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DOCTRINE

The rationale for compulsory B2B data sharing and its underlying balancing exercises

Thomas Tombal¹

Eu égard aux caractéristiques des données, de plus en plus de voix s'élèvent pour imposer leur partage entre entreprises. Ce partage peut reposer sur trois types de justifications, à savoir des considérations économiques, sociétales ou d'autonomisation des individus. Bien que le partage obligatoire de données puisse générer de nombreux avantages, il peut néanmoins engendrer plusieurs coûts. À cet égard, notre objectif est de répondre à la question de recherche suivante: «Quels sont les exercices d'équilibrage sous-tendant le partage obligatoire de données entre entreprises?». Plus précisément, nous soulignons la nécessité de trouver un équilibre entre les avantages découlant du partage obligatoire des données, d'une part, et les intérêts économiques du détenteur des données; les considérations relatives à la protection des données personnelles; et les coûts collectifs et de long terme que (certaines) de ces initiatives pourraient entraîner en termes d'autonomie des individus, d'autre part.



In light of data's characteristics, a growing call for imposing business-to-business (B2B) data sharing is being made. This can be justified by three types of rationale, namely economic, societal, and "empowerment" considerations. While compulsory data sharing may lead to numerous benefits, it can also entail several costs. In this regard, we aim at answering the following research question: "What are the balancing exercises underlying compulsory B2B data sharing?". More precisely, we highlight the need to balance the benefits stemming from compulsory B2B data sharing initiatives with the economic interests of the data holder; personal data protection considerations; and the long-term and collective costs that (some of) these initiatives could entail in terms of individual autonomy.



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I. CONTEXTUALISATION AND RESEARCH QUESTION

1. Data, which can be defined as “any digital representation of acts, facts or information and any compilation of such acts, facts or information, including in the form of sound, visual or audiovisual recording”,² is the fuel of innovation and knowledge creation in an increasingly connected world. It has become an essential resource for economic growth, job creation and societal progress,³ and the value of the data market is expected to reach between 432 and 827 billion euros by 2025.⁴ Such numbers do not come as a surprise, given that the amount of data generated increases exponentially.

While the value deriving from the processing of data seems obvious, determining the legal framework to be applied to it is, on the contrary, a complex task. This stems from the fact that data is a complex good, which will often be at the crossroads of multiple claims and rights aimed at controlling, accessing, or benefiting from the data processing. This highlights the need for a clear legal framework, especially as the data markets are still emerging.⁵ More-

over, the lack of a clear legal environment may contribute to insufficient data sharing, possibly stifling innovation and creating entry barriers for new market entrants,⁶ and possibly impairing access to information or our societies’ ability to tackle environmental, health or mobility challenges.⁷ In the context of this contribution, “data sharing” is understood as the act through which one or several data holder(s)⁸ provide(s) access to its(their) data to one or several data recipient(s), directly or through an intermediary, for the purpose of joint or individual use of the shared data, on the basis of voluntary agreements or of compulsory rules.⁹

2. As underlined by the European Commission, business-to-business data sharing (“B2B

news/study-emerging-issues-data-ownership- interoperability-re-usability-and-access-data-and, p. 31.

⁶ Communication from Commission, “*Building a European Data Economy*”, *op. cit.*, p. 3.

⁷ Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, “*A European strategy for data*”, 19 February 2020, COM(2020) 66, p. 3. See also J. DREXL, “Data Access and Control in the Era of Connected Devices”, *Study on Behalf of the European Consumer Organisation (BEUC)*, 2019, available at https://www.beuc.eu/publications/beuc-x-2018_121_data_access_and_control_in_the_area_of_connected_devices.pdf, p. 6-8; P. PICHT, “Towards an Access Regime for Mobility Data”, *IIC*, 2020, Volume 51, Issue 8, p. 942.

⁸ The more generic term of “data holder” is used here, rather than “data owner”, as the issue of data “ownership” is widely debated. For a proposed definition of a “data holder”, see Article 2.5 of the Proposal for a Data Governance Act: “a legal person or data subject who, in accordance with applicable Union or national law, has the right to grant access to or to share certain personal or non-personal data under its control”.

⁹ See, by analogy, Article 2.7 of the Proposal for a Data Governance Act: “data sharing means the provision by a data holder of data to a data user for the purpose of joint or individual use of the shared data, based on voluntary agreements, directly or through an intermediary”.

² Article 2.1 of the Proposal for a Regulation of the European Parliament and of the Council on European data governance (Data Governance Act), 25 November 2020, COM(2020) 767 final; Article 2.19 of the Proposal for a Regulation of the European Parliament and of the Council on contestable and fair markets in the digital sector (Digital Markets Act), 15 December 2020, COM(2020) 842 final.

³ Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, “*Building a European Data Economy*”, Brussels, 10 January 2017, COM(2017) 9 final, p. 2.

⁴ International Data Corporation and the Lisbon Council, “The European Data Market Study Monitoring Tool – Final Study Report”, June 2020, SMART 2016/0063, available at <http://datalandscape.eu/>, p. 9.

⁵ M. BARBERO, D. COCORU, H. GRAUX, A. HILLEBRAND, F. LINZ, D. OSIMO, A. SIEDE and P. WAUTERS, “Study on emerging issues of data ownership, interoperability, (re-)usability and access to data, and liability”, 25 April 2018, available at <https://ec.europa.eu/digital-single-market/en/>

data sharing¹⁰ “has not taken off at sufficient scale. This is due to a lack of economic incentives (including the fear of losing a competitive edge), lack of trust between economic operators that the data will be used in line with contractual agreements, imbalances in negotiating power, the fear of misappropriation of the data by third parties, and a lack of legal clarity on who can do what with the data.”¹¹ These factors can lead to market failures, such as the lack of incentives to collect data, uncertainties in terms of risks, high transaction costs for sharing and missing markets, and asymmetries of information distorting decision-making.¹²

One way to address these market failures is through the adoption of legal instruments promoting *voluntary* data sharing, which will tend to focus more on data governance and technical issues (standardisation, interoperability,¹³ etc.), in order to create more favourable conditions for the market actors to remedy, or at least reduce, these market failures themselves.¹⁴ For instance, the European Commission has adopted a Communication “Towards a common European data space”, containing key principles for *volun-*

¹⁰ The term “business” should be understood broadly and is not limited to undertakings pursuing profit. It also covers, for instance, data sharing with non-profits pursuing societal goals. Rather, it should be understood as being distinct from government-to-business (G2B) data sharing (see, for instance, Directive (EU) 2019/1024 of the European Parliament and of the Council of 20 June 2019 on open data and the re-use of public sector information, *OJ L 172/56*, 26 June 2019; Proposal for a Data Governance Act; Commission Staff Working Document, Impact assessment report accompanying the document “Proposal for a Regulation of the European Parliament and of the Council on European data governance: An enabling framework for common European data spaces (Data Governance Act)”, Brussels, 25 November 2020, SWD(2020) 295 final); and from business-to-government (B2G) data sharing (see, for instance, High-Level Expert Group on Business-to-Government Data Sharing, “Towards a European strategy on business-to-government data sharing for public interests – Final report”, 2020, available at <https://ec.europa.eu/digital-single-market/en/news/experts-say-privately-held-data-available-european-union-should-be-used-better-and-more>; European Commission, Inception Impact Assessment: “Data Act (including the review of the Directive 96/9/EC on the legal protection of databases)”, May 2021, Ares (2021)3527151).

¹¹ Communication from the Commission, “A European strategy for data”, *op. cit.*, p. 7.

¹² For a broader analysis of all of the potential types of data market failures, see M. STUCKE and A. GRUNES, *Big Data and Competition Policy*, Oxford, Oxford University Press, 2016; J. KRÄMER, D. SCHNURR and S. BROUGHTON MICOVA, “The role of data for digital markets contest-

ability: case studies and data access remedies”, *CERRE Report*, September 2020, available at <https://cerre.eu/publications/data-digital-markets-contestability-case-studies-and-data-access-remedies/>; J. CRÉMER, Y.-A. DE MONTJOYE and H. SCHWEITZER, “Competition Policy for the digital era – Final report”, 2019, available at <http://ec.europa.eu/competition/publications/reports/kd0419345enn.pdf>; B. MARTENS, A. DE STREEL, I. GRAEF, T. TOMBAL and N. DUCH-BROWN, “Business to business data sharing: an economic and legal analysis”, *EU Science Hub*, 2020, available at <https://ssrn.com/abstract=3658100>; M. BOURREAU and A. DE STREEL, “Digital Conglomerates and EU Competition Policy”, *CERRE Report*, March 2019, available at <http://www.crid.be/pdf/public/8377.pdf>; B. MARTENS, “An economic perspective on data and platform market power”, *JRC Digital Economy Working Paper 2020-09*, February 2021, available at <https://www.researchgate.net/publication/349179464>.

¹³ Interoperability is defined as “the ability of disparate and diverse organisations to interact towards mutually beneficial and agreed common goals, involving the sharing of information and knowledge between the organisations, through the business processes they support, by means of the exchange of data between their respective ICT systems” (Decision 2015/2240 of the European Parliament and of the Council of 25 November 2015 establishing a programme on interoperability solutions and common frameworks for European public administrations, businesses and citizens (ISA2 programme) as a means for modernising the public sector, *OJ L 318/1*, 4 December 2015, article 2.1).

¹⁴ B. MARTENS, A. DE STREEL, I. GRAEF, T. TOMBAL and N. DUCH-BROWN, “Business to business data sharing”, *op. cit.*, p. 28. See also R. FEASEY and A. DE STREEL, “Data Sharing for Digital Market Contestability: Towards a Governance Framework”, *CERRE Report*, September 2020, available at <https://cerre.eu/publications/data-sharing-digital-markets-competition-governance/>.

tary B2B data sharing.¹⁵ It has also created a “Support Centre for Data Sharing”,¹⁶ with the aim of putting in place a series of measures facilitating (voluntary) data sharing, in particular by providing examples of good practice, standard contractual clauses or existing contract models.¹⁷ More recently, it has adopted a proposal for a Data Governance Act that notably aims at promoting *voluntary* data sharing services by intermediaries,¹⁸ as well as *voluntary* data sharing in the common good (“data altruism”).¹⁹ The underlying idea behind all these instruments is that, in light of the proportionality principle,²⁰ it is preferable to first attempt to create a clear framework to incentivise the market actors to share data on their own initiative, rather than to compel them to do so.

3. Yet, such *voluntary* data sharing initiatives may not always be sufficient to address the above-mentioned issues, and legislators could be tempted to go a step further, by imposing *compulsory* B2B data sharing in order to achieve specific objectives, which will

be outlined in Section II.²¹ For example, imposing data sharing might be justified if, as it is currently the case, a small number of large firms hold a significant part of the world's data, as this might diminish the incentives of smaller data-driven firms to emerge, grow and innovate, due to high entry barriers.²² The high degree of market power deriving from this “data advantage” could also affect the contestability of some markets.²³ Moreover, some platforms have acquired significant scale, effectively allowing them to act as “private gatekeepers”, and *compulsory* B2B data sharing is being discussed as a potential remedy to ensure that their systemic role will not endanger the fairness and openness of the markets.²⁴ On the other hand, this data concentration phenomenon could also possibly impair access to information and our societies’ ability to tackle environmental, health or mobility challenges.²⁵ In this regard, the European Commission has suggested that it would explore legislative options in order to promote a wider (compulsory) sharing and availability of data, in order to ensure “contestability, fairness and innovation and the possibility of market entry, as well

¹⁵ Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, “Towards a common European data space”, Brussels, 25 April 2018, COM(2018) 232 final, p. 10. See also Commission Staff Working Document establishing a guidance on sharing private sector data in the European data economy accompanying the Communication “Towards a common European data space”, Brussels, 25 April 2018, SWD(2018) 125 final.

¹⁶ See <https://eudatasharing.eu/homepage>.

¹⁷ Commission Staff Working Document establishing a guidance on sharing private sector data, *op. cit.*, p. 6.

¹⁸ See Articles 9 to 14 of the Proposal for a Data Governance Act. See also Commission Staff Working Document, Impact assessment report accompanying the Data Governance Act, *op. cit.*, p. 11-12.

¹⁹ See Articles 15 to 22 of the Proposal for a Data Governance Act.

²⁰ Article 5.4 of the Treaty on European Union, OJ C 326/13, 26 October 2012; Protocol (No. 2) on the application of the principles of subsidiarity and proportionality, OJ C 326/206, 26 October 2012.

²¹ See, *inter alia*, M. STUCKE and A. GRUNES, *Big Data and Competition Policy*, *op. cit.*; J. KRÄMER, D. SCHNURR and S. BROUGHTON MICOVA, “The role of data for digital markets contestability”, *op. cit.*; J. CRÉMER, Y.-A. DE MONTJOYE and H. SCHWEITZER, “Competition Policy for the digital era”, *op. cit.*; R. FEASEY and A. DE STREEL, “Data Sharing for Digital Market Contestability”, *op. cit.*

²² Communication from the Commission, “A European strategy for data”, *op. cit.*, p. 3.

²³ *Ibid.*, p. 8.

²⁴ Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, “Shaping Europe’s digital future”, Brussels, 19 February 2020, COM(2020) 67, p. 8.

²⁵ See also J. DREXL, “Data Access and Control in the Era of Connected Devices”, *op. cit.*, p. 6-8; P. PICT, “Towards an Access Regime for Mobility Data”, *op. cit.*, p. 942.

as public interests that go beyond competition or economic considerations".²⁶

4. Importantly, however, while data sharing presents numerous benefits (Section II), it does not come without a cost.²⁷ Accordingly, any initiative imposing compulsory B2B data sharing, whatever its objective, must strike the right balance between the benefits and costs of data sharing.²⁸ This leads to the following research question: "What are the balancing exercises underlying compulsory B2B data sharing?". Indeed, if the legislator decides to take this step forward in the degree of its intervention, this will require the prior consideration of a certain number of fundamental economic and societal balancing exercises. The focus of Section III will be to highlight the nature of these balancing exercises.

II. RATIONALE FOR COMPULSORY B2B DATA SHARING

5. To answer the above-mentioned research question, it is first necessary to clarify the rationale for data sharing. Said otherwise, what could justify the imposition of data sharing obligations in the first place? What are the expected benefits? A key starting point in this reflection is data's characteristics. Data is often presented in the policy debates as the "new oil" of our modern economy. Yet, this broadly used catchphrase is somewhat misleading as oil is both tangible and depletable, which is not the case of data, which is intangible and

non-depletable, as its use does not affect its existence, although it may affect its value.²⁹ However, this metaphor does make some sense if one considers oil's "infrastructural" qualities, in that it can be directed to numerous applications, with diverse values.³⁰ In this sense, data, much like oil, is an important component of a great number of technical and commercial applications and it "lubricates social and technical processes".³¹ This is why data is, itself, sometimes characterised as an "infrastructural resource", because its use creates spill overs in multiple fields across society.³²

According to Frischmann, infrastructural resources "are "shared means to many ends", which satisfy the non-rivalrous, the capital good and the general-purpose criteria".³³ First, data are a non-rivalrous resource that can be replicated and consumed by an unlimited number of actors – even simultaneously –, and "maximising access to the non-rivalrous [resource] will in theory maximise social welfare, as every additional private benefit comes at no additional cost".³⁴ Second, data is often a capital resource, which means that it is used as an input for goods or services rather than as an end in itself. This is because data often has no intrinsic value, as the value will derive from the

²⁶ Communication from the Commission, "Shaping Europe's digital future", *op. cit.*, p. 9; Communication from the Commission, "A European strategy for data", *op. cit.*, p. 5 and 14.

²⁷ B. MARTENS, A. DE STREEL, I. GRAEF, T. TOMBAL and N. DUCH-BROWN, "Business to business data sharing", *op. cit.*, p. 5.

²⁸ P. LAROCHE, "The European Microsoft case at the crossroads of competition policy and innovation", *Antitrust Law Journal*, 2008, n° 75, p. 616-620; B. MARTENS, A. DE STREEL, I. GRAEF, T. TOMBAL and N. DUCH-BROWN, "Business to business data sharing", *op. cit.*, p. 5.

²⁹ M. MADISON, "Tools for Data Governance", *Technology and Regulation*, 2020, p. 31 and 34; M. STUCKE and A. GRUNES, *Big Data and Competition Policy*, *op. cit.*, p. 44-45.

³⁰ M. MADISON, "Tools for Data Governance", *op. cit.*, p. 31.

³¹ *Ibidem*.

³² *Ibidem*, p. 40.

³³ B. FRISCHMANN, *Infrastructure: The Social Value of Shared Resources*, Oxford, Oxford University Press, 2012, cited in OECD, *Data-Driven Innovation: Big Data for Growth and Well-Being*, OECD Publications, 2015, available at <https://www.oecd.org/sti/data-driven-innovation-9789264229358-en.htm>, p. 179.

³⁴ OECD, *Data-Driven Innovation: Big Data for Growth and Well-Being*, *op. cit.*, p. 179-180. See also N. ELKIN-KOREN and E. SALZBERGER, *The Law and Economics of Intellectual Property in the Digital Age: The limits of the analysis*, London, Routledge, 2013, p. 61.

use made of this data in order to extract information or knowledge. As data are a non-rival capital resource that “can in theory be used (simultaneously) by multiple users for multiple purposes as an input to produce an unlimited number of goods and services”,³⁵ data access and sharing is highly valuable. Third, data may be described as a general-purpose resource. Indeed, data could, in theory, be used for an unlimited number of purposes, including not only economic but also public and societal purposes, and additionally, the use of data for one purpose can provide valuable insights for uses in other domains, thus having significant spill over effects.³⁶

On the other hand, whether data should be considered as an excludable or non-excludable resource is less clear. Indeed, even if data is arguably non-excludable by nature,³⁷ in practice, data is both technically and contractually excludable.³⁸ In fact, as pointed out by Stucke and Grunes, “data’s competitive significance (and value) arise in part from the ability of firms to exclude others from access and analysing it as quickly”.³⁹

6. In light of data’s characteristics, and notably of the fact that data could be considered as an “infrastructural resource”, a growing

call for imposing data sharing is being made.⁴⁰ Yet, compulsory B2B data sharing is not a goal in itself, and it should only be used in specific circumstances as a way to achieve determined objectives.⁴¹ In fact, three types of rationale can be called upon to support compulsory B2B data sharing, namely economic (A), societal (B), and empowerment considerations (C).

A. Economic rationale for data sharing

7. To get a better grasp at the economic rationale for data sharing, it is first necessary to understand the economics of data. Data’s true value does not generally stem from data as such, but rather from the value of the information and knowledge that can be extracted from its combination and aggregation.⁴² Indeed, “the more available and more varied the data, the better the knowledge that can be mined from it”.⁴³ In economic terms, this means that data is characterised by economies of scope and scale, which provide an advantage to data holders and incentivise them to collect and produce as much data as possible.⁴⁴

Economies of scope in data aggregation generate economic efficiency gains, as more insights and economic value can be extracted from merging two complementary datasets than from keeping them separated in data silos.⁴⁵ As a consequence, there are economic

³⁵ OECD, *Data-Driven Innovation: Big Data for Growth and Well-Being*, *op. cit.*, p. 180-181.

³⁶ *Ibid.*, p. 181-182.

³⁷ B. MARTENS, A. DE STREEL, I. GRAEF, T. TOMBAL and N. DUCH-BROWN, “Business to business data sharing”, *op. cit.*, p. 4.

³⁸ W. KERBER, “Rights on Data: The EU Communication “Building a European Data Economy” from an Economic Perspective”, *Trading Data in the Digital Economy: Legal Concepts and Tools*, S. LOHSE, R. SCHULZE and D. STAUDENMAYER (ed.), Baden-Baden, Nomos, 2017, p. 118; N. ELKIN-KOREN and E. SALZBERGER, *The Law and Economics of Intellectual Property in the Digital Age*, *op. cit.*, p. 77.

³⁹ M. STUCKE and A. GRUNES, *Big Data and Competition Policy*, *op. cit.*, p. 46.

⁴⁰ OECD, *Data-Driven Innovation: Big Data for Growth and Well-Being*, *op. cit.*, p. 179; V. MAYER-SCHONBERGER and T. RAMGE, *Re-inventing capitalism in the age of big data*, New York, Basic Books, 2018.

⁴¹ B. MARTENS, A. DE STREEL, I. GRAEF, T. TOMBAL and N. DUCH-BROWN, “Business to business data sharing”, *op. cit.*, p. 5.

⁴² D. RUBINFELD and M. GAL, “Access Barriers to Big Data”, *Arizona Law Review*, 2017, Vol. 59, p. 342.

⁴³ M. GAL and D. RUBINFELD, “Data Standardization”, *New York University Law Review*, 2019, Vol. 94, Number 4, p. 774.

⁴⁴ B. MARTENS, A. DE STREEL, I. GRAEF, T. TOMBAL and N. DUCH-BROWN, “Business to business data sharing”, *op. cit.*, p. 13.

⁴⁵ *Ibid.*, p. 4.

efficiencies in concentrating data in large data pools, and there are clear incentives for data-driven firms to expand their activities in as many data-related service markets as possible.⁴⁶

Moreover, economies of scale also generate efficiency gains, as having data about more people allows to improve the service offered, which in turn attracts more users, etc.⁴⁷ This is described by Prüfer and Schottmüller as data-driven *indirect* network effects.⁴⁸ These *indirect* network effects should not be confused with *direct* network effects, which are completely demand-driven, and which relate to the fact that the utility of a service for a user will be function of, and will increase with, the number of other users that use the service.⁴⁹ This is also referred to, from a dynamic perspective, as a “user feedback loop”.⁵⁰ It entails decreasing marginal costs of innovation, due to the high consumer demand.⁵¹ Naturally, these two types

of network effects are not mutually exclusive, as illustrated by online social networks that are characterised by both.⁵²

From a dynamic perspective, these data-driven network effects can also give rise to another self-reinforcing feedback loop, namely a “monetisation feedback loop”, as explained by Krämer *et al.*⁵³ Indeed, as these data-driven companies derive a large chunk of their revenues from advertising, collecting more user data enables them to provide more targeted advertising. Because it is more effective, this generates more advertising revenues, which in turn allows them to further invest in the quality of their service, which will attract more users, etc.

8. While economies of scale and scope and data-driven network effects in data aggregation incentivise data collection and data production, the flip side of the coin is that these same economic characteristics of data may also raise entry barriers to data markets.⁵⁴ Indeed, these characteristics benefit large incumbent data holders who have access to more (recent) data than their competitors.⁵⁵ As summarised by Fast *et al.*, six factors may provide incumbent data holders with a competitive (data) advantage, namely “(i) exclusive access to data, (ii) exploitative access to data, (iii) economies of scale in data analytics, (iv) platform business models and network effects, (v) data-induced switching costs, and (vi) economies of scope and ecosystem expansion”.⁵⁶ As a result, these characteristics and factors might lead to

⁴⁶ *Ibid.*, p. 5.

⁴⁷ J. KRÄMER, D. SCHNURR and S. BROUGHTON MICOVA, “The role of data for digital markets contestability”, *op. cit.*, p. 7.

⁴⁸ J. PRÜFER and C. SCHOTTMÜLLER, “Competing with Big Data”, *TILEC Discussion Paper No. 2017-006 and CentER Discussion Paper No. 2017-007*, February 2017, available at https://pure.uvt.nl/ws/portalfiles/portal/15514029/2017_007.pdf, p. 1; B. MARTENS, A. DE STREEL, I. GRAEF, T. TOMBAL and N. DUCH-BROWN, “Business to business data sharing”, *op. cit.*, p. 15. For a detailed analysis of the various classic and data driven network effects, see M. STUCKE and A. GRUNES, *Big Data and Competition Policy*, *op. cit.*, p. 162-216.

⁴⁹ J. PRÜFER and C. SCHOTTMÜLLER, “Competing with Big Data”, *op. cit.*, p. 2.

⁵⁰ J. KRÄMER, D. SCHNURR and S. BROUGHTON MICOVA, “The role of data for digital markets contestability”, *op. cit.*, p. 64. See also A. LERNER, “The Role of ‘Big Data’ in Online Platform Competition”, 26 August 2014, available at SSRN <http://dx.doi.org/10.2139/ssrn.2482780>; M. BOURREAU, A. DE STREEL and I. GRAEF, “Big Data and Competition Policy: Market power, personalised pricing and advertising”, *CERRE Report*, 2017, available at <http://www.cerre.eu/publications/big-data-and-competition-policy>.

⁵¹ J. PRÜFER and C. SCHOTTMÜLLER, “Competing with Big Data”, *op. cit.*, p. 1-2.

⁵² *Ibid.*, p. 2.

⁵³ J. KRÄMER, D. SCHNURR and S. BROUGHTON MICOVA, “The role of data for digital markets contestability”, *op. cit.*, p. 64.

⁵⁴ D. RUBINFELD and M. GAL, “Access Barriers to Big Data”, *op. cit.*, p. 339-381.

⁵⁵ J. CRÉMER, Y.-A. DE MONTJOYE and H. SCHWEITZER, “Competition Policy for the digital era”, *op. cit.*, p. 3 and 19-24.

⁵⁶ V. FAST, D. SCHNURR and M. WOHLFARTH, “Data-Driven Market Power: An Overview of Economic Benefits and Competitive Advantages from Big Data Use”, July

techno-economic entry barriers (uniqueness of the data collected by the incumbent data holder or unique gateway to it; economies of scale, scope and speed; network effects; lock-in and switching costs),⁵⁷ which will make it very difficult to dislodge these incumbent data holders.⁵⁸ This is where data market failures might occur.

9. On the one hand, as data aggregation generates network effects and economies of scope, scale and speed, the economics of data favour concentration.⁵⁹ Indeed, due to these factors, data driven markets have a natural tendency to tip towards monopolisation.⁶⁰ Moreover, because such dominance is persistent once the market has tipped, even in dynamic high-tech markets, there is thus "a strong *first-mover advantage* in data-driven markets, which leads towards monopolization and is built upon data-driven indirect network effects" (emphasis in the text).⁶¹ Due to these first-mover advantage and market tipping dynamics, data concentration might increase entry barriers for new firms and strengthen data aggregators' market power, leading to diminishing incentives for innovation.⁶²

Such concentration may also establish long-term competitive advantages and this could endanger the contestability of these data driven markets.⁶³ This notably derives from the positive feedback loops mentioned above,⁶⁴ as "initially superior access to data may give rise to feedback effects, such that data-driven competitive advantages are magnified over time as improved service quality from data leads to more users and this then turns into access to even larger data sets".⁶⁵ Because competitors cannot have the same continuous inflow of data as the incumbent data holder – which benefits from self-reinforcing data driven network effects and economies of scope, scale and speed –, it will lack the ability to adapt its good or services to the users changing desires and it will thus struggle to be competitive.⁶⁶ Moreover, the lack of contestability could stem from the fact that incumbent data holders could leverage such data concentration phenomenon to exclude competitors from entering the market.⁶⁷ This might especially be the case if the incumbent's first mover advantage has allowed it to reach a monopolistic market position and that it retains an exclusive access on its data.⁶⁸

10. On the other hand, these network effects and economies of scope, scale and speed may not only protect incumbent data holders in their core data driven markets by providing them with a competitive data advantage leading to data concentration, but they may also be leveraged by the incumbent to

2019, available at <https://ssrn.com/abstract=3427087>, p. 2 and 19-35.

⁵⁷ See D. RUBINFELD and M. GAL, "Access Barriers to Big Data", *op. cit.*, p. 339-381.

⁵⁸ J. CRÉMER, Y.-A. DE MONTJOYE and H. SCHWEITZER, "Competition Policy for the digital era", *op. cit.*, p. 24.

⁵⁹ M. STUCKE and A. GRUNES, *Big Data and Competition Policy*, *op. cit.*, p. 336.

⁶⁰ See J. PRÜFER, "Competition Policy and Data Sharing on Data-driven Markets", *Report for the Friedrich-Ebert-Stiftung*, 2020, available at <http://library.fes.de/pdf-files/fes/15999.pdf>, p. 6-9; J. PRÜFER and C. SCHOTTMÜLLER, "Competing with Big Data", *op. cit.*, p. 2.

⁶¹ J. PRÜFER and C. SCHOTTMÜLLER, "Competing with Big Data", *op. cit.*, p. 2.

⁶² B. MARTENS, A. DE STREEL, I. GRAEF, T. TOMBAL and N. DUCH-BROWN, "Business to business data sharing", *op. cit.*, p. 24. See also J. PRÜFER and C. SCHOTTMÜLLER, "Competing with Big Data", *op. cit.*; J. KRÄMER, D. SCHNURR and S. BROUGHTON MICOVA, "The role of data for digital markets contestability", *op. cit.*

⁶³ J. KRÄMER, D. SCHNURR and S. BROUGHTON MICOVA, "The role of data for digital markets contestability", *op. cit.*, p. 55.

⁶⁴ See point 7.

⁶⁵ J. KRÄMER, D. SCHNURR and S. BROUGHTON MICOVA, "The role of data for digital markets contestability", *op. cit.*, p. 56.

⁶⁶ *Ibid.*, p. 71.

⁶⁷ B. MARTENS, A. DE STREEL, I. GRAEF, T. TOMBAL and N. DUCH-BROWN, "Business to business data sharing", *op. cit.*, p. 19.

⁶⁸ *Ibid.*, p. 5.

expand and strengthen its position in adjacent markets.⁶⁹ Accordingly, there are clear incentives for data driven firms to expand their activities in as many markets as possible and to build conglomerates.⁷⁰ Indeed, the dominant position gained in a data driven market could be leveraged to gain a dominant position in a *connected market*, i.e. another distinct market in which the data gathered in the first market turns out to be a valuable input to improve the goods or services offered.⁷¹ In fact, such expansion to a connected market could even reinforce the incumbent's position in the first market, if the data gathered on the second market is a valuable input to improve the goods or services offered on the first market.⁷² This is linked to the general-purpose nature of data, which can be re-used for a wide variety of goods and services.⁷³

If these connected markets' dynamics are combined with the first mover advantage outlined above, this could lead to a *domino effect*, i.e. "a first mover in market A can leverage its dominant position, which comes with an advantage on user information, to let connected market B tip, too, even if market B is already served by traditional incumbent firms".⁷⁴ Indeed, once a firm has established a strong data position in one market, "the

marginal costs of expanding into an adjacent complementary data domain are lower than for *de novo* entrants in that domain or incumbents who only cover that specific domain".⁷⁵ The domino effect deriving from this first mover advantage in an initial market could thus lead to successive market tipping in several connected markets. Indeed, venturing into related markets opens the access to more users, and thus consequently to more data, which will strengthen even more the incumbent data holder's data driven network effects, and this will, in turn, allow them to venture into further markets.⁷⁶ In time, this can lead to the constitution of digital conglomerates. Google, and its ability to leverage its dominant position in the search market to other connected markets (shopping, maps, etc.) is a prime example of such data conglomerate.⁷⁷

11. In order to remedy the market failures deriving from the phenomena of data concentration and data conglomeration presented above, compulsory B2B data sharing is increasingly considered in numerous policy reports across the globe.⁷⁸ Indeed, since it reduces

⁶⁹ J. KRÄMER, D. SCHNURR and S. BROUGHTON MICOVA, "The role of data for digital markets contestability", *op. cit.*, p. 56; B. MARTENS, A. DE STREEL, I. GRAEF, T. TOMBAL and N. DUCH-BROWN, "Business to business data sharing", *op. cit.*, p. 19.

⁷⁰ B. MARTENS, A. DE STREEL, I. GRAEF, T. TOMBAL and N. DUCH-BROWN, "Business to business data sharing", *op. cit.*, p. 5; M. BOURREAU and A. DE STREEL, "Digital Conglomerates and EU Competition Policy", *op. cit.*

⁷¹ J. PRÜFER and C. SCHOTTMÜLLER, "Competing with Big Data", *op. cit.*, p. 2-3.

⁷² *Ibidem*.

⁷³ M. BOURREAU and A. DE STREEL, "Digital Conglomerates and EU Competition Policy", *op. cit.*, p. 10. On the general-purpose nature of data, see point 5.

⁷⁴ J. PRÜFER and C. SCHOTTMÜLLER, "Competing with Big Data", *op. cit.*, p. 2-3.

⁷⁵ B. MARTENS, A. DE STREEL, I. GRAEF, T. TOMBAL and N. DUCH-BROWN, "Business to business data sharing", *op. cit.*, p. 24.

⁷⁶ J. KRÄMER, D. SCHNURR and S. BROUGHTON MICOVA, "The role of data for digital markets contestability", *op. cit.*, p. 71.

⁷⁷ M. BOURREAU and A. DE STREEL, "Digital Conglomerates and EU Competition Policy", *op. cit.*, p. 11.

⁷⁸ See (EU) J. CRÉMER, Y.-A. DE MONTJOYE and H. SCHWEITZER, "Competition Policy for the digital era", *op. cit.*; (Germany) H. SCHWEITZER, M. SCHALBRUCH, A. WAMBACH, W. KIRCHHOFF, D. LANGEHEINE, J.-P. SCHNEIDER, M. SCHNITZER, D. SEELIGER, G. WAGNER, H. DURZ, M. HEIDER and F. MOHRS, "A New Competition Framework for the Digital Economy", *Report by the Commission "Competition Law 4.0" for the German Federal Ministry for Economic Affairs and Energy*, 2019, available at https://www.bmwi.de/Redaktion/EN/Downloads/a/a-new-competitionframework.pdf?__blob=publicationFile&v=2; (Germany) H. SCHWEITZER, J. HAUCAP, W. KERBER and R. WELKER, *Modernisierung der Missbrauchsaufsicht für marktmächtige Unternehmen*, Baden-Baden, Nomos, 2018 (also available at <https://www.bmwi.de/Redaktion/DE/Publikationen/>

the incumbent data holder's data advantage derived from network effects and economies of scope, scale and speed, some consider compulsory sharing to be the best solution to tackle the data concentration problem because, through data sharing, competitors get access to (some of) its data and can thus benefit from those same advantages and compete

on the same basis.⁷⁹ As a consequence, fair competition would be stimulated.⁸⁰ Similarly, sharing specific types of (essential) data could attenuate the anti-competitive effects of conglomerates by allowing competition to emerge and ensuring market contestability, as "compulsory access will allow entrants, on the one hand, to enjoy the same economies of scope in product development than the incumbent firm and, on the other hand, to generate demand-side synergies of similar magnitude when integrating the key [data] in their product ecosystems".⁸¹

In this regard, the European Commission has notably announced in its *Strategy for data* that it would explore legislative options in order to promote a wider sharing and availability of data, and to ensure that markets stay open and fair.⁸² Indeed, the Commission realises that a number of large firms currently hold a significant part of the world's data, that this might diminish the incentives of smaller data-driven firms to emerge, grow and innovate, due to high entry barriers, and that the high degree of market power deriving from this "data advantage" could also affect the contestability of some markets.⁸³ In fact, the Commission's

Wirtschaft/modernisierung-der-missbrauchsaufsicht-fuer-marktmaechtigeunternehmen.html (an executive summary in English is available at <https://ssrn.com/abstract=3250742>); (France) Autorité de la concurrence, "Contribution de l'Autorité de la concurrence au débat sur la politique de concurrence et les enjeux numériques", 19 February 2020, available at https://www.autoritedelaconcurrence.fr/sites/default/files/2020-02/2020.02.19_contribution_adlc_enjeux_numeriques_vf.pdf; (BeNeLux) J. STEENBERGEN, M. SNOEP and P. BARTHELME, "Joint memorandum of the Belgian, Dutch and Luxembourg competition authorities on challenges faced by competition authorities in a digital world", 2 October 2019, available at <https://www.belgiancompetition.be/en/about-us/publications/joint-memorandum-belgian-dutch-and-luxembourg-competition-authorities>; (UK) J. FURMAN, D. COYLE, A. FLETCHER, P. MARSDEN and D. McAULEY, "Unlocking digital competition", *Report of the Digital Competition Expert Panel for the British Chancellor of the Exchequer and Secretary of State for Business, Energy and Industrial Strategy*, 2019, available at <https://www.gov.uk/government/publications/unlocking-digital-competition-report-of-the-digital-competition-expert-panel>; (UK) UK Competition & Markets Authority, "Online platforms and digital advertising: Market study final report", 1 July 2020, available at <https://www.gov.uk/cma-cases/online-platforms-and-digital-advertising-market-study>; (USA) Stigler Committee on Digital Platforms, "Final Report", September 2019, available at <https://research.chicagobooth.edu/stigler/media/news/committee-on-digital-platforms-final-report>; (Australia) Australian Competition and Consumer Commission, "Digital Platforms Inquiry – Final Report", 26 July 2019, available at <https://www.accc.gov.au/publications/digital-platforms-inquiry-final-report>. For a comparative analysis of some of these reports, see W. KERBER, "Updating Competition Policy for the Digital Economy? An Analysis of Recent Reports in Germany, UK, EU, and Australia", September 2019, available at <https://ssrn.com/abstract=3469624>; and S. ENNIS and A. FLETCHER, "Developing international perspectives on digital competition policy", 31 March 2020, available at <https://ssrn.com/abstract=3565491>.

⁷⁹ J. PRÜFER, "Competition Policy and Data Sharing on Data-driven Markets", *op. cit.*, p. 5. See also C. ARGENTON and J. PRÜFER, "Search engine competition with network externalities", *Journal of Competition Law and Economics*, 2012, Vol. 8(1), p. 73-105; J. PRÜFER and C. SCHOTTMÜLLER, "Competing with Big Data", *op. cit.*; G. PARKER, G. PETROPOULOS and M. VAN ALSTYNE, "Digital Platforms and Antitrust", May 2020, available at <https://ssrn.com/abstract=3608397>.

⁸⁰ Support Centre for Data Sharing, "B.2 – Analytical report on EU law applicable to sharing of non-personal data", SMART 2018/2019, 24 January 2020, available at <https://eudatasharing.eu/fr/legal-aspects>, p. 4.

⁸¹ M. BOURREAU and A. DE STREEL, "Digital Conglomerates and EU Competition Policy", *op. cit.*, p. 30.

⁸² Communication from the Commission, "A European strategy for data", *op. cit.*, p. 5 and 14.

⁸³ *Ibid.*, p. 3 and 8.

proposal for a Digital Markets Act contains several specific data sharing obligations.⁸⁴

The economic benefits of data sharing are, however, not limited to potentially solving the market failures outlined above. Because data is non-rivalrous and can be used for many different purposes, sharing data entails economic welfare gains.⁸⁵ This perspective of substantial welfare gains deriving from these key business benefits and from the exploitation of the non-rivalrous nature of data is at the core of the data sharing debates.⁸⁶

B. Societal rationale for data sharing

12. As outlined in the European Commission's *Strategy for data*, "making more data available and improving the way in which data is used is essential for tackling societal, climate and environment-related challenges, contributing to healthier, more prosperous and more sustainable societies".⁸⁷ Indeed, more access to data through data sharing can foster more transparency, more security and it can support research.⁸⁸ The underlying idea is that not only public sector data, but also private sector data, can make a significant contribution to the common good.⁸⁹ In this regard, the Commission has set to support the development of a series of "Common European data spaces",

which should lead to the availability of large pools of data in domains of public interest such as environmental protection, health, mobility, energy and agriculture.⁹⁰ To support the establishment of these European data spaces, the European Commission has adopted a proposal for a Data Governance Act, which aims at creating an overarching framework encompassing horizontal measures relevant for all Common European data spaces.⁹¹ Articles 15 to 22 of this Data Governance Act notably contain measures aiming at facilitating voluntary data sharing in the common good ("data altruism").

Interestingly, this societal rationale for data sharing seems to receive a large adherence from all categories of actors, as 91.5% of the respondents to the Commission's public consultation on its *Strategy for data* agreed that more data that are useful for the common good (e.g. for improving mobility, delivering personalised medicine, reducing energy consumption and/or contributing to a greener society) should be made accessible.⁹²

13. It is thus clear that data sharing can generate societal benefits. In contrast, this implies that a lack of data sharing, deriving from data concentration and conglomeration, will not only create economic challenges, but also societal challenges. Indeed, as outlined by Shkabatur:

"Companies such as Google, Facebook, Apple, and eBay have amassed more data about people and their behavior,

⁸⁴ See Recitals 54 to 56 and Articles 6.1.h) to 6.1.j) of the Proposal for a Digital Markets Act.

⁸⁵ B. MARTENS, A. DE STREEL, I. GRAEF, T. TOMBAL and N. DUCH-BROWN, "Business to business data sharing", *op. cit.*, p. 4. Massive sharing of personal data can however entail long-term losses of control for the individuals (see Section III, C.).

⁸⁶ B. MARTENS, "An economic perspective on data and platform market power", *op. cit.*, p. 6.

⁸⁷ Communication from the Commission, "A European strategy for data", *op. cit.*, p. 3.

⁸⁸ Support Centre for Data Sharing, "B.2 – Analytical report on EU law applicable to sharing of non-personal data", *op. cit.*, p. 4.

⁸⁹ See Communication from the Commission, "A European strategy for data", *op. cit.*, p. 6.

⁹⁰ *Ibid.*, p. 22-23. These domains of public interest are further detailed in the Appendix of the "European strategy for data" (see p. 26-34).

⁹¹ Proposal for a Data Governance Act, p. 6. See also Commission Staff Working Document, Impact assessment report accompanying the Data Governance Act, *op. cit.*

⁹² European Commission, "Summary Report on the open public consultation on the European strategy for data", 24 July 2020, available at <https://ec.europa.eu/digital-single-market/en/news/summary-report-public-consultation-european-strategy-data>, p. 2.

health, markets and networks than many governments and organizations around the globe. This data could enlighten us about ourselves, and instruct us on various matters, such as how to improve our health [or] make better informed political decisions”⁹³

As the societal value of the data held (exclusively) by some incumbent data holders is enormous, allowing (some) third parties to use this data could generate immense scientific, environmental, health and mobility benefits for our society.⁹⁴ Accordingly, for Shkabatur, a just, fair and equal access to (some) of the data that these incumbents hold would be necessary to avoid socio-economic disparities and inequalities of opportunity.⁹⁵

C. Empowerment rationale for data sharing

14. Data sharing is also increasingly presented as a way to “empower” individuals, by giving them more control on “their” data through tools and means allowing them to decide, at a much more granular level, what can be done with it.⁹⁶ Individual “empowerment” is an important policy goal for the European Commission, and it constitutes one of the four pillars of its *Strategy for data*, as “this promises significant benefits to individuals, including to their health and wellness, better personal finances, reduced environmental footprint, hassle-free access to public and private services and greater oversight and transparency over their personal data”⁹⁷ In this

regard, two different types of sub-objectives can be pursued.

On the one hand, empowerment initiatives can pursue the objective of allowing the exercise of fundamental rights.⁹⁸ This control that data subjects can (re)claim on their data is fundamental as it will allow them to exercise a series of other rights, such as their freedom of information,⁹⁹ and its deriving right of access to information.¹⁰⁰ Such access to information is important because it can improve the recipients’ decision-making and, consequently, their ability to exercise other rights (right to health,¹⁰¹ right to environmental protection,¹⁰² right to move freely,¹⁰³ etc.) and to take funda-

⁹⁸ See, for example, Article 20 of the 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 (General Data Protection Regulation) [GDPR], *OJ L 119*, 4 May 2016.

⁹⁹ Article 10 of the European Convention for the Protection of Human Rights and Fundamental Freedoms, signed in Rome on 4 November 1950; Article 11 of the Charter of Fundamental Rights of the European Union, *OJ C 326/391*, 26 October 2012.

¹⁰⁰ ECtHR, *Youth Initiative for Human Rights v. Serbia*, 25 June 2013, App. No. 48135/06, §§ 20 and 24; D. VOORHOOF, “Freedom of expression and the right to information: Implications for copyright”, *Research Handbook on Human Rights and Intellectual Property*, C. GEIGER (ed.), Cheltenham, Edward Elgar, 2015, p. 337. See also C. DE TERWANGNE, “Droit à la vie privée: un droit sur l’information et un droit à l’information”, *Law, Norms and Freedoms in Cyberspace / Droit, normes et libertés dans le cybermonde: Liber Amicorum Yves Poullet*, E. DEGRAVE, C. DE TERWANGNE, S. DUSOLLIER et R. QUECK (dir.), Bruxelles, Larcier, 2018, p. 555-579.

¹⁰¹ See Article 25 of the Universal Declaration of Human Rights, signed in Paris on 10 December 1948; Article 12 of the International Covenant on Economic, Social and Cultural Rights, 16 December 1966; Article 35 of the Charter of Fundamental Rights of the European Union, *OJ C 326/391*, 26 October 2012.

¹⁰² Article 37 of the Charter of Fundamental Rights of the European Union, *OJ C 326/391*, 26 October 2012.

¹⁰³ See Article 5 of the European Convention for the Protection of Human Rights and Fundamental Freedoms, signed in Rome on 4 November 1950; Article 2

⁹³ J. SHKABATUR, “The Global Commons of Data”, *Stanford Technology Law Review*, 2019, Vol. 22, p. 357.

⁹⁴ *Ibid.*, p. 383.

⁹⁵ *Ibid.*, p. 401-402.

⁹⁶ Communication from the Commission, “A European strategy for data”, *op. cit.*, p. 10. See also p. 20-21.

⁹⁷ *Ibid.*, p. 10.

mental decisions about all aspects of their life.¹⁰⁴ Indeed, access to information about the processing of “their” personal data by a data controller¹⁰⁵ allows individuals to exercise their data subject rights;¹⁰⁶ and access to suitable health and environmental information allows them to take informed decisions regarding their place of living.¹⁰⁷ More control on their personal data also allows individuals to better understand how they are “profiled” and why they are offered a specific type of advertisement, search result or content.¹⁰⁸

On the other hand, empowerment initiatives can also be adopted to address specific market

failures.¹⁰⁹ The underlying idea is that data sharing can optimise the individuals’ control over their data by allowing them to securely share it with third parties, in order to be offered better services, more choice and lower prices.¹¹⁰ As a result, individuals would thus be empowered to compare services, to multi-home and to switch more easily between them, as this would reduce their searching and switching costs (lock-in).¹¹¹ In turn, this should facilitate entry and should foster competition on the targeted markets. Indeed, it is argued that, at the moment, there is a strong consumer inertia which creates barriers to entry and expansion for new actors wishing to offer alternative services, as simply providing information about these services (notably about the fact that they are cheaper than the incumbent’s service) is not sufficient to convince the consumers to switch.¹¹² This is because consumers do not

of Protocol No. 4 to the European Convention for the Protection of Human Rights and Fundamental Freedoms, securing certain rights and freedoms other than those already included in the Convention and in the first Protocol thereto, as amended by Protocol No. 11, signed in Strasbourg on 16 September 1963; Article 45 of the Charter of Fundamental Rights of the European Union, *OJ C 326/391*, 26 October 2012.

¹⁰⁴ See C. DE TERWANGNE, “Droit à la vie privée: un droit sur l’information et un droit à l’information”, *op. cit.*, p. 555-579; ECtHR, *Guerra et al. v. Italy*, 19 February 1998, App. No. 14967/89, § 60; ECtHR, *McGinley and Egan v. United Kingdom*, 9 June 1998, App. No. 21825/93 and 23414/94, § 97 and 101; ECtHR, *Roche v. United Kingdom*, 19 October 2005, App. No. 32555/96, § 162 and 165.

¹⁰⁵ “The natural or legal person, public authority, agency or other body which, alone or jointly with others, determines the purposes and means of the processing of personal data” (Article 4.7 of the GDPR).

¹⁰⁶ Articles 13 to 22 of the GDPR; C. DE TERWANGNE, “Droit à la vie privée: un droit sur l’information et un droit à l’information”, *op. cit.*, p. 569.

¹⁰⁷ C. DE TERWANGNE, “Droit à la vie privée: un droit sur l’information et un droit à l’information”, *op. cit.*, p. 573-576; ECtHR, *Guerra et al. v. Italy*, 19 February 1998, App. No. 14967/89, § 60; ECtHR, *McGinley and Egan v. United Kingdom*, 9 June 1998, App. No. 21825/93 and 23414/94, § 97 and 101; ECtHR, *Roche v. United Kingdom*, 19 October 2005, App. No. 32555/96, § 162 and 165.

¹⁰⁸ See Articles 13.2.f) and 14.2.g) of the GDPR, which grant to the data subject the right to receive meaningful information about the logic involved in automated decisions, including profiling, pertaining to her.

¹⁰⁹ See, for example, Article 16.4 of the Directive 2019/770 of the European Parliament and of the Council of 20 May 2019 on certain aspects concerning contracts for the supply of digital content and digital services, *OJ L 136/1*, 22 May 2019; Articles 65 to 67 of the Directive (EU) 2015/2366 of the European Parliament and of the Council of 25 November 2015 on payment services in the internal market, amending Directives 2002/65/EC, 2009/110/EC and 2013/36/EU and Regulation (EU) No. 1093/2010, and repealing Directive 2007/64/EC, *OJ L 337/35*, 23 December 2015; Articles 20 to 24 of the Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU, *OJ L 158/125*, 14 June 2019.

¹¹⁰ Open Data Institute and Fingleton, “Open Banking, Preparing for lift off: Purpose Progress and Potential”, 16 July 2019, available at <https://www.openbanking.org.uk/wp-content/uploads/open-banking-report-150719.pdf>, p. 6.

¹¹¹ Open Data Institute and Fingleton, “Open Banking, Preparing for lift off”, *op. cit.*, p. 4; O. BORGOGNO and G. COLANGELO, “Consumer Inertia and Competition-Sensitive Data Governance: The Case of Open Banking”, 3 January 2020, available at SSRN: <https://ssrn.com/abstract=3513514>, p. 4 and 12.

¹¹² O. BORGOGNO and G. COLANGELO, “Consumer Inertia and Competition-Sensitive Data Governance”, *op. cit.*, p. 1 and 6.

always have the necessary background to understand all of this information. Moreover, “consumer decision-making can be affected by a range of factors which reinforce inertia, such as high searching and transaction costs (either real or perceived), behavioural biases and contextual factors, but also by firms’ strategic conduct aimed at exploiting these biases and poor consumer information by increasing searching and switching costs, thus taking advantage of these demand-side problems in order to weaken competition.”¹¹³

III. BALANCING EXERCISES UNDERLYING COMPULSORY B2B DATA SHARING

15. While, as outlined in Section II, data sharing presents numerous benefits, it does not come without a cost, as will be outlined below.¹¹⁴ Accordingly, any initiative imposing compulsory B2B data sharing, whatever its objective, must consider this balance between the benefits and costs of data sharing.¹¹⁵ Maximising data sharing should thus not be an objective in its own right, and data sharing obligations should only be imposed if the benefits they create trump the related costs.¹¹⁶

More concretely, this contribution highlights three balancing exercises, namely the need to balance the benefits stemming from compulsory B2B data sharing initiatives (see Section II) with: the economic interests of the data holder (A); personal data protection consid-

erations (B); and the long-term and collective costs that (some of) these initiatives could entail in terms of individual autonomy (C).

A. Balance with the data holder’s business interests

16. Data collection and processing, and consequently data sharing, entails costs for the data holder, and data sharing obligations might create disincentives for data collection and processing.¹¹⁷ Indeed, while allowing data re-use will not functionally affect the data holder’s ability to keep using the data herself, it may have an economic impact on the data holder’s business.¹¹⁸ This is because imposing data sharing might deter innovation by the data holder that is compelled to share its data, as it might no longer want to invest in data collection that used to provide him with a competitive advantage, due to the fear of free-riding that derives from the non-rivalrous nature of data.¹¹⁹ Moreover, imposing data sharing might also deter innovation by third parties who will no longer see the point in innovating in order to collect the data themselves, as they will receive it from the data holder (expectation to free-ride).

Accordingly, the efficiency gains stemming from sharing (increased competition and

¹¹³ *Ibid.*, p. 2.

¹¹⁴ B. MARTENS, A. DE STREEL, I. GRAEF, T. TOMBAL and N. DUCH-BROWN, “Business to business data sharing”, *op. cit.*, p. 5.

¹¹⁵ P. LAROCHE, “The European Microsoft case at the crossroads of competition policy and innovation”, *op. cit.*, p. 616-620; B. MARTENS, A. DE STREEL, I. GRAEF, T. TOMBAL and N. DUCH-BROWN, “Business to business data sharing”, *op. cit.*, p. 5.

¹¹⁶ B. MARTENS, A. DE STREEL, I. GRAEF, T. TOMBAL and N. DUCH-BROWN, “Business to business data sharing”, *op. cit.*, p. 12.

¹¹⁷ J. CRÉMER, Y.-A. DE MONTJOYE and H. SCHWEITZER, “Competition Policy for the digital era”, *op. cit.*, p. 76-77.

¹¹⁸ B. MARTENS, A. DE STREEL, I. GRAEF, T. TOMBAL and N. DUCH-BROWN, “Business to business data sharing”, *op. cit.*, p. 20-21; See L. CABRAL, J. HAUCAP, G. PARKER, G. PETROPOULOS, T. VALLETTI and M. VAN ALSTYNE, “The EU Digital Markets Act: A Report from a Panel of Economic Experts”, *EU Science Hub*, 2021, available at <https://ec.europa.eu/jrc/en/publication/eu-digital-markets-act>, p. 26.

¹¹⁹ D. RUBINFELD and M. GAL, “Access Barriers to Big Data”, *op. cit.*, p. 374. Importantly however, these incentive costs might be quite low if the data has been collected as a by-product of the data holder’s core economic activity, rather than as the object its core economic activity.

innovation from third parties) shall be carefully weighed against the efficiency gains stemming from the data holder's data-driven network effects and economies of scope, scale and speed.¹²⁰

In evaluating this balance, inspiration can be drawn from the classic balancing exercise, underlying the allocation of intellectual property rights, between the need to incentivise creation/innovation, on the one hand, and the benefits from a large dissemination of these creations/innovations, on the other hand. Indeed, as pointed out by Martens, data economics issues are very similar to the intellectual property rights' law and economics issues, as they struggle with the same balancing act "between the social welfare costs of monopolistic exclusive rights and the social welfare gains from the innovation incentive effects".¹²¹

However, it should be pointed out that, as data are non-rivalrous, capital and general-purpose resources whose use creates spillovers in multiple fields across society,¹²² and as data are potentially (technically and contractually) excludable,¹²³ the benefits of data sharing may arguably be greater than the benefits of sharing other resources, and the costs of data sharing may arguably be smaller than the costs of sharing other resources.¹²⁴ Moreover, it can

be argued that if the compulsory B2B data sharing initiative pursues societal objectives (see Section II.B), the data holder's costs may weigh less heavily in the balance, as they are opposed to fundamental societal objectives that could be viewed as superseding "mere" economic considerations.

B. Articulation with personal data protection considerations

17. As many of the data that would be shared in the context of compulsory B2B data sharing initiatives could be deemed as being personal data,¹²⁵ it is also essential for these initiatives to factor personal data protection considerations. Indeed, the "adverse effects"¹²⁶ that this sharing could have on the data subjects' right to personal data protection must be considered. Solving this issue is one of the core challenges of initiatives imposing B2B data sharing, and it is often pointed out as one of the key obstacles to their wider use.¹²⁷ Naturally, the importance of this issue will be particularly exacerbated in social media and communication services markets where the value of data is, to some extent, determined by the social interactions

¹²⁰ J. KRÄMER, D. SCHNURR and S. BROUGHTON MICOVA, "The role of data for digital markets contestability", *op. cit.*, p. 75.

¹²¹ B. MARTENS, "An economic perspective on data and platform market power", *op. cit.*, p. 23.

¹²² See point 5. B. FRISCHMANN, *Infrastructure: The Social Value of Shared Resources*, *op. cit.*, cited in OECD, *Data-Driven Innovation: Big Data for Growth and Well-Being*, *op. cit.*, p. 179; J. DREXL, "Data Access and Control in the Era of Connected Devices", *op. cit.*, p. 3; M. MADISON, "Tools for Data Governance", *op. cit.*, p. 40.

¹²³ M. MADISON, "Tools for Data Governance", *op. cit.*, p. 34; M. STUCKE and A. GRUNES, *Big Data and Competition Policy*, *op. cit.*, p. 45.

¹²⁴ M. BOURREAU and A. DE STREEL, "Digital Conglomerates and EU Competition Policy", *op. cit.*, p. 31; H. SCHWEITZER, J. HAUCAP, W. KERBER and R. WELKER, "Modernising the

law on abuse of market power: Executive summary", *Report for the German Federal Ministry for Economic Affairs and Energy*, 29 August 2018, available at <https://ssrn.com/abstract=3250742>, p. 10. See also J. PRÜFER and C. SCHOTTMÜLLER, "Competing with Big Data", *op. cit.*

¹²⁵ "Any information relating to an identified or identifiable natural person (data subject)" (Article 4.1 of the GDPR).

¹²⁶ Article 29 Working Party, *Guidelines on the right to data portability*, WP 242 rev.01, 13 April 2017, p. 11. See also Article 20.4 of the GDPR: "The right [to data portability] shall not adversely affect the rights and freedoms of others" (emphasis added).

¹²⁷ See for example E. EGAN, "Data Portability and Privacy", *Facebook White Paper*, September 2019, available at https://iapp.org/media/pdf/fb_whitepaper_sep_2019.pdf; S. MARTINELLI, "Sharing data and privacy in the platform economy: the right to data portability and "porting rights"", *Regulating New Technologies in Uncertain Times*, L. REINS (ed.), The Hague, T.M.C. Asser Press, 2019, p. 133-152.

between data subjects.¹²⁸ Importantly, compulsory data sharing and personal data protection law considerations are not necessarily incompatible, and sharing personal data can be beneficial for society, governments, undertakings and individuals.¹²⁹ The challenge is thus not whether one policy objective should prevail over the other, but rather how they can be reconciled.¹³⁰

18. As a preliminary consideration, it should be outlined that one way to circumvent the application of the General Data Protection Regulation (hereafter “GDPR”) would be to anonymise the personal data before sharing it. While this might be possible in some cases (e.g. search data), there are other cases where this might reduce the value of the dataset and, in any case, truly effective anonymisation¹³¹

is difficult to achieve.¹³² This is especially true in light of the constant development of *Big Data*¹³³ analytics, which increase the risk of re-identification of the data subjects. This failure to effectively anonymise personal data has been demonstrated several times in the literature,¹³⁴ leading to the conclusion that what is often presented as anonymisation techniques are, in fact, merely pseudonymisation¹³⁵ techniques. Yet, pseudonymised data remain personal data covered by the GDPR, given that the data subject can still be re-identified.

In the vast majority of cases, the data will thus remain personal and the data sharing initiative

¹²⁸ OECD, *Consumer Data Rights and Competition – Background note*, June 2020, DAF/COMP(2020)1, available at <http://www.oecd.org/daf/competition/consumer-data-rights-and-competition.htm>, p. 45. See also G. NICHOLAS and M. WEINBERG, “Data Portability and Platform Competition: Is User Data Exported from Facebook Actually Useful to Competitors?”, 2019, available at <https://www.law.nyu.edu/centers/engelberg/pubs/2019-11-06-Data-Portability-And-Platform-Competition>, p. 3.

¹²⁹ For a “Code of practice” on *voluntary* data sharing, which aims at serving as a guide for businesses wishing to share personal data in a privacy-compliant way, see Information Commissioner’s Office, “Data sharing code of practice”, 17 December 2020, available at <https://ico.org.uk/for-organisations/data-sharing-a-code-of-practice/>.

¹³⁰ K. MURALIDHAR, R. SARATHY and H. LI, “To Share or Not to Share. That is Not the Question” – A Privacy Preserving Procedure for Sharing Linked Data”, 3 July 2014, <https://ssrn.com/abstract=2462152>, p. 2.

¹³¹ The ISO 29100 standard defines anonymisation as the: “process by which personally identifiable information (PII) is irreversibly altered in such a way that a PII principal can no longer be identified directly or indirectly, either by the PII controller alone or in collaboration with any other party” (ISO 29100:2011, point 2.2, available at <https://www.iso.org/obp/ui/#iso:std:iso-iec:29100:ed-1:v1:en>).

¹³² J. DREXL, “Legal Challenges of the Changing Role of Personal and Non-Personal Data in the Data Economy”, *Max Planck Institute for Innovation & Competition Research Paper No. 18-23*, 31 October 2018, available at <https://ssrn.com/abstract=3274519>, p. 4. See also I. GRAEF, R. GELLERT and M. HUSOVEC, “Towards a Holistic Regulatory Approach for the European Data Economy: Why the Illusive Notion of Non-Personal Data is Counterproductive to Data Innovation”, *TILEC Discussion Paper No. 2018-028*, September 2018, available at <http://ssrn.com/abstract=3256189>, p. 6; and C. WENDEHORST, “Of Elephants in the Room and Paper Tigers: How to Reconcile Data Protection and the Data Economy”, *Trading Data in the Digital Economy: Legal Concepts and Tools*, S. LOHSE, R. SCHULZE and D. STAUDENMAYER (ed.), Baden-Baden, Nomos, 2017, p. 330-331.

¹³³ “Big data” is a field that treats ways to analyze, systematically extract information from, or otherwise deal with data sets that are too large or complex to be dealt with by traditional data-processing application software” (https://en.wikipedia.org/wiki/Big_data).

¹³⁴ L. SWEENEY, “Weaving Technology and Policy Together to Maintain Confidentiality”, *Journal of Law, Medicine & Ethics*, 1997, Vol. 25, Issues 2 & 3, p. 98-110; L. ROCHER, J. HENDRICKX and Y.-A. DE MONTJOYE, “Estimating the success of re-identifications in incomplete datasets using generative models”, *Nature Communications*, 2019, Vol. 10, n° 3069, available at <https://www.nature.com/articles/s41467-019-10933-3>.

¹³⁵ “The processing of personal data in such a manner that the personal data can no longer be attributed to a specific data subject without the use of additional information, provided that such additional information is kept separately and is subject to technical and organisational measures to ensure that the personal data are not attributed to an identified or identifiable natural person” (Article 4.5 of the GDPR).

will therefore have to comply with the rules of the GDPR. This requires, on the one hand, to have a lawful basis for the data sharing,¹³⁶ and, on the other hand, to comply with the general principles of personal data protection.¹³⁷

19. Regarding the lawful basis of processing, this will likely be the necessity to comply with a legal obligation (i.e. the data sharing obligation).¹³⁸ Importantly, Recital 41 of the GDPR provides, in accordance with the case-law of the European Court of Human Rights and the European Court of Justice, that this “law” must be formulated in clear and precise terms, and be sufficiently predictable and accessible.¹³⁹ The requirement of predictability implies that anyone must be able to foresee, with a reasonable degree of certainty, the potential effects of this “law”.¹⁴⁰ The data sharing obligation thus has to be specific enough. Indeed, Article 5.3 of the GDPR provides that the legal obligation should¹⁴¹ specify the purpose for which the data is shared, the undertakings with whom the data is shared, and the types of data and the data subjects concerned by the data sharing obligation. Moreover, Article 5.3 of the GDPR adds that this legal obligation should meet an objective of public interest and be proportionate to the legitimate aim pursued.

20. The data sharing obligation must also comply with the general principles of personal data protection. First, the data subjects will need to be informed about the data sharing

obligation, in a fair and transparent manner.¹⁴² Second, the specific purpose of the sharing (economic, societal or “empowerment” objective) will have to be circumscribed, in compliance with the purpose limitation principle.¹⁴³ Third, only the necessary data for the fulfilment of the specific purpose justifying the data sharing shall be transferred, in light of the data minimisation principle.¹⁴⁴ To facilitate the compliance with this principle, the use of pseudonymised data and of privacy-preserving techniques could be encouraged. Fourth, it will need to be ensured that the data subjects’ rights, such as their right to object to the processing,¹⁴⁵ are given their fullest effect.¹⁴⁶ Finally, appropriate technical and organisational measures will have to be implemented in order to ensure the security of the data during the transfer and during the further processing.¹⁴⁷

21. It should also be outlined that, perhaps unsurprisingly, large data holders have started to use data protection considerations to justify refusals to share data with third parties,¹⁴⁸ and it is difficult to evaluate the legitimacy of such claims (dynamic nature of the notion of personal data, compliance with the purpose limitation principle,...).¹⁴⁹ To some extent, this is echoed by the European Data Protection Supervisor, which calls “for cautious approach

¹³⁶ Article 6 of the GDPR.

¹³⁷ Article 5 of the GDPR.

¹³⁸ Article 6.1.c) of the GDPR.

¹³⁹ R. ERGEC, *Protection européenne et internationale des droits de l’homme*, Bruxelles, Larcier, 2014, p. 232.

¹⁴⁰ *Ibidem*.

¹⁴¹ Article 5.3 of the GDPR uses the word “may” but, in light of the decision of the European Court of Human Rights in the *Rotaru* (ECtHR, *Rotaru v. Romania*, 4 May 2000, App. No. 28341/95) and *Shimolovos* (ECtHR, *Shimolovos v. Russia*, 21 June 2011, App. No. 30194/09) cases, we argue that the appropriate word should be “should”.

¹⁴² Articles 5.1.a) and 12 to 14 of the GDPR.

¹⁴³ Article 5.1.b) of the GDPR.

¹⁴⁴ Article 5.1.c) of the GDPR.

¹⁴⁵ Article 21 of the GDPR. See the example of the *GDF Suez* case (Autorité de la concurrence, Decision n° 14-MC-02 (*GDF Suez*), 9 September 2014, available at <https://www.autoritedelaconcurrence.fr/sites/default/files/commitments/14mc02.pdf>).

¹⁴⁶ Articles 13 to 22 of the GDPR.

¹⁴⁷ Article 5.1.f) and 32 of the GDPR.

¹⁴⁸ See for instance E. EGAN, “Data Portability and Privacy”, *op. cit.*

¹⁴⁹ I. GRAEF, R. GELLERT and M. HUSOVEC, “Towards a Holistic Regulatory Approach for the European Data Economy”, *op. cit.*, p. 10-11.

towards initiatives aimed at compulsory access to personal data in the competition context, i.e. access to personal data held by the incumbent undertaking by its competitors. Such sharing and access to data among competitors must be balanced against other policy concerns, especially data protection¹⁵⁰

According to several authors, this use of personal data protection considerations by large data holders to justify refusals to share data with third parties, combined with the fact that these undertakings can better sink the large implementation costs of the GDPR than smaller competitors that are disproportionately burdened by this instrument, could create some serious competition issues.¹⁵¹ For Gal and Aviv, the GDPR thus "limits competition and increases concentration in data and data-related markets, and potentially strengthens large data holders. It also further reinforces

the already existing barriers to data sharing in the EU, thereby potentially reducing data synergies that might result from combining different datasets controlled by separate entities".¹⁵² These authors notably argue that while sharing data with third parties often entails high hurdles, data can circulate much more easily within the broad ecosystems of large data holders,¹⁵³ which they have constituted through market expansion and through mergers and acquisitions.¹⁵⁴

Indeed, large data holders apply "double standards" in practice. They adopt a very restrictive approach towards data sharing with third parties while massively circulating their users' data internally. One of the potential explanations for this is that there is less visibility (and also scrutiny) on internal data circulation than on data sharing with third parties. On the one hand, this allows the large data holders to claim that they are fully compliant with the data protection requirements, while this may not be true (several large data holders have been fined by data protection authorities for infringing personal data protection legislation).¹⁵⁵ On the

¹⁵⁰ European Data Protection Supervisor, *Opinion 3/2020 on the European strategy for data*, 16 June 2020, available at https://edps.europa.eu/sites/edp/files/publication/20-06-16_opinion_data_strategy_en.pdf, p. 12.

¹⁵¹ See J. CRÉMER, Y.-A. DE MONTJOYE and H. SCHWEITZER, "Competition Policy for the digital era", *op. cit.*, p. 99. See also M. GAL and O. AVIV, "The Competitive Effects of the GDPR", *Journal of Competition Law and Economics*, September 2020, Vol. 16, Issue 3, p. 349-391; D. GERADIN, T. KARANIKIOTI and D. KATSIFIS, "GDPR Myopia: How a Well-Intended Regulation ended up Favoring Google in Ad Tech", *TILEC Discussion Paper DP 2020-012*, May 2020, available at <https://ssrn.com/abstract=3598130>; J. CAMPBELL, A. GOLDFARB and C. TUCKER, "Privacy Regulation and Market Structure", *Journal of Economics & Management Strategy*, Vol. 24, Issue 1, 2015, p. 47-73; J. JIA, G. ZHE JIN and L. WAGMAN, "The Short-Run Effects of GDPR on Technology Venture Investment", November 2019, available at <https://papers.ssrn.com/abstract=32789128>; T. ZARSKY, "Incompatible: The GDPR in the Age of Big Data", *Seton Hall Law Review*, 2017, Vol. 47, No. 4(2), p. 995-1020; T. ZARSKY, "The Privacy-Innovation Conundrum", *Lewis & Clark Law Review*, 2015, Vol. 19, No. 1, p. 115-168. For empirical evidence of this increased concentration, see G. JOHNSON and S. SHRIVER, "Privacy & market concentration: Intended & unintended consequences of the GDPR", March 2020, available at <https://ssrn.com/abstract=3477686>.

¹⁵² M. GAL and O. AVIV, "The Competitive Effects of the GDPR", *op. cit.*, p. 352.

¹⁵³ *Ibid.*, p. 361-369.

¹⁵⁴ For instance, since 2008, Google has acquired 168 undertakings (notably Waze, YouTube or Double-Click that were potential competitors), Facebook has acquired 71 undertakings (including Instagram and WhatsApp that were also arguably potential competitors), and Amazon has acquired 60 undertakings, which is a respective average of around 15, 6 and 5 acquisitions per year (Autorité de la concurrence, "Contribution de l'Autorité de la concurrence au débat sur la politique de concurrence et les enjeux numériques", *op. cit.*, p. 9; Lear, "Ex-post Assessment of Merger Control Decisions in Digital Markets – Final Report", 9 May 2019, available at https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/803576/CMA_past_digital_mergers_GOV.UK_version.pdf, p. ii).

¹⁵⁵ See <https://www.enforcementtracker.com/>. See for example: (FR) Commission Nationale de l'Informatique et des Libertés, *Google*, 21 January

other hand, it allows them to require “equivalent compliance” from third parties, who are asked to match the high level of compliance that large data holders claim to have achieved internally. Unfortunately, this “double standard” practice does not seem to be addressed appro-

riately by the controlling authorities, which have more often opted to intervene harshly against smaller actors instead.¹⁵⁶

C. Balance with the long-term and collective costs that (some of) these initiatives could entail in terms of individual autonomy

22. Finally, while legislators and policy makers usually heavily focus on the short-term positive aspects of compulsory B2B data sharing initiatives, they must be careful not to be blinded by these benefits and should also pay great attention to the risks that they could entail in terms of personal autonomy and informational self-determination.¹⁵⁷

This right to informational self-determination has traditionally been interpreted in an individual-centric way, in the sense that “controlling and manipulating information and data about oneself is an exercise of “self-determination.”¹⁵⁸ As a result of this traditional interpretation, “in a context of pervasive possessive individualism and at a time where private property and the laws of the market are perceived as the most efficient ways to allocate rights, the right to “informational self-determination” has increasingly been understood as implying a sort of alienable property right of the individual over his personal data and information.”¹⁵⁹ Yet, the individuals’ right

2019, Deliberation of the Restricted Committee SAN-2019-001, available at <https://www.cnil.fr/sites/default/files/atoms/files/san-2019-001.pdf>; Commission Nationale de l'Informatique et des Libertés, *Google LLC and Google Ireland Limited*, 7 December 2020, Deliberation of the Restricted Committee SAN-2020-012, available at <https://www.legifrance.gouv.fr/cnil/id/CNILTEXT000042635706>; Commission Nationale de l'Informatique et des Libertés, *Amazon Europe Core*, 7 December 2020, Deliberation of the Restricted Committee SAN-2020-013, available at <https://www.legifrance.gouv.fr/cnil/id/CNILTEXT000042635729>; (BE) Autorité de Protection des Données, *X c/ Google*, 14 July 2020, decision no. 37/2020, available at <https://www.autoriteprotectiondonnees.be/publications/decision-quant-aufond-n-37-2020.pdf>; (SWE) Datainspektionen, *Google LLC*, 10 March 2020, decision no. DI-2018-9274, available at <https://www.datainspektionen.se/globalassets/dokument/beslut/2020-03-11-beslut-google.pdf>; (IR) Data Protection Commission, *Twitter International Company*, 9 December 2020, decision no. IN-19-1-1, available at https://edpb.europa.eu/sites/edpb/files/decisions/final_decision_-_in-19-1-1_9.12.2020.pdf; Data Protection Commission, *WhatsApp Ireland Limited*, 20 August 2021, decision no. IN-18-12-2, available at https://edpb.europa.eu/system/files/2021-09/dpc_final_decision_redacted_for_issue_to_edpb_01-09-21_en.pdf; (IT) Garante per la protezione dei dati personali, *Facebook*, 14 June 2019, decision no. 9121486, available at <https://perma.cc/LHV7-2THY>; (UK) Information Commissioner's Office, *Facebook Ireland and Facebook Inc*, 24 October 2018, available at <https://ico.org.uk/media/action-weve-taken/mpns/2260051/r-facebook-mpn-20181024.pdf>; (NED) Autoriteit Persoonsgegevens, *TikTok Inc.*, 9 April 2021, (confidential reference), available at https://autoriteitpersoonsgegevens.nl/sites/default/files/atoms/files/decision_to_impose_a_fine_on_tiktok.pdf; (Lux) S. BODONI, “Amazon Gets Record \$888 Million EU Fine Over Data Violations”, 30 July 2021, available at <https://www.bloomberg.com/news/articles/2021-07-30/amazon-given-record-888-million-eu-fine-for-data-privacy-breach>; L. ADAM, “RGPD: Amazon écope d'une amende record à 746 millions d'euros”, 30 July 2021, available at <https://www.zdnet.fr/actualites/rgpd-amazon-ecope-d-une-amende-record-a-746-millions-d-euros-39926965.htm>.

¹⁵⁶ D. GERADIN, T. KARANIKIOTI and D. KATSIFIS, “GDPR Myopia”, *op. cit.*, p. 1.

¹⁵⁷ See Preamble of the Modernised Convention for the Protection of Individuals with Regard to the Processing of Personal Data, 17-18 May 2018, CM/Inf(2018)15-final.

¹⁵⁸ A. ROUVROY and Y. POUILLET, “The Right to Informational Self-Determination and the Value of Self-Development: Reassessing the Importance of Privacy for Democracy”, *Reinventing Data Protection: Proceedings of the International Conference (Brussels, 12-13 October 2007)*, Dordrecht, Springer, 2009, p. 51.

¹⁵⁹ A. ROUVROY and Y. POUILLET, “The Right to Informational Self-Determination and the Value of Self-Development”, *op. cit.*, p. 51.

to informational self-determination should not only be understood as their ability to decide which information/data they share with whom, but also, and more fundamentally, as their right to understand and exercise control on who has their data, what is being done with it and how this impacts their life and their possibility to exercise their autonomy by making their own choices, as opposed to being subject to decisions made about them on the basis of personal data used as proxies and on which they might not have control.¹⁶⁰

23. Accordingly, great caution should be applied when considering the adoption of compulsory B2B data sharing initiatives. In fact, if they are not strictly delineated, they might actually entail a high price and a loss of control for the individuals. Indeed, if the compulsory data sharing initiative leads to the divulgence of large quantities of data in order to obtain economic, societal or "empowerment" benefits, there is a risk that those data could be further disseminated with other actors, such as data brokers. This is notably due to the fact that there are strong informational asymmetries, as individuals "have no direct interaction with these data brokers, [and] they have no way of knowing the extent or nature of the information collected and sold for a multitude of

reasons including fraud prevention, marketing and credit scoring".¹⁶¹ This is fundamental to keep in mind because, due to these asymmetries of information, "consumers are rarely (if ever) completely aware about privacy threats and the consequences of sharing and protecting their personal information".¹⁶² Often, they will not know exactly which data will be used, for which purposes and whether these processing are truly necessary.¹⁶³ Moreover, "personal data may be used to influence individual decision-making in subtle, targeted, and hidden manners,¹⁶⁴ raising questions over the limits of a person's autonomy and self-determination in a world where so much personal data can be gathered and used to influence the individual".¹⁶⁵ As a result, an over-emphasis on the beneficial aspects of these compulsory data sharing initiatives could overshadow these risks, for individuals, of losing control and of becoming decreasingly capable of living by their fully autonomous and self-determined choices and behaviours.

24. In addition, it must also be underlined that protecting an individual's autonomy and self-determination is not only necessary for the individual itself, but also, more critically, for the "collective or societal interest in preser-

¹⁶⁰ *Ibid.*, p. 56. See also C. DE TERWANGNE, J.-P. MOINY, Y. POULLET et J.-M. VAN GYZEGHEM, "Rapport sur les lacunes de la Convention n° 108 pour la protection des personnes à l'égard du traitement automatisé des données à caractère personnel face aux développements technologiques (Partie II)", *Rapport pour le Comité consultatif de la convention pour la protection des personnes à l'égard du traitement automatisé des données à caractère personnel (T-PD)*, T-PD-BUR(2010)09 (II) FINAL, Conseil de l'Europe, Strasbourg, 3 novembre 2010, p. 6; Y. POULLET, J.-M. DINANT, C. DE TERWANGNE et M.-V. PEREZ-ASINARI, "L'autodétermination informationnelle à l'ère de l'internet", *Rapport pour le Comité consultatif de la convention pour la protection des personnes à l'égard du traitement automatisé des données à caractère personnel (T-PD)*, Conseil de l'Europe, Strasbourg, 18 novembre 2004.

¹⁶¹ A. ROUVROY, "Of Data and Men: Fundamental Rights and Liberties in a World of Big Data", *Report for the Consultative Committee of the Convention for the protection of individuals with regard to automatic processing of personal data (T-PD)*, T-PD-BUR(2015)09REV, Council of Europe, Strasbourg, 11 January 2016, p. 8.

¹⁶² A. ACQUISTI, C. TAYLOR and L. WAGMAN, "The Economics of Privacy", *Sloan Foundation Economics Research Paper No. 2580411*, 8 March 2016, available at <https://ssrn.com/abstract=2580411>, p. 3.

¹⁶³ A. ROUVROY and Y. POULLET, "The Right to Informational Self-Determination and the Value of Self-Development", *op. cit.*, p. 68.

¹⁶⁴ See R. CALO, "Digital market manipulation", *George Washington Law Review*, 2014, Vol. 82, Issue 4, p. 995-1051.

¹⁶⁵ A. ACQUISTI, C. TAYLOR and L. WAGMAN, "The Economics of Privacy", *op. cit.*, p. 44.

ving a free and democratic society: individual autonomy and deliberative democracy presuppose a series of rights and liberties allowing individuals to live a life characterized as (partly at least) self-determined, self-authored or self-created, following plans and ideals that they have chosen for themselves".¹⁶⁶ Accordingly, the individuals' autonomy and their right to (informational) self-determination should not be conceived "as a liberty held in isolation by an individual living secluded from the rest of society but, on the contrary, as a right enjoyed as member of a free society".¹⁶⁷

Indeed, when data about an individual's behaviour, habits or preferences is shared, this also reveals significant information about her friends, family, neighbours as well as about any other people having similar characteristics.¹⁶⁸ In economic terms, it can thus be said that data sharing creates negative externalities.¹⁶⁹ This can be illustrated by the infamous *Cambridge Analytica* scandal, where the data disclosed by 270.000 users of the application called

"This is your digital life" allowed *Cambridge Analytica* to infer detailed information about more than 50 million *Facebook* users and to use these insights to send targeted political messages to these *Facebook* users in order to influence the Brexit referendum and the 2016 US presidential election.¹⁷⁰ This illustrative example, which is only the tip of the iceberg, reveals that "the very nature of predictive big data approaches is to forecast the behaviour or characteristics of groups of individuals from data shared by samples".¹⁷¹ In light of this relational and collective nature of data¹⁷², it will also be fundamental, when considering the adoption of compulsory data sharing initiatives, to balance the potential gains from data sharing (economic, societal, "empowerment") with the potential collective costs for individuals in terms of control, autonomy and self-determination.

IV. CONCLUSION

25. As outlined in Section II, in light of data's characteristics, a growing call for imposing data sharing is being made. This can be

¹⁶⁶ A. ROUVROY and Y. Poullet, "The Right to Informational Self-Determination and the Value of Self-Development", *op. cit.*, p. 55. See also G. DWORKIN, *The Theory and Practice of Autonomy*, Cambridge, Cambridge University Press, 1988.

¹⁶⁷ A. ROUVROY and Y. Poullet, "The Right to Informational Self-Determination and the Value of Self-Development", *op. cit.*, p. 57.

¹⁶⁸ D. ACEMOĞLU, A. MAKHDOUNI, A. MALEKIAN and A. OZDAGLAR, "Too much data: prices and inefficiencies in data markets", *NBER Working Paper No. 26296*, 2019, available at https://www.nber.org/system/files/working_papers/w26296/w26296.pdf, p. 1.

¹⁶⁹ D. ACEMOĞLU, A. MAKHDOUNI, A. MALEKIAN and A. OZDAGLAR, "Can we have too much data?", 18 November 2019, available at <https://voxeu.org/article/can-we-have-too-much-data>; D. ACEMOĞLU, A. MAKHDOUNI, A. MALEKIAN and A. OZDAGLAR, "Too much data: prices and inefficiencies in data markets", *op. cit.*, p. 3 and 36-37. On these negative externalities, see also J.A. FAIRFIELD and C. ENGEL, "Privacy as a public good", *Duke Law Journal*, 2015, Vol. 65, Issue 3, p. 385-457; M. MACCARTHY, "New directions in privacy: Disclosure, unfairness and externalities", *Journal of Law and Policy for the Information Society*, 2011, Vol. 6, p. 425-512.

¹⁷⁰ D. ACEMOĞLU, A. MAKHDOUNI, A. MALEKIAN and A. OZDAGLAR, "Can we have too much data?", *op. cit.*; D. ACEMOĞLU, A. MAKHDOUNI, A. MALEKIAN and A. OZDAGLAR, "Too much data: prices and inefficiencies in data markets", *op. cit.*, p. 1. See also A. CHANG, "The Facebook and Cambridge Analytica scandal, explained with a simple diagram", 2 May 2018, available at <https://www.vox.com/policy-and-politics/2018/3/23/17151916/facebook-cambridge-analytica-trump-diagram>; K. GRANVILLE, "Facebook and Cambridge Analytica: What You Need to Know as Fallout Widens", *New York Times*, 19 March 2018, available at <https://www.nytimes.com/2018/03/19/technology/facebook-cambridge-analytica-explained.html>.

¹⁷¹ D. ACEMOĞLU, A. MAKHDOUNI, A. MALEKIAN and A. OZDAGLAR, "Can we have too much data?", *op. cit.*

¹⁷² A. ROUVROY, "Homo juridicus est-il soluble dans les données?", *Law, Norms and Freedoms in Cyberspace / Droit, normes et libertés dans le cybermonde: Liber Amicorum Yves Poulet*, E. DEGRAVE, C. DE TERWANGNE, S. DUSOLLIER et R. QUECK (dir.), Bruxelles, Larcier, 2018, p. 429.

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justified by three types of rationale, namely economic, societal, and “empowerment” considerations. However, as indicated in Section III, data sharing does not come without a cost. Accordingly, any initiative imposing data sharing, whatever its objective, must consider several balancing exercises. In the context of this contribution, we highlighted three fundamental balancing exercises, namely the need to balance the benefits stemming from compulsory B2B data sharing initiatives with: the economic interests of the data holder; personal data protection considerations; and the long-term and collective costs that (some of) these initiatives could entail in terms of individual autonomy.

In this regard, it should be outlined that there is arguably no one-size fits all answer to how these balancing exercises should be solved. That being said, the objective pursued by the compulsory data sharing initiative (economic, societal or empowerment) could be a key starting point when addressing them.¹⁷³ For

instance, as indicated above,¹⁷⁴ if the compulsory B2B data sharing initiative pursues societal objectives (see Section II.B), the data holder’s costs may weigh less heavily in the balance, as they are opposed to fundamental societal objectives that could be viewed as superseding “mere” economic considerations.

Rather, addressing these balancing exercises will require to formulate the rules of these B2B data sharing obligations in such a way that they allow recurring checks and balances, on a case-by-case basis. Indeed, for each of these cases, it will be necessary to factor the impact that the specific circumstances of the case, the passing of time and the development of technological innovations will have on the solution to be given to these balancing exercises.

¹⁷³ T. TOMBAL, *Imposing Data Sharing among Private Actors: A Tale of Evolving Balances*, Alphen aan den Rijn, Kluwer Law International, 2022 (to be published).

¹⁷⁴ See point 16.