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Verticalization of Data Sharing and the Difficult Path to 'Eunnovation'*

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ABSTRACT: Data sharing has been offered as a useful tool to open up impregnable markets to competition. EU law has a rich tradition in enabling business-to-business data sharing in a sector-specific (or vertical) fashion, which has formed the basis of the quest for an internal market where data flows freely. Two recent legislative instruments, the Digital Markets Act and the Data Act, contain industry- and actor-specific data sharing provisions. By unleashing troves of data hoarded by large incumbents, the Acts aspire to empower small and medium-sized enterprises, unlocking organic innovation. Notwithstanding the normative desirability of such a goal, it is unclear whether verticalized rules on data sharing can foster innovation by entrants and smaller undertakings. This Article legally and economically appraises the Acts to shed light on this issue. Read together, the data sharing provisions under the Digital Markets Act and the Data Act pursue the common aim of spurring disruptive (market creating) and complementary innovation. However, the Acts suffer from legal uncertainty and are liable to produce unintended economic consequences, such as diminishing the ability of complementors to satisfy consumers whilst simultaneously strengthening incumbent platform operators. The conclusions cast doubt on whether the vertical data sharing rules of the Acts can achieve their intended objectives, that is, ensuring the contestability of digital markets by promoting organic innovation by smaller scale firms.

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I. Introduction

The digital economy challenges jurisdictions around the globe. Platforms occupy powerful market positions due to increasing returns to scale, economies of scope, network effects, and zero-priced services[1]. Business models based on accumulating and exploiting data increases switching costs for users and may lead to consumer lock-in[2]. Data portability can remedy problems of "user inertia" by allowing users to easily transmit their data on a platform to another service provider[3]. Commentators view data portability and data sharing in general as crucial for switching, multi-homing, and ultimately, market contestability[4]. Conversely, inhibiting data sharing can produce exclusionary effects by denying entrants scale, artificially favouring the first mover in a market[5].

European law provides various avenues for data sharing. Generally, these opportunities apply to all industries and undertakings (horizontal data portability). For example, the General Data Protection Regulation (GDPR) provides for a universal right to data portability[6]. As *lex generalis*, the data portability regime under the GDPR is formulated broadly. Users wanting to port their data based on the GDPR have to satisfy numerous criteria, including paying a reasonable fee and navigating technical difficulties. Because of many obstacles hindering its effective use, data portability is the most underutilized tool of the GDPR[7].

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[1] Filippo Lancieri & Patricia Sakowski, "Competition in digital markets: A review of expert reports", *Stanford Journal of Law, Business & Finance* 26 (2021): 65.

[2] Whitney Nixdorf, "Planting in a walled garden: Data portability policies to inform consumers how much (if any) of the harvest is their share", *Journal of Transnational Law and Contemporary Problems* 29 (2020): 135.

[3] Jacques Cremer, Yves-Alexandre de Montjoye, & Heike Schweitzer, "Competition policy for the digital era", https://ec.europa.eu/competition/publications/reports/kd0419345enn.pdf.

[4] Justus Haucap, "A German approach to antitrust for digital platforms", in *Digital platforms and concentration,* ed. Guy Rolnik (Chicago: ProMarket, 2019), 8.

[5] Steven C. Salop, "Strategic entry deterrence", *The American Economic Review* 69, no. 2 (1979): 335; Selçukhan Ünekbaş, "Do first-mover advantages last?", *Network Law Review*, 2022, https://www.networklawreview.org/phd-advantage/.

[6] Orla Lynskey, "Aligning data protection rights with competition law remedies? The GDPR right to data portability" 42 (6) *European Law Review* 42, no. 6 (2017): 793.

[7] Sophie Kuebler-Wachendorff, Robert Luzsa, Johann Kranz, Stefan Mager, Emmanuel Syrmoudis, Susanne Mayr & Jens Grossklags, "The right to data portability: Conception, status quo, and future

Creating an internal market where data flows freely is of paramount importance for preparing Europe for the digital age[8]. A concrete step in this quest is the verticalization of data sharing[9]. In this context, verticalization refers to creating industry-, user-, and market-specific legal obligations. So far, EU law has fostered data sharing vertically, such as in telecommunications and banking[10]. This *status quo* is bound to accelerate. The Digital Markets Act (DMA) provides users with a strengthened right to transfer data from large digital platform operators to complementors. The Data Act establishes a qualified right to data sharing that only benefits small-and-medium sized enterprises, but not powerful market players.

Discussing the verticalization of data sharing is important for three reasons. First, vertical data sharing rules are designed to remedy the shortcomings of horizontal data sharing obligations. Vertical rules take into account the needs of specific industries and users, aiming to enhance effectiveness[11]. Second, the new European rules on data sharing explicitly favour smaller firms and entrants over incumbents and gatekeepers. Thus, the verticalization of data sharing is geared towards achieving greater market contestability by spurring small-firm innovation[12]. By contrast, horizontal data sharing obligations benefit not only entrants and smaller undertakings,

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directions", *Informatik Spektrum* 44 (2021): 264. Some have thus called for a "decoupling" of data portability from the data privacy framework, or at least a major overhaul of the current EU system. See Wenlong Li, "Between incrementalism and revolution: How the GDPR right to data portability is revamped by the EU and the UK post-Brexit", in *Research Handbook of EU Data Protection Law,* ed. Eleni Kosta & Ronald Leenes (Tilburg: Elgar, 2021), 570.

[8] European Commission, *Data protection as a pillar of citizens' empowerment and the EU's approach to the digital transition – two years of application of the General Data Protection Regulation,* accessed 31 March, 2023. https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52020DC0264&from=EN

[9] Some authors called for industry-specific rules to foster competition in the digital economy. See e.g., William P. Rogerson & Howard Shelanski, "Antitrust enforcement, regulation, and digital platforms" *University of Pennsylvania Law Review* 168 (2020): 1911.

[10] OECD, "Data portability in open banking: Privacy and other cross-cutting issues", *OECD Digital Economy Papers No. 348*, 2023, https://www.oecd.org/digital/data-portability-in-open-banking-6c872949-en.htm.

[11] There are calls for a context-specific understanding of data in antitrust analyses. See e.g., Reuben Binns and Elettra Bietti, "Dissolving privacy, one merger at a time: Competition, data and third-party tracking", *Computer Law & Security Review* 36 (2020): 105369.

[12] Giuseppe Colangelo and Oscar Borgogno, "Open banking and the ambiguous competitive effects of data portability", *CPI Antitrust Chronicle,* 2021, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3826444.

but also incumbents, with ambiguous effects on firm entry[13]. Third, it is unclear whether the discriminatory design of verticalized data sharing obligations is economically desirable. The new rules' favouring of smaller firms and entrants may come at the expense of innovative growth.

This Article proceeds as follows. Chapter II defines horizontal and vertical modes of regulation and explains what verticalization of the regulatory sphere entails. It also addresses the possible reasons behind regulatory choices for horizontal or vertical rules. Chapter III explores novel data sharing regimes under the Digital Markets Act and the Data Act. It also explores whether these instruments are likely to achieve their objective of promoting organic innovation. Chapter IV concludes by summarizing the causes and consequences of the proliferation of vertical data sharing rules.

II. Dimensions of regulation

A. Defining horizontal and vertical modes of regulation

Understanding the trend towards a verticalized regulatory sphere on data sharing requires grasping what vertical or horizontal regulation means. One can define such regulatory dimensions in a hierarchical manner. In the EU, harmonizing legislation is a form of regulation that centralizes applicable rules under the horizontal umbrella of the European internal market[14]. Harmonizing legislation typically entails technical specifications for certain products, health, safety, and environmental requirements, and other measures deemed fit for universalization at the European level[15]. By contrast, in cases where the EU decides not to exercise its shared competence on the internal market, the activity in question becomes vertically

[13] Wing Man Wynne Lam & Xingyi Liu, "Does data portability facilitate entry?" *International Journal of Industrial Organization* 69 (2020): 102564. The impact of data portability on consumer welfare is also ambiguous; See Don-Shin Jeon, Domenico Menicucci, and Nikrooz Nasr, "Compatibility choices, switching costs, and data portability", *American Economic Journal: Microeconomics* 15 (2023): 30.

[14] Some authors characterize vertical regulation as the centralized monitoring of economic entities by a governmental authority. In this conceptualization, public bodies exist vertically "above" economic undertakings. See Yaohui Jiang, Zhaowen Zhang, and Guojie Xie, "Emission reduction effects of vertical environmental regulation", *Journal of Environmental Management* 323 (2022): 116180.

[15] For example, the new Renewable Energy Directive (RED II) entails rules on harmonizing the support schemes Member States could grant to renewable energy projects. See Mariam Dekanozishvili, *Dynamics of EU renewable energy policy integration* (Springer, 2023), 25.

regulated by the Member States in accordance with general principles of EU law[16].

Another way to conceptualize horizontal and vertical regulations is through generality and specificity. Horizontal regulations are legal instruments enabling or constraining the use, design, or application of a particular service in a general, broad manner. By contrast, vertical regulations create a regulatory framework on a sector-, product-, or entity-specific basis. For example, European data protection legislation is a horizontal measure applicable to processing activities concerning personal data[17]. The GDPR does not discriminate based on industries or persons. By contrast, data protection regimes in the United States are vertically designed. These rules protect data only in certain circumstances, either based on the industry in question (e.g., healthcare data) or on the type of persons to whom data belongs (e.g., children's data)[18].

Horizontal regulations address a field in its entirety. They provide universally applicable rules that serve as guideposts for legal interpretation. At the same time, the broader scope of horizontal regulations inevitably leads to generalization and abstraction. Compared to sector- or product-specific (i.e., vertical) regulations, horizontal rules must retain applicability to industries with diverse characteristics, reducing the capacity to employ targeted action[19]. By contrast, vertical regulations can more effectively address the idiosyncrasies of particular sectors, actors, or products. They are often more precise and targeted. As a downside, a proliferation of vertical regulation in a legal field may endanger coherence by leading to overlapping rules. Furthermore, as vertical regulations discriminate between industries by definition, they can lead to regulatory imbalances, which can

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[16] An example is the principle of mutual recognition. See Susanne K. Schmidt, "Mutual recognition as a new mode of governance", *Journal of European Public Policy* 14, no. 5 (2007): 667.

[17] Lingjie Kong, "Data protection and transborder data flow in the European and global context", *European Journal of International Law* 21, no. 2 (2010): 441.

[18] Laura Bradford, Mateo Aboy, and Kathleen Liddell, "International transfers of health data between the EU and USA: A sector-specific approach for the USA to ensure an 'adequate' level of protection", *Journal of Law and Biosciences* 15, no. 7 (2020): 55.

[19] This aspect led some scholars to label horizontal rules as "regulatory overaggregation", which refers to "the grouping of a large number of disparate and only nominally related subjects under a single regulatory regime". See Kristian Stout, "The AI Act and regulatory overaggregation", *Truth on the Market Blog*, 2023, https://truthonthemarket.com/2023/04/27/the-ai-act-and-regulatory-overaggregation/.

contribute to inflating costs and stagnation in targeted industries as a consequence of "industry hopping"[20].

Inherent risks and/or opportunities justify the institution of vertical rules to regulate particular industries, entities, and products. For example, protecting children's rights under data protection more strictly reflects the more severe risks associated with exposing information pertaining to minors. Similarly, sector-specific market power regulations applied to energy, telecommunications, and utilities denote the naturally monopolistic characteristics of these industries. Absent targeted scrutiny, such market conditions jeopardize the attainment of effective competition, thus necessitating regulation. Vertical rules address specific dangers or opportunities associated with an economic activity or person, and the desirability and viability of vertical rules require evaluating those particular reasons behind their enactment. Successful vertical rules clearly state their objectives in isolating the subject matter and contain provisions that are effective at tackling the concerns presented therein.

It is rare for regulation to be entirely vertical or horizontal. Rather, regulations exist on a spectrum with varying degrees of scope. For example, EU law has traditionally conceived green public procurement as vertical regulation[21]. Green public procurement refers to public authorities making sustainable purchasing decisions. In the EU, a large portion of authority for regulating sustainable procurement remains with national governments; Member States retain the competence to issue mandatory or voluntary targets for green purchasing, procedural guidelines, and benchmarking. EU law contributes to green public procurement mainly through sector- or product-specific rules, such as promulgating technical specifications for greening the purchase of office products (e.g., computers) and timber[22].

Acknowledging that dimensions of regulation have a fluid nature means that rules can become more vertical or horizontal over time. Indeed, horizontal and vertical modes of regulation exist in a relationship of

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[20] Airlie Hilliard, "Regulating AI: The horizontal vs. vertical approach", *Holistic AI*, 2022, https://www.holisticai.com/blog/regulating-ai-the-horizontal-vs-vertical-approach.

[21] Harri Kalimo, Mirella Miettinen, Max Jansson, Eleanor Mateo, Jarkko Pesu, Katriina Alhola, Sanna Lehtinen, Ari Nissinen, and Selçukhan Ünekbaş, "Procuring sustainability – How the public sector can deliver on its greening potential", *Journal of Transnational Law & Contemporary Problems* 32 (2022): 33.

[22] Lela Melon, "More than a nudge? Arguments and tools for mandating green public procurement in the EU", *Sustainability* 12, no. 3 (2020): 988.

continuous feedback[23]. Jurisdictions favouring light-touch arrangements to spur innovation may initially favour sector-specific (i.e., vertical) rules, perhaps as a component of experimentalist regulation[24]. After a prescribed period elapses, regulators can take stock of the compartmentalized approach and decide whether to transform the results of their experiment into a horizontally applicable instrument. For instance, the sector- and product-specific approach to green public procurement is giving way to a more exhaustive regulatory framework at the European level, especially with the advent of the Green Deal[25]. Comprehensive horizontal rules may also be devised to address new technologies or emerging products existing laws are inadequate in regulating[26]. In a similar vein, jurisdictions adopting a precautionary stance toward new technologies may enact horizontal rules at first[27]. Over time, these jurisdictions may spot industries with specific needs that would benefit from a specialized version of the framework legislation, thus leading to verticalization. A shift from horizontal to vertical rulemaking may also occur as the reasons initially eliciting precaution begin to dissipate.

B. Some examples of dimensional oscillation in EU Law

As argued, vertical rules can gradually become horizontal, and vice-versa, in what we may call dimensional oscillation. Regulation of the digital sphere in the EU is rife with examples of dimensional oscillation. EU law has hitherto relied on vertical regulation to control the application of artificial intelligence. The Medical Devices Regulation imposes stringent

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[23] For example, some have offered the Second Payment Services Directive (PSD2) as a framework to construct a horizontal data sharing regime for the EU. See Federico Ferretti, "A single European data space and Data Act for the digital single market", *European Journal of Legal Studies* 14 (2020): 173.

[24] Charles F. Sabel and Jonathan Zeitlin, "Learning from difference: The new architecture of experimentalist governance in the EU", *European Law Journal* 14, no. 3 (2008): 271.

[25] See, e.g., Kleoniki Pouikli, "Towards mandatory Green Public Procurement (GPP) requirements under the EU Green Deal: Reconsidering the role of public procurement as an environmental policy tool", *ERA Forum* 21 (2021): 699.

[26] For example, some authors call for upgrading the REACH Regulation (on chemicals) to address problems raised by the increasing use of nanomaterials. See David Azoulay and Vito Buonsante, "Regulation of nanomaterials in the EU: Proposed measures to fill in the gap", *European Journal of Risk Regulation* 5, no. 2 (2014): 228.

[27] For example, the Artificial Intelligence Act of the EU could be understood as a precautionary-horizontal regulation. See e.g., Michael Veale and Frederik Z. Borgesius, "Demystifying the Draft EU Artificial Intelligence Act – Analysing the good, the bad, and the unclear elements of the proposed approach", *Computer Law Review International* 22, no. 4 (2022): 97.

requirements on medical devices developed with the help of AI[28]. Such an approach reflects the heightened risk to health and safety surrounding the medical sector and a desire to ensure human oversight over automated processes. By contrast, the new proposal for the Artificial Intelligence Act is a textbook example of horizontal regulation[29]. As the proposal suggests, the Act is couched on the fast-evolving nature of AI, which is beginning to pervade social and economic life across industries and activities.

Several reasons may explain the horizontal turn of AI regulation in the EU. For some commentators, the wide scope of the Act is a direct consequence of the value trade-offs between responsibility and innovation[30]. Accordingly, a safety-first approach to AI necessitates horizontal measures. The proposal confirms this view. In particular, the Act aims to ensure that AI-based products placed on the internal market are safe and respect fundamental rights and EU values. However, an alternative account emphasizing the economic rationale behind the Act also has illustrative value[31]. The European Commission's Explanatory Memorandum offers a starting point[32]. According to the EC, the reason behind the Act's preparation is an EU interest to preserve technological leadership[33]. Indeed, one is led to doubt the purported safety-first approach of the Act by comparing the references to fundamental rights (84 times) and the market (188 times) in the text. The horizontalization of AI regulation in the EU may merely

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[28] R. Beckers, Z. Kwade, and F. Zanca, "The EU medical device regulation: Implications for artificial intelligence-based medical device software in medical physics", *Physica Medica* 83 (2021): 1.

[29] Patrick Glauner, "An assessment of the AI Regulation proposed by the European Commission", in *The future circle of healthcare*, ed. Sepehr Ehsani *et al.* (Switzerland: Springer, 2022), 119.

[30] Markus Trengove and Emre Kazım, "Dilemmas in AI regulation: An exposition of the regulatory trade-offs between responsibility and innovation", *Social Science Research Network* (SSRN), 2023, https://dx.doi.org/10.2139/ssrn.4072436.

[31] Marco Almada and Nicolas Petit, "The EU AI Act: Between product safety and fundamental rights", *Social Science Research Network* (SSRN), 2023, https://dx.doi.org/10.2139/ssrn.4308072.

[32] European Commission, *Proposal for a Regulation of the European Parliament and of the Council laying down harmonised rules on Artificial Intelligence (Artificial Intelligence Act) and amending certain Union Legislative Acts* (COM(2021) 206 final), April 21, 2021, https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A52021PC0206.

[33] It is questionable to what extent the EU has a "leadership" in technology in the first place. The dominating view is that the EU missed the opportunity to cultivate a powerful technology industry, at least in terms of Web2. See, e.g., "Securing Europe's competitiveness: Addressing its technology gap" (*McKinsey Global Institute Report*, 22 September 2022) https://www.mckinsey.com/capabilities/strategy-and-corporate-finance/our-insights/securing-europes-competitiveness-addressing-its-technology-gap.

constitute yet another episode of the EU's "internal market rationality", whereby social issues are instrumentalized to advance economic ends[34].

Whilst the AI Act represents a turn from vertical to horizontal rulemaking, further verticalization of AI regulation cannot be disregarded. This is for two reasons. First, as the EC's Explanatory Memorandum suggests, the AI Act is intended to lay down only the minimum necessary requirements to address AI risks. Second, in a bid to foster innovation, the AI Act foresees the establishment of regulatory sandboxes. These schemes allow for the controlled development, training, testing, and validation of AI systems under the direct supervision of public authorities. Regulatory sandboxes are a cornerstone of experimentalist rulemaking[35]. The experience gathered thereunder may be used to craft more or less stringent rules for the application of AI in particular industries.

Another example of dimensional oscillation is the cybersecurity framework. For a period, the EU legislative framework concerning the security of Internet-of-Things (IoT) products was vertically organized based on sector-specific rules. For example, the Radio Equipment Directive, General Product Safety Regulation, and Medical Devices Regulation include product standards and technical specifications concerning cybersecurity. This landscape led to calls for a horizontal legislation harmonizing the fragmented rules by introducing a baseline of cybersecurity standards for all connected devices[36]. Similar to rationales underpinning the AI Act, the importance of IoT for contemporary societies as well as the rapid pace with which the technology has grown motivated these calls[37].

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[34] Marija Bartl, "Internal market rationality, private law and the direction of the Union: Resuscitating the market as the object of the political", *European Law Journal* 21, no. 5 (2015): 572.

[35] Sofia Ranchordas, "Experimental law-making in the EU: Regulatory sandboxes", *University of Groningen Faculty of Law Research Paper No. 12*, 2021, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3963810. As regulatory policy, sandboxes themselves can become horizontal, or "universal". In the United States, the state of Arizona provides an example. See Adam Thierer and Brant Skorup, "How Arizona is getting innovation culture right", *Discourse Magazine*, 2022, https://www.discoursemagazine.com/politics/2022/06/17/how-arizona-is-getting-innovation-culture-right/.

[36] Pier Giorgio Chiara, "The IoT and the new EU cybersecurity regulatory landscape", *International Review of Law, Computers & Technology* 36, no. 2 (2022): 118.

[37] These calls seem answered, as implied by the introduction of the EU Cyber Resilience Act. The proposal intends to establish a baseline for cybersecurity and allows for further sector-specific rules to impose stricter cybersecurity requirements. See Pier Giorgio Chiara, "The Cyber Resilience Act: The EU Commission's proposal for a horizontal regulation on cybersecurity for products with digital elements", *International Cybersecurity Law Review* 3 (2022): 255.

The vertical/horizontal regulation framework, and the oscillation between such modes of regulating is perhaps most visible in business-to-business (B2B) data sharing. As a horizontal measure, the GDPR provides for an overarching right to personal data portability, although this right must be activated by data subjects, fulfilling the consumers' request to port their data results in a transfer from one undertaking to another[38]. However, the European legislative framework applicable to data sharing is far broader than the GDPR. In fact, the EU has regulated B2B data sharing for a long time, mainly vertically[39]. Notwithstanding horizontal measures like the GDPR, EU data sharing law allows, facilitates, or mandates data sharing on an industry-specific (vertical) basis to achieve particular goals.

Some regulations aim to prevent distortions of competition by introducing asymmetric obligations for undertakings with significant market power. These asymmetric obligations are by definition vertical, since they only apply to certain firms with unique characteristics that justify the application of differentiated rules. For example, Article 23 of the Recast Electricity Directive provides that "metering and consumption data, as well as data required for customer switching" should be provided to eligible parties upon request in a non-discriminatory and transparent manner[40]. Furthermore, Article 24 empowers the EC to adopt interoperability requirements and procedures to ensure smooth and affordable transmission of such data. Lastly, Article 34 entrusts the Member States with the duty to ensure that vertically integrated undertakings do not enjoy privileged access to data. Former monopolies can leverage resources inherent to their prior market position to distort competition, since such conduct cannot be replicated by equally efficient competitors[41]. Thus, the data sharing

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[38] By contrast, the regulation (2018/1807/EU) focused on the free flow of non-personal data empowers the EC as a coordinator of efforts geared toward self-regulation in data sharing. There have been some examples of such cooperation; for example, leading technology firms gathered together to create the Data Transfer Initiative to foster the portability of personal and non-personal data. See Chris Riley, "Portability, not doctrine, is key to unlock user agency for data", *CPI Antitrust Chronicle*, 2023, https://www.competitionpolicyinternational.com/wp-content/uploads/2023/04/ANTITRUST-CHRONICLE-Essential-Facilities-April-2023.pdf.

[39] For an example of a rare horizontal data sharing rule, the Database Directive (96/9/EC) can be considered as introducing a horizontal obligation to share parts of a database's content for the benefit of users.

[40] 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 (recast).

[41] Judgment of 12 May 2022, *Servizio Elettrico Nazionale*, C-377/20, ECLI:EU:C:2022:379.

rules of the Recast Electricity Directive directly contribute to achieving the goals pursued – providing an example of vertical data sharing regulation.

Data sharing also helps to facilitate or enable particular economic activities. For example, some regulations mandate data sharing in high-technology industries with frequent testing and experimentation, such as chemicals, fertilizers, and plant protection products[42]. These rules are instituted to prevent duplicative efforts in time- and resource-intensive sectors, thereby making it easier for the sector as a whole to develop through cumulative innovation. By contrast, in some cases the sharing of data is inherently necessary for the functioning of an industry[43]. For instance, credit institutions can legitimately share borrowers' personal data with credit purchasers, as the absence of such transfers would make it impossible for credit purchasers to make informed decisions and risk assessment to conduct their economic activity[44]. Similarly, the sharing of static and dynamic data between charging point operators, mobility service providers, e-roaming platforms, distribution systems, and end consumers, as foreseen under the proposal for a regulation concerning alternative fuels, aims to create an open data ecosystem for developing recharging/refuelling infrastructures for road transport[45]. Since these rules are designed strictly in accordance with the requirements of the industries in question, they constitute vertical regulations.

Vertical data sharing rules rely extensively on the characteristics of the industries they regulate. Nonetheless, vertical data sharing rules also interact with generally applicable (horizontal) measures. Indeed, EU competition law interacts extensively with data sharing rules. For example, motor vehicle manufacturers can establish pools to share emissions data

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[42] For example, Article 30 of the REACH Regulation (1907/2006/EU) as well as Article 61 of the PPP Regulation (1107/2009/EU).

[43] Another example could be the data access rules in favour of financial technology companies under the Second Payment Services Directive (PSD2). These rules allow FinTech firms access to accounting and transaction information to function effectively. On the PSD2 and its effects on competition in banking, see Markos Zachariadis and Pınar Özcan, "The API economy and digital transformation in financial services: The case of open banking", *SWIFT Institute Working Paper No. 001*, 2017, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2975199.

[44] See e.g., Recital 36 of the Directive (EU) 2021/2167 of the European Parliament and of the Council of 24 November 2021 on credit servicers and credit purchasers.

[45] See Article 18 (3) of the Proposal for a Regulation of the European Parliament and of the Council on the deployment of alternative fuels infrastructure, and repealing Directive 2014/94/EU of the European Parliament and of the Council.

to promote sustainable manufacturing practices[46]. However, such data sharing is without prejudice to competition rules, and the EC does not tolerate restrictions of competition under the guise of data sharing[47]. This is an example of competition rules limiting the sharing of data. An inverse scenario is also possible. For instance, the EU lacks a robust data sharing mechanism in agriculture, leading private parties and non-governmental organizations to facilitate agricultural data sharing through voluntary schemes or codes of conduct[48]. In the absence of vertical data sharing rules concerning the agricultural sector, some have suggested applying competition laws to ensure case-specific transfer of data[49].

The above analysis demonstrates that vertical data sharing rules are not new in EU law. A whole host of industries, ranging from telecommunications and banking to automotive and chemicals, have been subject to data sharing rules for a significant period. These vertical data sharing regulations are designed with very specific goals concerning the industries, actors, and economic activities they target (e.g., preventing market failures stemming from market power, enabling/facilitating innovation, creating markets for new economic activities, promoting sustainability, etc.). Therefore, understanding vertical rules in any setting requires the researcher to expose the rationale behind those rules.

III. Vertical data sharing rules under the Data Act and the Digital Markets Act

The conclusions produced by the previous analysis form a departure point to examine the new data sharing rules under the Data Act and the Digital Markets Act. It is important to delineate what the vertical data sharing rules under the DA and the DMA aim to achieve. In other words, one must inquire whether there are underlying policy currents justifying the emergence of vertical data sharing rules specifically targeting large technology firms.

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[46] The Type Approval Regulation (2018/858/EU) facilitates access to motor vehicle data on, e.g., repair and maintenance.

[47] For a recent example, see Decision of 8 July 2021, *Car Emissions*, AT. 40178.

[48] Simone van der Burg, Leanne Wiseman, and Jovana Krkeljas, "Trust in farm data sharing: reflections on the EU code of conduct for agricultural data sharing", *Ethics and Information Technology* 23 (2021): 185.

[49] Can Atik, "Addressing data access problems in the emerging digital agriculture sector: Potential of the refusal to deal case law to complement ex-ante regulation", *European Competition Journal* (2023): 1.

Both the Data Act and the Digital Markets Act contain vertical data sharing provisions[50]. Whilst the DMA focuses on powerful technology firms, the DA mostly addresses small-and-medium-sized enterprises (SMEs). Both measures pursue similar goals, as analysed below. However, before moving onto the goals pursued by each measure, it is important to clearly determine the vertical nature of the data sharing provisions contained therein. For the DMA, this is a rather straightforward exercise. By nature, the DMA is an asymmetric regulation, targeting only "gatekeepers"; that is, firms operating core platform services that have a significant and durable impact on the internal market due to their bottleneck position[51]. Consequently, the DMA is a vertical regulation in terms of industry (digital) and targeted actors (based on size).

It is more counterintuitive to suggest that the Data Act is a vertical regulation. There are many signs pointing toward the opposite conclusion (horizontality)[52]. To begin with, the official title of the Act contains "harmonized rules on fair access to and use of data". The adjective "harmonized" suggests that the DA mainly introduces horizontal rules at the European level. Various passages in the text corroborate this view. For example, the EC acknowledges that the DA "creates a cross-sectoral framework for data access" to provide incentives for horizontal data sharing across industries[53]. Furthermore, the DA also contains interoperability requirements that are geared towards making cross-sector data transfers feasible[54]. The Explanatory Memorandum accompanying the proposal explicitly acknowledges that the DA is a horizontal measure by clarifying

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[50] Commentators have highlighted the benefits of context-specific rules in the data-driven economy. See, e.g., Eliana Garces and Daniel Fanaras, "Antitrust, privacy, and digital platforms' use of Big Data: A brief overview", *Competition* 28 (2018): 23. EU's own Observatory have also argued against introducing horizontal data sharing obligations. See Teresa Rodríguez de las Heras Ballell, "Work stream on data: Final report", *Report of the Expert Group for the Observatory on the Online Platform Economy*, 2021, https://digital-strategy.ec.europa.eu/en/library/expert-group-eu-observatory-online-platform-economy-final-reports.

[51] Pier Luigi Parcu, Giorgio Monti, and Marco Botta, *The interaction of competition law and sector regulation: Emerging trends at the national and EU level* (United Kingdom: Elgar, 2022), 1.

[52] Antoine Donne, "Non-personal data in the electricity sector: A key asset for companies and public authorities", *Network Industries Quarterly* 24, no. 3 (2022): 3.

[53] European Commission, *Proposal for a Regulation of the European Parliament and of the Council on harmonized rules on fair access to and use of data (Data Act)* (COM (2022) 68 final), February 23, 2022, https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM%3A2022%3A68%3AFIN. For the reference, see Explanatory Memorandum, 2-6.

[54] Commentators have called for establishing standardized practices for data portability and sharing. See, e.g., Janis Wong and Tristan Henderson, "The right to data portability in practice: explor-

that it is without prejudice to sector-specific legislation, thus opening the path for introducing sectoral regulations if deemed necessary. The overarching horizontality observed in the Data Act reflects the shift from viewing B2B data sharing as a sectoral tool to that of an encompassing EU policy in the digital economy[55].

It is possible and useful to acknowledge the general horizontal nature of the Data Act whilst insisting on the vertical nature of some of its provisions. Recall that it is rare for legislation to be fully horizontal or vertical. Rather, regulations mostly follow one dimension while accommodating exceptions for various reasons. As a rule, the DA proposal empowers individuals to acquire the data they have created on a service. These individuals can also request the data holder (i.e., the service provider) to transfer their data to other entities, encouraging customer switching and fostering the free flow of data. In this way, the DA complements and extends the earlier Free Flow of (Non-Personal) Data Regulation (FFDR)[56]. That measure aims to facilitate data mobility throughout the EU by regulating data localization practices by Member States and encouraging self-regulation by private parties to improve data portability.

Despite retaining a generally horizontal narrative, the Data Act incorporates vertical components concerning large technology companies deemed gatekeepers under the Digital Markets Act. In other words, the DA builds upon a concept borrowed from the DMA, a vertical regulation, to create exceptions to a horizontal rule. The exception stipulates that gatekeepers cannot benefit from the data sharing obligations introduced by the Data Act – they cannot be the recipients of data originating from other services[57]. This provision vertically divests large technology companies from the broad policy goal the DA pursues. It also implicitly acknowledges that

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ing the implications of the technologically neutral GDPR", *International Data Privacy Law* 9, no. 3 (2019): 173.

[55] European Commission, *A European strategy for data*, (COM (2020) 66 final), February 19, 2020, https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52020DC0066. Embracing data portability as an overarching regulatory duty may stem from the difficulty of applying competition law to individual cases involving data access problems. See, on that front, Ken Dai and Jet Deng, "Big Data and antitrust risks in close-up: From the perspective of real cases", *Competition* 30, no. 2 (2020): 36.

[56] Regulation 2018/1807 on a framework for the free flow of non-personal data in the European Union.

[57] Data Act Proposal, Article 5 (2).

earlier regulations, such as the FFDR, failed to promote customer switching from established data processing service providers to entrants[58].

As argued earlier, legislatures draft vertical rules to address specific concerns in an industry. This begs the question: what goal motivates the vertical data sharing provisions of the DMA and the DA? The remainder of this section offers an answer to that question in a two-step methodology. First, the section looks at the overarching goals pursued by each measure. Second, it attempts to tease out specific goals to which data sharing provisions cater.

The stated objectives for the DMA are formulated in a vague manner: fairness and contestability. Whilst fairness is an essentially contested concept[59], the DMA defines it as balancing the rights and obligations of business users and gatekeepers, where the natural forces of the market may lead to powerful firms capturing a disproportionate share of the overall economic contributions flowing from both parties[60]. By contrast, contestability is more economic-based, and within the context of the DMA, refers to the ability of undertakings to overcome barriers to entry and expansion, thereby challenging gatekeepers. Thus, it is somewhat similar to the contestable markets theory first proposed by William Baumol, which argues that even monopolistic markets (such as some digital markets) can produce results *as if* they were competitive simply due to the disciplinary impact exerted by firms ready to enter[61]. The difference between the DMA and Baumol's contestable markets theory is that the DMA actually has structural aspirations. Unlike Baumol's theory, the DMA endeavours to realize entry and is not satisfied with the prevailing competitive outcomes in digital markets, be it monopolistic or competitive[62].

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[58] Vendor lock-in has been identified in many jurisdictions as a real threat to competition in cloud markets. For a UK perspective, see Trevor Wagner, "Addressing the real barrier to competition in the UK cloud market", *Project DisCo*, 2023, https://www.project-disco.org/competition/addressing-the-real-barrier-to-competition-in-the-uk-cloud-market/.

[59] Essentially contested concepts are concepts whose desirability is unanimously acknowledged, whilst having rampant disagreement on how to achieve them. For instance, everyone wants to be fair, but exactly how one could be "fair" produces broad disagreement. See W. B. Gallie, "Essentially contested concepts", *Proceedings of the Aristotelian Society* 56 (1955): 167.

[60] Recital 33 of the Digital Markets Act.

[61] William J. Baumol, "Contestable markets: An uprising in the theory of industry structure", *The American Economic Review* 72 (1982): 1.

[62] There are reasons to believe that digital markets are structurally monopolistic but behaviorally competitive. Large technology firms are leading in terms of R&D spending and productivity. See,

Besides the explicit goals prescribed by the regulation itself, scholarship has argued for implicit goals the DMA pursues. For example, some have suggested that the fairness prong protects intra-platform competition whereas the contestability prong promotes inter-platform competition[63]. As the DMA has been built as a supplement to *ex-post* competition rules, it possesses a functional goal as well[64]. Elsewhere, the DMA has been characterized as pursuing geo-economic goals, such as by cultivating a European technology ecosystem or promoting "digital sovereignty"[65]. There have also been allegations that the DMA is inherently protectionist and thus follows political aims, for instance through disadvantaging US-based firms[66]. Lastly, some commentators argue that the DMA is the result of paternalistic urges to protect consumers against hidden harms of latent technology, which forms a core component of the European vision for the digital economy[67].

As a draft regulation, scholarly commentary on the Data Act is not as extensive[68]. The DA itself states its goals as follows: addressing imbalances of power in data sharing, driving innovation and fostering the development of new services based on EU values, creating a single European data

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e.g., David Autor *et al.*, "The fall of the labor share and the rise of superstar firms", *The Quarterly Journal of Economics* 135, no. 2 (2020): 645.

[63] Friso Bostoen, "Understanding the Digital Markets Act", *The Antitrust Bulletin* 68, no. 2 (2023): 263.

[64] The effectiveness of *ex-post* competition rules in the digital economy has been questioned in terms of length of proceedings, the impact of remedies, and the potential misuse of procedural rights as barriers to expedient enforcement. See, e.g., Philip Marsden and Rupprecht Podzsun, "Restoring balance to digital competition: Sensible rules, effective enforcement", *Competition Policy International*, 2020, https://www.competitionpolicyinternational.com/restoring-balance-to-digital-competition-sensible-rules-effective-enforcement/; Pablo Ibanez Colomo, "When did the rule of law come to be seen as an inconvenience?", *Journal of European Competition Law & Practice* 12, no. 10 (2021): 719.

[65] Oles Andriychuk, "Shifting the digital paradigm: Towards a *sui generis* competition policy", *Computer Law & Security Review* 46 (2022): 105733.

[66] Aurelien Portuese, "The Digital Markets Act: European precautionary antitrust", (2021) *Information Technology & Innovation Foundation Paper*, 2021, https://www2.itif.org/2021-digital-markets-a4.pdf.

[67] On paternalism and the DMA, see Viktorija Morozovaite, "Hypernudging in the changing European regulatory landscape for digital markets", *Policy & Internet* 15 (2023): 78. On the DMA's place in the European vision of the digital economy, see Michelle Cini and Patryk Czulno, "Digital single market and the EU competition regime: An explanation of policy change", *Journal of European Integration* 44 (2022): 41.

[68] See, e.g., Axel Metzger and Heike Schweitzer, "Shaping markets: A critical evaluation of the Draft Data Act", *Zeitschrift für Europäisches Privatrecht* 1 (2023): 42.

market, and ensuring that the value of data in the economy is allocated fairly among actors[69]. As such, the Data Act pursues similar goals as the DMA; the first and last goals correspond to fairness, whilst the remaining aims could be reconciled with creating competitive and contestable markets.

It is important to analyse the data sharing provisions of the DMA and the DA with the preceding analysis in mind. Under the DMA, Article 5 (2) prohibits non-consensual sharing of data between a gatekeeper's services; Articles 5 (9) and (10) mandate the gatekeeper to provide advertising data to advertisers and publishers; Article 6 (2) proscribes gatekeepers from using data generated on their platforms by business users; Article 6 (9) tasks gatekeepers with an obligation to provide effective data portability mechanisms; Article 6 (10) requires business user access to real-time data; and Article 6 (11) stipulates that online search engine providers shall have access to click, view, and query data of a gatekeeper operating an online search engine. As stated, the majority of the Data Act is applicable to all sectors. By contrast, vertical rules on data sharing are located under Article 5 (2), prohibiting gatekeepers from becoming the recipients of data ported from other services.

The vertical data sharing rules in both instruments reflect a desire to make it easier for small-and-medium sized enterprises to access data[70]. For example, the DMA recognizes that the data portability rules under Article 6 complement the existing portability right of the GDPR[71]. Unlike the GDPR, the right to data portability under the DMA applies both to personal and non-personal data, is free of charge, and targets data provided by the data subject as well as inferred and derived data[72]. The DMA also goes further by eliminating technical infeasibility as a justification for restricting

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[69] The public sphere remains a key actor in redistributing value created through data. See in this regard, Marina Micheli, Marisa Ponti, Max Craglia, and Anna Berti Suman, "Emerging models of data governance in the age of datafication", *Big Data & Society* 1 (2020): 1.

[70] Jan Kramer and Daniel Schnurr, "Big Data and digital markets contestability: Theory of harm and data access remedies", *Journal of Competition Law & Economics* 18, no. 2 (2022): 255.

[71] As iterated earlier, the GDPR right to data portability remains underutilized. See e.g., Daniel Gill and Jakob Metzger, "Data access through data portability – Economic and legal analysis of the applicability of Art. 20 GDPR to the data access problem in the ecosystem of connected cars", *European Data Protection Law Review* 8, no. 2 (2022): 221.

[72] Konstantina Bania, "Fitting the Digital Markets Act in the existing legal framework: The myth of the 'without prejudice' clause", *European Competition Journal* 19 (2023): 116. The EC also retains the ability to extend data-related obligations to different types of data, as empowered by Article 12 (2) (e) of the DMA.

the right to data portability[73]. Accordingly, gatekeepers will need to develop mechanisms to enable their users' data transfers. Furthermore, since the DMA applies without prejudice to the GDPR, gatekeepers will be required to facilitate data sharing in a privacy-friendly manner, for example by using homomorphic encryption techniques[74]. One can recite the earlier *GDF Suez* case in this regard, which featured the explicit gathering of user consent as a pre-requisite for the sharing of customer data between an incumbent gas operator and a rival[75]. As for the Data Act, Articles 4-9 stipulate that users must easily access and transfer the data they have accumulated on a service to third-party providers. As such, both instruments strive to make data transfer easy and safe for users in an effort to incentivize a flow of data toward small- and medium-sized rivals[76].

The vertical data sharing rules also contribute to a policy of data immobility that makes it more difficult for large firms to acquire data[77]. First, it is unclear whether gatekeepers under the DMA will be able to benefit from data portability rules[78]. According to the Data Act, gatekeepers cannot be the beneficiaries of data sharing. If the two instruments are interpreted together, there is a possibility that a gatekeeper may not receive data from another gatekeeper. One should keep in mind that the right to data portability of the DMA is located under Article 6, which contains obligations subject to further clarification by the EC. As such, the EC may decide that

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[73] The pro-competitive effects of data portability are more uncertain in industries lacking interoperability standards. See Maurizio Borghi, "Data portability and regulation of digital markets", *Mercato Concorrenza Regole* 2 (2018): 223.

[74] Dan Feldman and Eldar Haber, "Measuring and protecting privacy in the always-on era", *Berkeley Technology Law Journal* 35 (2020): 197. The UK Competition and Markets Authority have also investigated privacy-enhancing technologies. See Dave Buckley, "Privacy enhancing technologies for trustworthy use of data", *Centre for Data Ethics and Innovation Blog*, 2021, https://cdei.blog.gov.uk/2021/02/09/privacy-enhancing-technologies-for-trustworthy-use-of-data/.

[75] Simonetta Vezzoso, "Competition policy in transition: Exploring data portability's roles", *Journal of European Competition Law & Practice* 12, no. 5 (2021): 357.

[76] For earlier calls on additional safeguards for enabling effective data portability, see Wolfgang Kerber, "From (horizontal and sectoral) data access solutions to data governance systems", *MAGKS Discussion Paper No. 40*, 2020, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3681263.

[77] Some have advocated for the normative desirability of such a policy. See, e.g., Wolfgang Kerber, "Data Act and competition: An ambivalent relationship", *Concurrences* 1 (2023): 30.

[78] The Data Act is *lex posteriori*, but the Digital Markets Act is probably *lex specialis*, which complicates the relationship between the two "sister acts". Some authors have already pointed toward the "spill-overs" between many data sharing regimes in the EU. See, e.g., Inge Graef, Martin Husovec, and Jasper van den Boom, "Spill-overs in data governance", *Journal of European Consumer and Market Law* 1 (2020): 3.

transferring data from one powerful undertaking to another is inconsistent with the objectives of the legislation, especially keeping in mind the Data Act's explicit acknowledgment that gatekeepers do not need access to more data. Second, the right to data transfer under the Data Act is to be exercised on a fair, non-discriminatory, and reasonable basis, which also prohibits a data holder (from which transfer will occur) from applying favourable data sharing conditions to affiliated enterprises, making intra-firm data transfers less attractive[79]. Third, the DMA constrains intra-platform exploitation of data even further via Article 5 (2). This provision bars a gatekeeper from combining personal data accumulated in different services unless the users consent in line with the GDPR. However, as gatekeepers are often also dominant undertakings in competition law terms, it is unclear whether the imbalance of commercial power in their favour tarnishes the genuine nature of consent they acquire from users[80]. Recent developments extend the power imbalance narrative to contractual relationships as well, resulting in some platforms' inability to use contract as a lawful basis for data processing. Consequently, large technology firms' avenues for lawful data acquisition are getting increasingly narrower: these firms cannot predictably rely on data sharing, intra-firm data relocation, contractual ties, or user consent to collect and process data[81].

The above analysis suggests that the data sharing provisions under the DMA and the DA aim to boost innovation in a qualified manner. Both Acts acknowledge that having access to data begets innovation potential[82].

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[79] This is a particular way of proscribing self-preferencing. In a competition law setting, the General Court confirmed that self-preferencing is an abuse of dominance. See Judgment of 10 November 2021, *Google (Shopping)*, T-612/17, ECLI:EU:T:2021:763. For a discussion of the FRAND obligations under the Data Act, see Peter Georg Picht, "Caught in the Acts: Framing mandatory data access transactions under the Data Act, further EU digital regulation acts, and competition law", *Journal of European Competition Law & Practice* 14, no. 2 (2023): 67.

[80] Of course, whether competition law should venture into privacy is up for debate. See, e.g., Dzhuliia Lypalo, "Can competition protect privacy? An analysis based on the German Facebook case", *World Competition* 44 (2021): 169.

[81] Safe to say that the remaining legal bases under the GDPR are unlikely to prove useful: legitimate interest is vague and subject to interpretative uncertainty, whereas complying with a court decision is situational.

[82] For example, see Recital 59 of the Digital Markets Act. Relatedly, Recital 28 of the Data Act designates the Act's goal as "foster[ing] the development of new, innovative products or related services, stimulate innovation on aftermarkets, but also stimulate the development of entirely novel services making use of the data…", and acknowledges the role data access plays in that regard. In this way, the Acts acknowledge the "latent public good" nature of data, whereby using data is non-rivalrous, but access could be restricted to the detriment of welfare. See Richard R. Nelson, "On

At the same time, the Acts do not promote innovation unreservedly. The Acts reflect a policy of preferring organic, ground-up innovation by small-and-medium sized enterprises that operate in line with European values[83]. Access to data as a crucial input of innovation is made easier for such enterprises, whilst simultaneously choking off the opportunities of their larger competitors to obtain more data. In pursuing this goal, both Acts remain faithful to two assumptions: i) innovation by larger firms is undesirable; ii) access to data will render smaller firms more innovative. Whether the Acts will achieve their common goal of promoting "Eunnovation" hinges on the validity of these assumptions.

The first assumption is rather straightforward. The EU strategy for data asserts that large technology firms have already accumulated "data power"[84]. Solidifying that power further by granting even more data to large technology firms remains undesirable. In other words, EU law on the intersection of data and competition currently favours legal decentralizations of data ownership whilst disfavouring economically desirable centralizations of data[85]. This makes sense at first glance – since both the DA and the DMA aim to stimulate the entry of smaller firms into digital markets, priming the incumbents by propping up their data reserves seems self-defeating[86]. At the same time, contestability *per se* and contestability by smaller firms in core platform markets may be mutually exclusive propositions[87]. Economic literature has long recognized that entrants do

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the complexities and limits of market organization", *Review of International Political Economy* 10, no. 4 (2003): 697.

[83] This is a corollary of the long-running debate between the Chicago and Harvard schools of antitrust, originating in the United States. Briefly, the Chicago school is indifferent to the identity of innovators and values innovation and efficiency *per se*. By contrast, the Harvard school emphasizes competitive structure and prefers innovation by rivals as opposed to powerful incumbents. See, e.g., William E. Kovacic and Carl Shapiro, "Antitrust policy: A century of legal and economic thinking", *Journal of Economic Perspectives* 14 (2000): 43.

[84] Orla Lynskey, "Grappling with 'data power': Normative nudges from data protection and privacy", *Theoretical Inquiries in Law* 20 (2019): 189.

[85] Inge Graef & Jens Prüfer, "Governance of data sharing: A law & economics proposal", *Research Policy* 50, no. 9 (2021): 104330.

[86] Heike Schweitzer and Axel Metzger, "Data access under the Draft Data Act, competition law and the DMA: Opening the data treasures for competition and innovation?" *GRUR International* 72, no. 4 (2023): 337.

[87] For example, scholars criticize the data portability mandates under the PSD2 for failing to prop up FinTech firms (i.e., start-ups) whilst barring competition TechFin firms (large technology companies entering financial services markets). Thus, incumbents in financial services (i.e. large banks and financial institutions) remain dominant. See, in this regard, Oscar Borgogno and Giuseppe

not wait on the side-lines to enter markets[88]. Rather, entry usually comes from established firms that can leverage existing assets and capabilities in adjacent industries. Scholars have suggested that competition at the platform level occurs mainly in a "moligopolistic fashion", whereby dominant firms simultaneously enjoy entrenched positions in their home markets while vying for power in related markets, employing various strategies like "envelopment" or "annexation" to conquer market share[89]. Relying on smaller firms to ride on data portability to contest nigh-impregnable markets will likely remain ineffective in altering existing structures[90].

The second assumption requires examining the claim that the key to innovation lies in accessing large swathes of data[91]. In competition law terms, the theory of harm materializes as a dominant firm withholding its datasets from smaller rivals, thereby extinguishing competition and innovation by creating "data enclosures"[92]. The Acts recognize this hypothesis as valid. However, one can criticize such claim. Fundamentally, access to

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Colangelo, "The data sharing paradox: BigTechs in finance", *European Competition Journal* 16, no. 2 (2020): 492; Pınar Özcan and Markos Zachariadis, "Open banking as a catalyst for industry transformation", *SWIFT Institute Working Paper No. 2017-006*, 2021, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3984857.

[88] R. E. Caves and M. E. Porter, "From entry barriers to mobility barriers: Conjectural decisions and contrived deterrence to new competition", *The Quarterly Journal of Economics* 91, no. 2 (1977): 241.

[89] Nicolas Petit, *Big tech and the digital economy: The moligopoly scenario* (Oxford: Oxford University Press, 2020), 1. For platform envelopment, see Thomas Eisenmann, Geoffrey Parker, and Marshall Van Alstyne, "Platform envelopment", *Strategic Management Journal* 32, no. 12 (2011): 1270. For platform annexation strategies, see Susan Athey and Fiona Scott Morton, "Platform annexation", *SIEPR Working Paper No. 21-015*, 2021, https://siepr.stanford.edu/publications/working-paper/platform-annexation.

[90] Economic studies have argued that data portability may promote innovation in competitive markets, but not tipped markets. See Esmeralda F. Ramos and Knut Blind, "Data portability effects on data-driven innovation of online platforms: Analyzing Spotify", *Telecommunications Policy* 44, no. 9 (2020): 102026.

[91] It is also unclear whether the Data Act, the latest and most up-to-date of EU digital legislation, contains sufficiently powerful safeguards to ensure effective data access in the first place. For a critical commentary, see Wolfgang Kerber, "Governance of IoT data: Why the EU Data Act will not fulfil its objectives", *GRUR International* 72, no. 2 (2023): 120. For a discussion on the difference between "the right to access" and "the right to process", see Nora J. Meiborg, "Data access under the Data Act – new momentum for the IoT market (and beyond)?", *European Competition Law Review* 44, no. 5 (2023): 187.

[92] Kentaro Hirayama and Koki Arai, "Interaction between information law and competition law: Organizing regulatory perspectives on platform businesses", *Asian Journal of Law and Economics* 12, no. 2 (2021): 171.

snapshots of data may not be that important[93]. Instead of the size of the corpus of data, what matters may be algorithmic capabilities to analyse, interpret, and capitalize on such data[94]. According to a report by the Centre on Regulation in Europe (CERRE), as raw data becomes more prevalent, the focus of competition switches from collection to analytics[95]. With the advent of large language models, generative artificial intelligence, and synthetic data, creating and collecting data will face even fewer constraints, significantly elevating analytics capabilities in order of importance[96]. The head start that large firms have likely obtained, as well as their financial and technical capabilities, may render their positions unchallengeable even when data access is mandated[97].

Instead of promoting market contestability by unleashing innovation, the vertical portability rules under the DA and the DMA could actually produce unintended consequences[98]. As argued earlier, the vertical data sharing provisions under the Acts reflect a desire to promote organic innovation by entrants and disfavour innovation by established firms. By doing so, the Acts expect entrants to contest markets which are currently impregnable due to their economic characteristics. However, the Acts also risk counteracting that aim, on both legal and economic grounds. From a legal perspective, the Data Act specifies that recipients may not use the data they obtained from a data holder to develop a service that competes

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[93] The proposition that data in itself does not represent value is well captured by the remark "data is sand". See Abiel Garcia, "Antitrust is already equipped to handle 'Big Data' issues", *Competition* 28 (2018): 1.

[94] Hal R. Varian, "Seven deadly sins of tech?", (2021) 54 *Information Economics and Policy* 54 (2021): 100893. See, also, John M. Yun, "Does antitrust have digital blind spots?", *South Carolina Law Review* 72, no. 2 (2020): 305.

[95] Alexandre de Streel and Jan Kramer, "Making data portability more effective for the digital economy", *CERRE Report*, 2020, https://cerre.eu/wp-content/uploads/2020/07/cerre_making_data_portability_more_effective_for_the_digital_economy_june2020.pdf.

[96] Michal Gal and Orla Lynskey, "Synthetic data: Legal implications of the data-generation revolution", *Iowa Law Review* 109 (2023): 1.

[97] In other words, the power of these firms may stem from a combination of data access, capabilities, computing power, strength in analytics, and human capital. It is unclear whether granting access to but one component will fix the market power problem. See, in that regard, Omar Vasquez Duque and Jörg Hoffmann, "Can data exploitation be properly addressed by competition law? A note of caution", *Concurrences* 1 (2021): 75.

[98] For example, see analysis by Sean Ennis & Ben Evans, "Cloud portability and interoperability under the EU Data Act: Dynamism versus equivalence", *Competition Policy Blog*, 2023, https://competitionpolicy.wordpress.com/2023/04/06/cloud-portability-and-interoperability-under-the-eu-data-act-dynamism-versus-equivalence/.

with the services of that data holder. This non-compete clause means that the data portability regime under the Data Act *cannot* promote contestability. Instead, the DA effectively promotes two types of innovation: innovation of a disruptive (rather than cumulative) nature capable of establishing a new market, or innovation in complementary markets[99]. It is unclear whether the first type of innovation truly caters to the contestability of core platform services, as a disruptive entrant operates in a novel market by definition[100].

Promoting innovation in complementary markets, the second possible aim of the Data Act, is also problematic. From an economic perspective, it is doubtful whether data sharing mandates will generate innovation by complementors. Empirical studies investigating the effects of mandated data sharing in hybrid marketplaces suggest otherwise. In the likely scenario where the platform operator has data advantages over its downstream co-opetitors, data sharing is likely to improve total welfare, but it also strengthens the incumbent platform[101]. In a hybrid marketplace with the platform, less efficient firms, and more efficient firms as sellers, data sharing increases the ability of all sellers to price discriminate, leading to a larger extraction of consumer surplus. To temper downstream co-opetitors' (data-induced) ability to extract greater consumer surplus, the platform is incentivized to raise fees. This makes the initially efficient sellers worse off because the advantages they gather from mandated data sharing do not compensate the increase in sellers' fee. Consequently, mandated data sharing in such settings decreases consumer benefit and props up inefficient firms – neither of which is conducive for accumulating consumer satisfaction to supplant an incumbent. The scenario is exacerbated by the fact that the inflated platform fee fills the platform operator's coffers.

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[99] Giulio Federico, Fiona Scott Morton, and Carl Shapiro, "Antitrust and innovation: Welcoming and protecting disruption", *Innovation Policy and the Economy* 20 (2020): 125.

[100] Disruptive entrants can certainly exert competitive pressure on incumbents, but it is disputable whether they truly cater to opening up non-contestable markets to competition (rather than repositioning the locus of competition), as the Acts purport to achieve.

[101] See Federico Navarra, Flavio Pino, and Luca Sandrini, "Mandated data sharing in hybrid marketplaces", *Social Science Research Network* (SSRN), 2023, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4390587. For a similar conclusion, see Emilio Calvano, Giacomo Calzolari, Vincenzo Denicolo, and Sergio Pastarello, "Artificial Intelligence, algorithmic recommendations and competition", *Social Science Research Network* (SSRN), 2023, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4448010.

This conclusion invited some scholars to propose a *ban* on data sharing instead[102].

Banning data mobility is not without precedent under competition law. Recent investigations into data-related practices by Amazon illustrate a case in point[103]. It is well documented that some vertically integrated hybrid platforms, like Amazon, use data generated by third-party sellers to make business decisions. For example, Amazon can monitor the success of a particular batteries producer to decide whether it is viable to enter into the batteries market as a first-party seller. The competitive impact of such practices is ambivalent. First-party entry by relying on insights gathered through third-party seller data can be pro-competitive by driving down prices and introducing consumer variety. Alternatively, such practices can be anticompetitive by precluding dynamism since the risks of entry by a platform owner may disincentivize third-party sellers to participate in the first place. As innovation and technological development increase welfare the most, it makes sense to protect ex-ante incentives to innovate by third-party sellers. However, theoretical studies analysing which regulatory policies promote innovation the most conclude that a total ban on data access could damage dynamism[104].

The above analysis suggests that neither data sharing of the kind advocated by the Acts, nor data immobility are optimal for welfare. In the face of evidential uncertainty regarding the effects of data sharing, one can advocate for a middle ground policy consisting of data patents. A policy of data patents would introduce a specific period during which large firms are barred from accessing data, such as demanding data of a new product. The nature of the data in question could determine the calibration of the patent-protection period. In some industries, such as search engines (where consumer queries evolve rapidly) and aftermarket services for automobiles (where real-time monitoring of data is crucial), allowing SMEs to exclusively access and receive data is likely to effectively reward innovative

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[102] Some authors argue for a voluntary data-sharing scheme. See, e.g., Oliver J. Bethell, Gavin N. Baird, and Alexander M. Waksman, "Ensuring innovation through participative antitrust", *Journal of Antitrust Enforcement* 8 (2020): 30.

[103] Some merger decisions, such as *Google/FitBit*, also preclude data mobility by erecting firewalls between the acquiring party and the target. See Pierre Regibeau, "Why I agree with the Google-Fitbit decision", *VoxEU CEPR,* 2021, https://cepr.org/voxeu/columns/why-i-agree-google-fitbit-decision.

[104] Erik Madsen and Nikhil Velodi, "Insider imitation", *Social Science Research Network* (SSRN), 2023, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3832712.

effort and generate further innovative action[105]. Not only antitrust law, but also the DMA, with its inherent flexibility under Article 6, could enable the European Commission to calibrate such policies.

IV. Conclusion

The European strategy for data aspires to create a fifth freedom, the free movement of data. A main prong of this strategy is facilitating business-to-business data sharing and data portability. EU law has hitherto regulated data sharing in a sector- and actor-specific (vertical) manner. Although novel instruments like the Data Act aim to establish a horizontal right to data sharing, the verticalization of data sharing continues its reign. Whilst horizontal regulations address a field in its entirety, vertical rules carve out specific industries or use cases for specialized treatment. As such, vertical rules always follow a rationale that differs from the logic animating horizontal measures. Accordingly, the effectiveness of any vertical regulation will depend on the particular objectives it pursues, and whether its provisions have been drafted to address that objective.

The Digital Markets Act and the Data Act contain vertical rules on data sharing. The data sharing rules under the DMA apply only to gatekeepers – powerful firms offering core platform services that significantly impact the internal market in a durable manner. Although the Data Act introduces data sharing obligations in an industry-agnostic fashion, it nonetheless carves out actor-specific rules that also target gatekeepers. Both Acts have various objectives to consider.

This Article has identified organic innovation (or "Eunnovation") as the reason behind the construction of vertical data sharing rules under both Acts. Organic innovation refers to promoting innovative growth through smaller firms and entrants that presumably commit to European values, while disfavouring innovation by large incumbents. Without discussing their normative desirability, the Article examined whether the vertical data sharing rules are capable of spurring organic innovation and, by extension, welfare. In their current form, it seems unlikely for new data sharing rules to leave a marked difference in digital market structures, especially considering that recipients of data under the Data Act are legally barred from competing with the originators. As for innovation in related

[105] Bertin Martens and Frank Müller-Langer, "Access to digital car data and competition in aftermarket maintenance services", *Journal of Competition Law & Economics* 16 (2020): 116.

but separate markets, vertical data sharing rules may do more harm than good by diminishing complementors' ability to satisfy consumers.

Construction of data sharing rules can benefit from economic analysis and a clearer understanding of regulatory goals. Instead of simply making it difficult for larger firms to obtain data whilst introducing ease-of-access to data for smaller players, a more nuanced approach promises more desirable results. The inherent flexibility of competition law and of the Digital Markets Act under Article 6 are apt mechanisms to pursue such nuance, for example through introducing data patents. Further research can focus on alternative formulations of governing the sharing of data. In any case, it may be time for EU law to seriously question its structural commitments in innovation policy that disfavours innovation by established players.

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