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Reconsidering the Public-Private Data Dichotomy in the European Union's Data Sharing Policies

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Abstract

This paper analyses one of the dichotomies around which the European Commission has built its policies to facilitate and stimulate data sharing as a key element of a thriving data economy, that is, the distinction between public sector and private sector data. The paper investigates the assumptions underlying this dichotomy and whether they still hold under the current dynamics of data production. In particular, this article focuses on European Union legislation and policies on accessibility and re-use of data to foster innovation and economic growth, embodied in what the European Commission understands as Government-to-Business (G2B) data sharing and Business-to-Business (B2B) data sharing.

Keywords: Data Sharing, Data Economy, Public-Private Data Dichotomy, Data Regulation

1. Introduction

Since 2014, the European Commission has as a central part of its policies the promotion and facilitation of a thriving data-economy[2] and the creation of a single European data

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[2] European Commission, 'Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions 'Towards a Thriving Data-Driven Economy'' (European Commission 2014) COM/2014/0442 final.

space, i.e., a single market for data.[3] A crucial aspect of such an economy is having sufficient data available to reap the benefits of data-driven innovation.[4]

In its 2020 Communication 'A European strategy for data', the European Commission highlighted that *'[c]urrently there is not enough data available for innovative re-use, including for the development of artificial intelligence*.'[5] As a result, the full potential of the data economy in the European Union (hereinafter 'EU') cannot be realised. For that reason, putting forward policies and legislation that facilitate and promote data sharing is high in European Commission's agenda.

Data sharing is understood in this contribution as the action of making data held by an organisation (the data holder) available for re-use by other parties outside that organisation (data re-users); where re-use can be understood as the use of data for commercial or non-commercial purposes other than the initial purpose for which data were produced. This notion covers both voluntary data sharing and the sharing of data following a legal obligation.[6]

When articulating its data sharing policies, the European Commission resorts to certain differentiations or dichotomies that are supposed to help in identifying what legal and policy frameworks are applicable and should be observed in each case. The most notable dichotomies are, on the one hand, the distinction between personal data and non-personal

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[3] European Commission, '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'' (European Commission 2020) COM/2020/66 final 4 <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52020DC0066> accessed 24 July 2020.

[4] In a report published by the OECD in 2015, the term 'data-driven innovation' is defined as '[t]he use of data and analytics to improve or foster new products, processes, organisational methods and markets'. OECD, 'Data-Driven Innovation: Big Data for Growth and Well-Being' (OECD Publishing 2015) 17.

[5] European Commission, 'A European Strategy for Data, COM/2020/66 Final' (n 3) 6.

[6] This broad working definition draws from the Directive (EU) 2019/1024 on open data and the re-use of public sector information (hereinafter 'Open Data Directive'), in particular the definition of 're-use' in Art. 2(11); the European Commission, 'Commission Staff Working Document 'Guidance on Sharing Private Sector Data in the European Data Economy'' (2018) SWD(2018) 125 final <https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1539766272141&uri=CELEX%3A52018SC0125>.; and the 'Proposal for a Regulation of the European Parliament and of the Council on European Data Governance (Data Governance Act) COM/2020/767 Final' (2020) COM/2020/767 final <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52020PC0767>. It is worth noting that the proposed Data Governance Act defines data sharing in a slightly narrower manner, as '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' (emphasis added). Thus, this definition of data sharing would cover only the sharing of data on a voluntary basis. Given the relatively limited scope of application the proposed Data Governance Act (discussed in Section 4.1.1. below), and considering that other EU legislation and policy, as well as legal scholarship, usually refer to data sharing as encompassing voluntary and mandated data exchanges, the broader definition outlined above will be followed.

data, and, on the other hand, the distinction between public and private sector data.[7] Although such dichotomies might seem useful to give structure to policy and academic discussions, this binary approach does not always reflect the current dynamics of data production and can lead to counterproductive outcomes.

There is already literature that discusses the inadequacies of the personal vs. non-personal data dichotomy present in EU data (sharing) legislation and policies, and the need to move towards a more holistic regulatory approach.[8] In contrast, studies that scrutinise the public-private data dichotomy that shapes EU data sharing legislation and policy are largely absent in legal scholarship.

This article contributes to filling that gap, by investigating the assumptions underlying the public-private sector data dichotomy in EU law and policy and discussing whether this binary approach to regulating data sharing can be sustained under the current dynamics of data production. The research aims to contribute to the booming legal research on data governance, wherein the regulation of data access and re-use occupy a prominent place.[9] This study employs a doctrinal research methodology, and it starts by examining EU law and policy applicable to data sharing, in order to identify which criteria are used to define

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[7] See European Commission, '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'' (2018) COM(2018) 232 final <https://eur-lex.europa.eu/legal-content/en/TXT/?uri=CELEX%3A52018DC0232>; European Commission, 'A European Strategy for Data, COM/2020/66 Final' (n 3).

[8] See Inge Graef, Raphaël Gellert and Martin Husovec, 'Towards a Holistic Regulatory Approach for the European Data Economy: Why the Illusive Notion of Non-Personal Data Is Counterproductive to Data Innovation' (2019) 44 European Law Review 605 <https://www.westlaw.com/Document/IC048A060F4D411E9AC57CCBC247CA5E8/View/FullText.html?transitionType=Default&contextData=(sc.Default)&VR=3.0&RS=cblt1.0>; Inge Graef, 'Paving the Way Forward for Data Governance: A Story of Checks and Balances': [2020] Technology and Regulation 24 <https://techreg.org/index.php/techreg/article/view/57>; Josef Drexl, 'Legal Challenges of the Changing Role of Personal and Non-Personal Data in the Data Economy (Drexl)' in Alberto Franceschi and others (eds), *Digital Revolution - New Challenges for Law: Data Protection, Artificial Intelligence, Smart Products, Blockchain Technology and Virtual Currencies* (Beck CH 2020).

[9] See e.g., the special issue on 'Governing Data as a Resource' published by the journal Technology and Regulation in 2020, in particular: Michael Madison, 'Tools for Data Governance' [2020] Technology and Regulation 29 <https://techreg.org/index.php/techreg/article/view/45>; Teresa Scassa, 'Designing Data Governance for Data Sharing': [2020] Technology and Regulation <https://techreg.org/index.php/techreg/article/view/51>; Graef (n 8); Charlotte Ducuing, 'Beyond the Data Flow Paradigm': [2020] Technology and Regulation 57 <https://techreg.org/index.php/techreg/article/view/49>. See also: Heiko Richter and Peter R Slowinski, 'The Data Sharing Economy: On the Emergence of New Intermediaries' (2019) 50 IIC-International Review of Intellectual Property and Competition Law 4 <http://link.springer.com/10.1007/s40319-018-00777-7> accessed 7 May 2019; Richard Feasey and Alexandre de Streel, 'Data Sharing for Digital Markets Contestability: Towards a Governance Framework' (CERRE 2020) <https://cerre.eu/publications/data-sharing-digital-markets-competition-governance/>; Laura Zoboli, 'Fueling the European Digital Economy: A Regulatory Assessment of B2B Data Sharing' (2020) 31 European Business Law Review <https://kluwerlawonline.com/journalarticle/European+Business+Law+Review/31.4/EULR2020026>.

when data are considered from the public or the private sector, and the regulatory approach employed for each sector. This analysis is presented in Part 2 of this paper. In respect of public sector data, the article examines EU legislation that addresses the availability and re-use of data held by the public sector.[10] Specifically, this research focuses on the 'Open Data Directive' and, where relevant, the legislation that preceded it. Concerning private sector data, this study examined communications and staff working documents published by the European Commission, which summarize its vision and approach for the sharing of privately held data.[11] Part 3 identifies the shortcomings of the public-private data dichotomy observed in current in EU data sharing legislation and policy. Part 4 explores whether the identified shortcomings will be addressed by the regulatory intervention announced by the European Commission in its Data Strategy. It provides starting points for further exploration toward a more consistent regulatory approach to data sharing. The conclusions of this research are presented in Part 5.

2. The public-private dichotomy in EU data sharing policies

It is said that data have no intrinsic value *per se*, and that their value lies on their use and re-use.[12] Data (and information in general) have three characteristics that make them especially suitable to be re-used: they are non-rivalrous, non-excludable (by default) and once they have been produced, the cost of reproduction tends to be zero.[13] These characteristics make possible that data can be shared and used *'by multiple users for multiple purposes as an input to produce an unlimited number of goods and services'*[14]*,* in both, the public and private sector. As summarised in a 2019 report from the OECD, some of the expected benefits of data sharing, are more transparency, accountability and user

[10] This article does not cover the legal and policy frameworks concerning the regimes of access to public sector information, which is largely a matter of the exclusive competence of Member States. Although intertwined, the legal regimes of access to and re-use of public sector information have a different scope. While the access regimes are grounded in the democratic need to know the content of public sector information, the re-use regimes go beyond that and emphasize the possibility of using information for other commercial or non-commercial purposes. In this regard, see e.g. Mireille van Eechoud, 'Making Access to Government Data Work' (2015) 9 Masaryk University Journal of Law and Technology 61 <https://journals.muni.cz/mujlt/article/view/3717> accessed 25 May 2020; Katleen Janssen, 'The EC Legal Framework for the Availability of Public Sector Spatial Data: An Examination of the Criteria for Applying the Directive on Access to Environmental Information, the PSI Directive and the INSPIRE Directive.' (2009) 62 <https://lirias.kuleuven.be/retrieve/94728> accessed 6 August 2019.

[11] For reasons of scope and space, this paper does not include a detailed analysis of EU legislation governing the access to privately data in specific economic sectors. See section 2.2. for references to sectoral data sharing regimes and literature studying such regimes.

[12] See European Commission, 'A European Strategy for Data, COM/2020/66 Final' (n 3) 6; OECD, 'Data-Driven Innovation' (n 4) 181.

[13] Luciano Floridi, *Information: A Very Short Introduction* (Oxford University Press 2010) 30 <http://ebookcentral.proquest.com/lib/uvtilburg-ebooks/detail.action?docID=737413> accessed 3 February 2020; see also Rob Kitchin, 'Conceptualising Data', *The Data Revolution: Big Data, Open Data, Data Infrastructures & Their Consequences* (SAGE Publications Ltd 2014) 10 <http://methods.sagepub.com/book/the-data-revolution> accessed 12 April 2019.

[14] OECD, 'Data-Driven Innovation' (n 4) 181.

(and citizen) empowerment, new business opportunities and increased efficiency as a result of integration of data from different sources.[15]

Considering the expected economic and social gains derived from data sharing, it is seen by the European Commission as a key aspect of a thriving data economy.[16] However, it seems that data sharing in the EU has not reached yet an optimal level, and that there are issues of insufficient availability of data.[17] Against this backdrop, putting forward policies that stimulate and facilitate data sharing within and across sectors has become one of the key lines of action of the European Commission in order to foster the data economy.[18]

The European Commission has articulated the issues of availability of data in four fronts, corresponding to broad categorisations of data sharing based on who is the data holder and the data user:[19]

- Use of public sector information by businesses (government-to-business – G2B – data sharing).
- Sharing and use of privately-held data by other companies (business-to-business – B2B – data-sharing).
- Use of privately-held data by government authorities (business-to-government – B2G – data sharing).
- Sharing of data between public authorities.

From these four data sharing categories, the first two address accessibility and re-use of data to foster innovation and economic growth. The other two refer to accessibility and re-use of data to improve policymaking and the execution of other public tasks.[20] For reasons of space and considering that the European Commission has so far devoted considerably more attention to the first two categories,[21] this paper will focus on G2B and B2B data sharing. As will be explained in the following sections, the regulatory approach adopted at EU level for each of this two data sharing categories is significantly different.

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[15] OECD, *Enhancing Access to and Sharing of Data* (2019) 64 <https://www.oecd-ilibrary.org/content/publication/276aaca8-en>.
[16] European Commission, 'Towards a Common European Data Space COM(2018) 232 Final' (n 7); European Commission, 'A European Strategy for Data, COM/2020/66 Final' (n 3).
[17] European Commission, 'A European Strategy for Data, COM/2020/66 Final' (n 3) 6.
[18] See e.g. European Commission, 'Towards a Common European Data Space COM(2018) 232 Final' (n 7); European Commission, 'A European Strategy for Data, COM/2020/66 Final' (n 3).
[19] European Commission, 'A European Strategy for Data, COM/2020/66 Final' (n 3) 6–8. European Commission, Communication *'A European strategy for data',* COM(2020) 66 final, 6-8.
[20] European Commission, 'A European Strategy for Data, COM/2020/66 Final' (n 3) 7–8.
[21] Although B2G data sharing is gradually getting higher in the Commission's agenda. See the report prepared by the High-Level Expert Group on Business-to-Government Data Sharing: European Union, 'Towards a European Strategy on Business-to-Government Data Sharing for the Public Interest' (2020) <https://ec.europa.eu/digital-single-market/en/news/experts-say-privately-held-data-available-european-union-should-be-used-better-and-more> accessed 24 July 2020; see also European Commission, 'A European Strategy for Data, COM/2020/66 Final' (n 3).

2.1. Sharing of public sector data

In the EU, the sharing of public sector data for re-use by businesses (G2B) is mainly regulated by the Directive (EU) 2019/1024 on open data and the re-use of public sector information (the 'Open Data Directive').[22] The Open Data Directive is a recast of the Directive 2003/98/EC on the re-use of public sector information (hereafter, 'the PSI Directive'),[23] as revised by the Directive 2013/37/EU.[24] The Open Data Directive, as well as its predecessor, departs from the idea that the public sector collects or produces an array of valuable information in execution of its tasks, which can in turn be re-used by businesses and citizens to create innovative products and services.[25]

To the extent that this legislation encourages the emergence of new markets based on information generated by the public sector, it can be seen as a manifestation of industrial policy in EU law.[26] Since its origins with the 2003 Directive,[27] the EU legislation on the re-use of public sector information ('PSI') has been based on the proper functioning of the internal market enshrined in Art. 114 of the Treaty on the Functioning of the European Union.[28] Its main objectives are providing minimum harmonising rules that facilitate the creation of EU-wide information products and services based on PSI, and enhancing the cross-border use of PSI by private businesses to create added-value information products and services.[29]

The Directive currently in force enshrines a set of rules governing the re-use and the practical arrangements to facilitate the wide re-use[30] of three main types of PSI:

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[22] 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 (2019) OJ L 172, 56-23. It is worth noting that the Directive also applies to the sharing of public sector data with citizens. See in particular Art. 2(11), which defines 're-use' as the use by *persons* or legal entities of documents held by PSBs and public undertakings.

[23] Directive 2003/98/EC of the European Parliament and of the Council of 17 November 2003 on the re-use of public sector information (2003) OJ L 345, 90-96.

[24] Directive 2013/37/EU of the European Parliament and of the Council of 26 June 2013 amending Directive 2003/98/EC on the re-use of public sector information (2013) OJ L 175, 1–8.

[25] Recital 8 of the Open Data Directive.

[26] Josef Drexl, 'The Competition Dimension of the European Regulation of Public Sector Information and the Concept of an Undertaking', *State-Initiated Restraints of Competition* (Edward Elgar Publishing 2015) 66.

[27] For further reading on the origins and evolution of the PSI legislation in the EU, see e.g. Katleen Janssen and Jos Dumortier, 'Towards a European Framework for the Re-use of Public Sector Information: A Long and Winding Road' (2003) 11 International Journal of Law and Information Technology 184 <https://academic.oup.com/ijlit/article/11/2/184/854368> accessed 23 April 2020; Lorenzo Dalla Corte, 'Towards Open Data Across the Pond' in Bastiaan van Loenen, Glenn Vancauwenberghe and Joep Crompvoets (eds), *Open Data Exposed* (TMC Asser Press 2018) <https://doi.org/10.1007/978-94-6265-261-3_2> accessed 22 July 2020.

[28] Consolidated version of the Treaty on the Functioning of the European Union 2016 OJ C202/1.

[29] Open Data Directive, Recital 70.

[30] 're-use' is defined in the Open and PSI Directive as the use by persons of legal entities of documents held by PSBs or public undertakings, other than for the initial purpose for which they were produced,

a) Documents held by public sector bodies (hereafter, PSBs) – Art. 1, par. 1(a).

PSBs are *''the State, regional or local authorities, bodies governed by public law and associations formed by one or several such authorities or one or several such bodies governed by public law''*.[31] The Open Data Directive applies to existing documents (including data)[32] held by PSBs, excluding documents produced or obtained outside the scope of their public task, as defined by the law, other binding rules or, in their absence, by common administrative practice in the Member State in question.[33]

b) Documents held by public undertakings active in the provision of utilities and transport services – Art. 1, par. 1(b).

Public undertakings were excluded from the original scope of the PSI Directive (which covered only data held by PSBs),[34] but this changed with the Open Data Directive. *'Public undertaking'* is defined in the new Directive as any undertaking active in specific utilities and transport sectors[35] over which PSBs *'may exercise directly or indirectly a dominant influence by virtue of their ownership of it, their financial participation therein, or the rules which govern it'*.[36] The Open Data Directive applies to existing documents (including data) held by public undertakings, excluding documents produced or obtained outside the scope of *'the provision of services in the general interest as defined by law or other binding rules in the Member State'*.[37] The Directive does not cover information related to activities directly exposed to competition and, therefore, not subject to procurement rules pursuant

within a given public task (for the case of PSBs) or in the provision of services in the general interest (in the case of public undertakings). The exchange of documents between PSBs or between public undertakings and PSBs purely in pursuit of the public tasks of the latter, does not qualify as re-use (Art. 2(11) of the Open Data & PSI Directive).

[31] For the definition of 'bodies governed by public law', see Open Data Directive, Art. 2(2).

[32] The term 'document' is defined in Art. 2(6) of the Open Data Directive as: a) 'any content whatever its medium (paper or electronic form or as a sound, visual or audiovisual recording)'; or b) 'any part of such content'. Following Recital 30 of the same Directive, the term 'document' 'should cover any representation of acts, facts or information — and any compilation of such acts, facts or information — whatever its medium (paper, or electronic form or as a sound, visual or audiovisual recording)'. Although not explicitly mentioned in the definition, the broadness of the term 'document' allows to include data under its scope. In fact, from the title and text of the Open Data Directive, it can be concluded that data are one of the forms of PSI that receive most attention in this new legislation. For this reason, the word 'data' (or 'information') will be used in place of 'document' when referring to the provisions in the Open Data Directive in this paper.

[33] Open Data Directive, Art. 1, par. 2(a).

[34] See Recital 10 of the PSI Directive.

[35] Such as gas and heat, electricity, drinking water, different kind of transport services and postal services. For the full list of sectors, see Art. 1, par. 1 (b) of the Open Data Directive.

[36] Open Data Directive Art. 2(3).

[37] Open Data Directive Art. 1, par. 2 (b)(i).

to Article 34 of the Directive 2014/25/EU, which governs the procurement of entities operating in the water, energy, transport, and, postal services sectors.[38]

c) Publicly funded research data -Art.1(c) and Art. 10.

The Open Data Directive applies to research data[39] insofar as they are publicly funded and they have been made publicly available through an institutional or subject-based repository.[40] Due to the very specific character of research data, they will be left outside of the scope of this paper.

Interestingly, the Open Data Directive does not directly introduce a formal definition of PSI. As explained above, the normative provisions of the Directive refer and apply to *'documents'* (including data) that are held by organisations of a public nature (PSBs and public undertakings), and to publicly funded research data. The 2003 PSI Directive included a clarification of the meaning of the expression *'held'*. According to Recital 11, a document held by a PSB is *'a document where the public sector body has the right to authorize re-use'*. The Open Data Directive currently in force does not include this clarification.

Recital 13 of the Open Data Directive refers to PSI as a synonym of *'information collected, produced, reproduced, and disseminated within the exercise of a public task or a service of general interest'*. However, this notion is not included as such in the list of legal definitions in Article 2, and it is only used in Article 1, par. 2 to delineate the negative scope of the Directive, i.e., certain types of data held by PSBs and public undertakings which are not covered by the provisions of the Directive, as described above.

Against this backdrop, it can be concluded that the main criterion used in the Open Data Directive to define which information (including data) should be covered by its provisions is that they are held by entities of a public nature (PSBs and certain public undertakings). A secondary criterion found in the Directive for data that are not directly held by a PSB or a public undertaking is that the data have been publicly funded. However, this applies only to research data.

In terms of regulatory approach, the Open Data Directive sets minimum harmonising rules governing the conditions applicable to the re-use of PSI by individuals and businesses, in particular: procedures, format, charging, licenses and, in some cases, an obligation to allow re-use. It also includes provisions based on the principles of transparency, non-

[38] Open Data Directive Art. 1, par. 2 (b)(ii). Recital 19 of the Directive encourages Member States to go beyond the minimum requirements set forth by the Directive and apply its rules for data held by public undertakings even in such cases.

[39] 'Research data' are 'documents in a digital form, other than scientific publications, which are collected or produced in the course of scientific research activities and are used as evidence in the research process, or are commonly accepted in the research community as necessary to validate research findings and results'. Open Data Directive, Art. 2(9).

[40] Open Data Directive, Art. 10, par. 2.

discrimination, prohibition of cross-subsidisation and prohibition (or strict limitation) of exclusive arrangements. Although the name of the Open Data Directive might suggest otherwise, its minimum harmonising rules do not include a general obligation of proactively publishing all data held by the public sector. In fact, the provisions in the Directive are conceived in principle for access and re-use following requests lodged by the re-users.

There are multiple sub-regimes within the Open Data Directive. The furthest-reaching rules apply to PSBs other than (university) libraries, museums and archives. They entail, among others, an obligation to allow re-use of the PSI they hold,[41] limitations to the charges for re-use (re-use should be in principle free of charge, but recovery of marginal costs is allowed),[42] and specific rules governing the processing of requests.[43]

The rules that apply to public undertakings and PSBs that are (university) libraries, museums and archives are less stringent. Unless otherwise provided by EU or national law, these organisations are not obliged to allow re-use of the information they hold,[44] and are exempted from the rule that limits the charges for re-use to the marginal costs therein incurred, being allowed to include in the charges a reasonable return on investment.[45] Moreover, following Art. 4, par. 6 of the Open Data Directive, public undertakings are not covered by the rules governing the processing of requests.

One of the novelties of the Open Data Directive is the introduction of a new set of rules applicable specifically to *'high-value datasets'.* They are datasets held by PSBs and public undertakings the re-use of which is expected to yield significant benefits for society, the environment and the economy, due to their suitability to be used for the creation of value-added products and services, among other factors.[46] Annex I of the Directive includes a list of thematic categories of high-value datasets: geospatial, earth observation and environment, meteorological, statistics, companies and company ownership and mobility. This thematic list can be adjusted by the European Commission by means of delegated acts *'in order to reflect technological and market developments'*.[47]

The list of specific high-value datasets belonging to the aforementioned categories shall be laid down by the European Commission by means of implementing acts, which may also

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[41] Open Data Directive, Art. 3, par. 1. See also Recital 23.

[42] Open Data Directive, Art. 6. See also Recital 36. Art. 6, par. 2 (a) creates an exception to this rule for PSBs that are 'required to generate revenue to cover a substantial part of their costs relating to the performance of their public tasks'. For the re-use of PSI held by such entities, the total charges shall be laid down by Member States, following objective, transparent and verifiable criteria (Art. 6, par. 4).

[43] Open Data Directive, Art. 4.

[44] Open Data Directive, Art. 3, par. 2.

[45] Open Data Directive, Art. 6, par. 2, 4 and 5. 'Reasonable return on investment' is defined in the same Directive as 'a percentage of the overall charge, in addition to that needed to recover the eligible costs, not exceeding 5 percentage points above the fixed interest rate of the [European Central Bank]' Art. 2 (16).

[46] For the full legal definition of 'high-value datasets' see Article 2 (10) of the Open Data Directive.

[47] Open Data Directive, Art. 13, par. 2

specify the arrangements for the publication and re-use of such datasets.[48] The identification of the high-value datasets should be based on the expected socioeconomic and environmental benefits, the types of products and services that can be created with them, the number of re-users that would be benefited, and the potential to generate revenue and to be combined with other datasets.[49]

Due to their socioeconomic relevance, high-value datasets are subject to special rules under the Open Data Directive, which aim at *'ensuring their maximum impact and to facilitate re-use'*.[50] For example, such datasets shall be (i.e. this is not optional) made available for re-use in machine-readable form, via suitable Application Programming Interfaces (APIs) and, where relevant, as a bulk download.[51] In terms of re-use fees, high-value datasets should be made available free of charge.[52] However, this requirement can be unapplied in the case of datasets held by public undertakings, when it *'would lead to a distortion of a competition in the relevant markets'*.[53] At the moment of writing, the European Commission is preparing an implementing act with a list of high-value datasets, which should be adopted in the first quarter of 2021.[54]

2.2. Sharing of private sector data

The notion of *'private sector data'* is not clearly delineated in EU data sharing legislation or policy. The OECD understands this type of data as being *'generated, created, collected, processed, preserved, maintained, disseminated or funded by or for private sector'*,[55] clarifying that '*private sector'* refers to *'private corporations, households and non-profit institutions serving households'*.[56] The European Commission uses the expressions privately-held data, or, private sector data, in a narrower sense, to refer to data held by private companies or businesses.[57] Since this paper focuses on EU data sharing policies, the latter notion will be employed.

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[48] Open Data Directive, Art. 14, par. 1.
[49] Open Data Directive, Art. 14, par. 2. Examples of specific high-value datasets are provided in Recital 66 of the Directive: 'postcodes, national and local maps (geospatial), energy consumption and satellite images (earth observation and environment), in situ data from instruments and weather forecasts (meteorological), demographic and economic indicators (statistics), business registers and registration identifiers (companies and company ownership), road signs and inland waterways (mobility).'
[50] Open Data Directive, Recital 69.
[51] Open Data Directive, Art. 14, par. 1, points (b) to (d).
[52] Open Data Directive, Art. 14, par. 1, point (a).
[53] Open Data Directive, Art. 14, par. 3.
[54] See 'Open Data – Availability of Public Datasets' (*Have your say*) <https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12111-Open-data-availability-of-public-datasets> accessed 19 February 2021. See also section 4.1.3. of this paper.
[55] OECD, *Enhancing Access to and Sharing of Data* (n 15) 27.
[56] OECD, 'OECD Glossary of Statistical Terms - Private Sector Definition' <https://stats.oecd.org/glossary/detail.asp?ID=2130> accessed 23 June 2020.
[57] European Commission, 'Towards a Common European Data Space COM(2018) 232 Final' (n 7); European Commission, 'Commission Staff Working Document 'Guidance on Sharing Private Sector

Business-to-business (B2B) data sharing is not subject to a legal framework that specifically targets private sector data and that is as comprehensive as the G2B regime above referred. For B2B data sharing, the current policy approach in the EU can be summarised in the following aspects, taken from documents published by the European Commission:[58]

- As a rule, B2B data sharing should take place voluntarily. Freedom of contract is seen as the cornerstone of B2B data sharing.

- Non-regulatory measures, such as the creation of an EU Support Centre for data sharing[59] and the provision of guidance[60], are favoured over regulatory measures.

- Compulsory data sharing regimes (or data access rights) can be created where a market failure is identified or expected, and competition law cannot solve this. Moreover, compulsory data sharing should be only sector-specific and should take place under fair, transparent, reasonable, proportionate and/or non-discriminatory conditions.[61]

2.3. Observations from the analysis of EU law and policy

The previous sections examined EU legislation and policy concerning data sharing for the purposes of fostering innovation and economic growth. Two broad data sharing regimes were analysed. The first was public sector data (G2B data sharing), with the second being private sector data (B2B data sharing). From this analysis, it was observed that the main criterion to assert which regime applies in a given case is the public or private nature of the data holder.

During this analysis, it was discovered that there are important differences in regulatory approach for data sharing in each sector, and thus the importance of knowing whether

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Data in the European Data Economy'' (n 6); European Commission, 'A European Strategy for Data, COM/2020/66 Final' (n 3).

[58] See European Commission, 'Towards a Common European Data Space COM(2018) 232 Final' (n 7); European Commission, 'A European Strategy for Data, COM/2020/66 Final' (n 3); European Commission, 'Commission Staff Working Document 'Guidance on Sharing Private Sector Data in the European Data Economy'' (n 6).

[59] Support Centre for Data Sharing, 'Support Centre for Data Sharing' <https://eudatasharing.eu/> accessed 22 September 2020.

[60] European Commission, 'Commission Staff Working Document 'Guidance on Sharing Private Sector Data in the European Data Economy'' (n 6).

[61] European Commission, 'A European Strategy for Data, COM/2020/66 Final' (n 3) footnote 39. Examples of sector-specific legislation creating data sharing obligations or data access rights are the Directive (EU) 2015/2366 (concerning payment services in the internal market) and the Directive 2019/944 (concerning smart metering data). For a description and analysis of sector-specific data sharing regimes, see Ducuing (n 9); Charlotte Ducuing, 'Data as Infrastructure? A Study of Data Sharing Legal Regimes' (2020) 21 Competition and Regulation in Network Industries 124 <https://doi.org/10.1177/1783591719895390> accessed 20 August 2020; Feasey and de Streel (n 9).

certain data fall under one or the other category. G2B data sharing is largely regulated, by means of legislation that aims at facilitating and harmonizing public sector data re-use across the EU, to the benefit of a broad and undetermined number of re-users across different productive sectors. The Open Data Directive regulates the conditions under which G2B data sharing takes place and introduces special provisions to foster the re-use of high-value datasets. This legislation is rooted in the idea that data held by the public sector should be made broadly available so that businesses (and citizens) can create innovative products and services.

Contrastingly, the preferred regulatory approach for B2B data sharing is that the involved parties can freely decide whether to share data and under which conditions. EU policymakers are rather reluctant to introduce horizontal rules for the sharing of private sector data. Regulatory intervention to mandate data sharing and/or standardise the applicable conditions is usually exceptional (if there is a market failure that cannot be addressed by competition law) and sector specific. Moreover, in the B2B context, the beneficiaries of data sharing usually are a limited range of re-users, chosen voluntarily by the data holder or as prescribed by sector-specific regulations.

3. The shortcomings of the public-private data dichotomy

Having two separate data sharing regimes depending on whether data are publicly or privately held, might be useful to give order and structure the lines of action of the European Commission and academic discussions around data sharing. However, as will be explained in this section, this binary approach presents a number of shortcomings. The first two issues have to do with the criterion that triggers the application of the G2B or B2B data sharing regime, that is, that data are held by a public or private organisation. The other two issues relate to the underlying assumption that only public sector data should be regulated and made broadly available for re-use, while the sharing of private sector data should remain largely unregulated or be regulated only at a sectoral level.

3.1. The legal meaning of ''holding data'' is not clear

As seen in Part 2, EU legislation and policy on data sharing rely on the notions of publicly-held data and privately-held data to identify the applicable (legal) regime in each case. Interestingly, *'holding data'* is an expression that does not have a clearly defined legal meaning. As previously mentioned, Recital 11 of the 2003 PSI Directive explained that a document is considered *'held'* by a PSB when the PSB has the right to authorise re-use.[62]

[62] The proposed Data Governance Act (discussed later in section 4.1.1.) echoes this understanding with its definition of 'data holder' as the legal person or data subject who has the right to grant access to or to share certain data, in accordance with applicable EU or national law. Art. 2(5) of the Proposal for a Data Governance Act.

The problem is that it is not always clear who has the right to authorise the sharing of data under EU and Member State law, especially in the case of co-generated (industrial) data that do not qualify as personal following the General Data Protection Regulation (GDPR).[63] The GDPR grants certain rights or entitlements to the data subjects to control access to data concerning them.[64] Those control rights are usually not recognized in respect of non-personal data, such as industrial data.

The expression '*holding data'* has been used as a functional substitute for *'owning'* data because in the legal tradition of EU Member States data cannot be seen as property.[65] Even legal instruments that have been traditionally used to protect and define entitlements to control the access to intangible assets, such as intellectual property rights (including database protection) and trade secret protection, these are increasingly deemed inadequate in the context of the data economy.[66] Moreover, they are especially difficult to apply to raw, unstructured and/or machine-generated data.

Therefore, due to the general absence of legally recognized rights defining who is entitled to allow or restrict the access to non-personal data, these rights are often agreed upon contractually or exercised *de facto.* This lack of clarity concerning what is the exact legal scope of *'holding data'*, makes it a questionable criterion to classify the data as public or private. In turn, this raises questions on the adequacy of building data sharing regimes around this distinction.

3.2. Difficulties to classify data in public-private collaborations

Another problem with the public-private data binary is that it assumes that data can be easily classified as public or private whereby it is becoming very difficult to make a clear distinction between public and private sector data. With this, it is also important to note that data is increasingly collected or produced in settings where multiple stakeholders, both from the public, and private sector, intervene.[67] Smart cities are a good example of this. In a smart city context, local authorities usually collaborate with private organisations

[63] Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC, OJ L 119, 1–88. Art. 4(1) of the GDPR defines personal data as 'any information relating to an identified or identifiable natural person ('data subject')'.

[64] For example, the rights to restriction of processing (Art. 18 of the GDPR) or to data portability (Art. 20 of the GDPR).

[65] See e.g., Lothar Determann, 'No One Owns Data' (2019) 70 Hastings Law Journal 1 <https://www.hastingslawjournal.org/no-one-owns-data-2/>; Eric Tjong Tjin Tai, 'Data Ownership and Consumer Protection' (2018) 7 Journal of European Consumer and Market Law <https://kluwerlawonline.com/journalarticle/Journal+of+European+Consumer+and+Market+Law/7.4/EuCML2018029>.

[66] Sofia Oliveira Pais, 'Big Data and Big Databases between Privacy and Competition' [2020] Legal Challenges of Big Data <https://doi.org/10.4337/9781788976220> at 2.2.

[67] See Madison (n 9).

that provide the technology and expertise required to collect and process data about the city and the citizens.[68]

For instance, data collected with privately owned and operated sensors, installed in public space. In such scenario, asserting the public or private status of data based solely on who has factual control over them might prove insufficient, to the extent that it would allow private appropriation of data that have been collected in public space, in the context of a project developed with public local authorities.

Yet, if the data were to be considered as privately held, the sharing, and re-use, of it, would follow the B2B approach explained earlier in this paper. In contrast, if the data were to be considered as publicly held, the sharing, and re-use, of it would have to follow the previously examined G2B rules. This binary approach does not contemplate that data can be simultaneously held by the public and the private sector, in cases where actors from both sectors contributed to their collection.

As previously noted, there is little clarity regarding the legal entitlements ascribed to data holders. The parties in smart city collaborations usually seek to fill those legal gaps with contractual agreements. However, as illustrated by the discussions about data governance in the (now defunct) smart city project *'Sidewalk Toronto'*, given the multiplicity of actors, interests and contextual factors at stake, defining entitlements and responsibilities in relation to data in a smart city is a very complex exercise.[69] The criterion of who holds the data is not sufficient to determine the legal treatment that should be applied to the (sharing of) data collected in a smart city, and in other complex settings where both public and private actors contribute to the creation or collection of data.

3.3. Increasing involvement of the private sector in the production of data with high socio-economic value

The private sector is every time more active in the creation of data that could arguably be considered as public for the purposes of accessibility and re-use. This is a consequence of the growing involvement of private actors in the *'public sphere'*, understood by Taylor as the space *'where public functions are performed and matters of public concern are dealt with'*.[70]

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[68] For a comprehensive discussion on the elements that characterise a smart city, see Lorenzo Dalla Corte, 'Safeguarding Data Protection in an Open Data World: On the Idea of Balancing Open Data and Data Protection in the Development of the Smart City Environment' (2020) <https://research.tilburguniversity.edu/en/publications/safeguarding-data-protection-in-an-open-data-world-on-the-idea-of> accessed 24 July 2020, in particular section 2.2.

[69] See Scassa (n 9).

[70] Linnet Taylor, 'Public Actors Without Public Values: Legitimacy, Domination and the Regulation of the Technology Sector' [2021] Philosophy & Technology 4 <https://doi.org/10.1007/s13347-020-00441-4>.

On the one hand, this is evidenced by the growing delegation to the private sector of activities that are typically considered a responsibility of the state. This was acknowledged by the European Commission when carrying out the review of the PSI Directive that led to the adoption of the Open Data Directive. During the review, the Commission recognised as problematic that many datasets of considerable socio-economic value were *'shielded'* from the PSI regime, to the extent that the PSI Directive applied only to data held by PSBs.[71]

The Commission explored the possibility of extending the scope of the Directive, to cover also data held by publicly owned (utility) companies and private entities entrusted with public tasks (on the basis of public service contracts).[72] However, due to lack of political consensus, the new provisions of the Open Data Directive ended up covering only public undertakings (as explained section 2.1) and not private undertakings. The choice of applying the Directive to the latter was ultimately left to the Member States, which are encouraged to go beyond the minimum harmonising rules and apply its provisions to private undertakings, *'in particular those that provide services of general interest'*.[73]

On the other hand,, the private sector produces more data that can be of public relevance, even in the absence of legal or contractual ties with the public sector. This is especially evident in the case of big technology companies, which, as Taylor explains, have the ability of acquiring mass influence through the engagement of people with the platforms or services they offer.[74] She argues that this engagement effectively makes these private actors public service providers, whereby she gives the example of the partnership between Google and Apple. Specifically, this refers to the creation of a technological solution to facilitate contact tracing in the context of the Covid-19 pandemic. Being by far the two largest providers of smartphone operating systems around the world, these two private companies were able to develop a technological framework that has been used by governments and research institutions in several countries to enhance their contact tracing strategies.[75]

The pervasiveness of the private sector is also illustrated by the on-going discussions regarding access to private sector data by the public sector for public interest reasons in the EU (B2G data sharing).[76] The core idea behind B2G data sharing is that the private sector holds data that have *'a high potential to serve the general public interest by*

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[71] European Commission, 'Inception Impact Assessment - Review of the Directive on the Re-Use of Public Sector Information (Directive 2003/98/EU)' (European Commission 2017) Ares(2017)4540429 2 <https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/1096-Review-of-the-Directive-on-the-re-use-of-public-sector-information-Directive-2013-37-EU-> accessed 9 July 2020.
[72] European Commission, 'Inception Impact Assessment - Review of the Directive on the Re-Use of Public Sector Information (Directive 2003/98/EU)' (n 71) 2.
[73] Open Data Directive, Recital 19.
[74] Taylor (n 70) 2.
[75] Kari Paul, 'Apple and Google Release Phone Technology to Notify Users of Coronavirus Exposure' (*The Guardian*, 20 May 2020) <http://www.theguardian.com/technology/2020/may/20/apple-google-phone-app-trace-coronavirus> accessed 21 February 2021.
[76] See in particular the report prepared by the High-Level Expert Group on Business-to-Government Data Sharing, European Union (n 21).

informing decision making […] enabling more targeted interventions and improving public service delivery'.[77]

Data to which, in principle, the public sector does not have direct access and that could obtain (exclusively or at least more efficiently) from the private sector. For example, mobility data, health data, and financial data. The B2G debate is outside the scope of this article. However, it illustrates a change in paradigm that is relevant for the analysis in this paper: the position of the public sector as the major holder of the most valuable datasets is being contested by the private sector.[78]

When the first legislation on the re-use of PSI was being prepared, States were considered the major holders of vast amounts of information with high economic potential when used to create added-value products and services.[79] The role of the private sector was limited to re-use and exploit such information. As illustrated in this section, such dynamics have changed, and the private sector is every time more active in the production of data with high economic and social value.

3.4. Fragility of the public-private data dichotomy in the context of organisational change

The current regulatory approach to data sharing can lead to scenarios in which changes in the public or private status of the data holder would alter the public or private status of the data and the applicable data sharing regime. This is more problematic when public sector organisations are privatised. In practice, this would mean that data that were initially subject to the more open and re-use friendly rules of the Open Data Directive would then be subject to the B2B regime if the data holder becomes a private organisation.

The Open Data Directive does not include provisions to deal with such situation. Thus, the more public organisations are privatised, less data will be covered by the Open Data Directive. As noted by Ricolfi et al, the fact that certain datasets cease to be available for re-use as a result of an organisational change, affects negatively the emergence of markets of value-added services based on such datasets.[80]

As previously shown, the current approach to regulating data sharing depending on whether the data are held by the public or the private sector has significant shortcomings.

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[77] European Union (n 21).
[78] See e.g. European Union (n 21); Jennifer Shkabatur, 'The Global Commons of Data' (2019) 22 Stanford Technology Law Review 354, 357 <https://heinonline.org/HOL/P?h=hein.journals/stantlr22&i=356> accessed 14 September 2020.
[79] See European Commission, 'Proposal for a Directive of the European Parliament and of the Council on the Re-Use and Commercial Exploitation of Public Sector Documents' (2002) COM(2002) 207 final — 2002/0123(COD) <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM:2002:0207:FIN>.
[80] Marco Ricolfi and others, 'The Exclusion of 'public Undertakings' from the Re-Use of Public Sector Information Regime' (2011) 2011 Informatica e Diritto 147, 152.

The issues explained in section 3.1. and section 3.2. point at the practical difficulties of making a clear distinction between private and public sector data, solely on the basis of the status of the data holder. The issues explained in section 3.3. and section 3.4. point at a more fundamental question.

The role of the private sector in the production of data with high socioeconomic value is every time more prominent, as private actors increasingly intervene in the *'public sphere'* as a result of delegation, privatisation or *de facto,* through the mass engagement of people with their platforms or services. This combination of circumstances is leading to a scenario in which private actors might outrival the public sector and become major holders of datasets with high socioeconomic value.

The current regulatory approach does not acknowledge this important change in paradigm, generally displaying a certain reluctance to regulate the sharing of private sector data beyond sector-specific intervention. This reluctance is evidenced in the previously discussed minimum harmonising rules of the Open Data Directive, which do not cover data from the private sector even when private entities are entrusted with a public sector task or with the provision of services of general interest. The Directive still pays too much attention to the public nature of the data holder neglecting other aspects, such as the context in which data are produced or the value of data for the economy and society, that could justify bringing privately held data under its scope.

Therefore, it is problematic that data sharing for the purposes of innovation and economic growth is currently regulated under the assumption that there are always hard lines between public and private sector data.

4. A glimpse of the future: toward a more comprehensive regulation of data sharing?

After exposing the public-private data dichotomy in the current data sharing legislation and policy and identifying its shortcomings, this article will now discuss how the landscape will evolve in light of the regulatory proposals announced in the European Commission's communication '*A European strategy for data'* published in 2020 (hereinafter, the Data Strategy).[81] This section will provide a number of starting points to advance the discussion on the issues identified in this paper.

4.1. The data strategy and the public-private data dichotomy

The Data Strategy published in 2020 announced a number of regulatory interventions at horizontal and sectoral level concerning data sharing. An overview of their key points and their link with the issues raised in this paper are provided in the following sub-sections.[82]

[81] European Commission, 'A European Strategy for Data, COM/2020/66 Final' (n 3).
[82] This part incorporates developments up to February 17, 2021.

4.1.1. The Data Governance Act

The proposal for a regulation on European data governance, known as the Data Governance Act, is intended to *'foster the availability of data for use by increasing trust in data intermediaries and by strengthening data-sharing mechanisms across the EU'*.[83] The proposed Act, published by the European Commission in November 2020, maintains the approach of taking different measures for G2B and B2B data sharing.

For G2B data sharing, the proposed Data Governance Act would introduce a framework to allow the re-use of certain types of data that are explicitly excluded from the scope of the Open Data Directive. That is, data protected on the grounds of commercial confidentiality, statistical confidentiality, intellectual property rights of third parties and personal data protection.[84]

The conditions to be introduced by the Data Governance Act include: firstly, a prohibition of exclusive agreements concerning the re-use of protected data; secondly, transparency and non-discrimination requirements; thirdly, the possibility of requiring data users to access and re-use data within secure processing environments; and additionally, conditions for the charging of re-use fees.[85]

For B2B data sharing, the envisioned Data Governance Act would take measures oriented to the professionalisation of providers of data sharing services, [86] to increase the trust and incentivise data holders and data users to exchange data voluntarily. This would be done through a notification procedure for providers of data sharing services and the introduction of a number of requirements, including a neutrality requirement which prevents that they can use the shared data for other purposes.[87] The proposed Data Governance Act would not regulate the specific conditions under which B2B data sharing should take place. An interesting novelty of the proposed Data Governance Act is that it would introduce for the

[83] 'Proposal for a Regulation of the European Parliament and of the Council on European Data Governance (Data Governance Act) COM/2020/767 Final' (n 6) 1. Hereinafter, 'Proposal for a Data Governance Act'.
[84] Art. 3(1) of the Proposal for a Data Governance Act.
[85] See Chapter II of the Proposal for a Data Governance Act.
[86] For the list of data sharing services, see Article 9 of the Proposal for a Data Governance Act.
[87] For the full list of requirements, see Article 11 of the Proposal for a Data Governance Act

first time legal definitions of *'data'*,[88] *'data holder'*[89], *'data user'*[90], *'data sharing'*[91], and *'access'*[92], among others. Although the envisioned scope of the Data Governance Act is rather limited,[93] if adopted, the new definitions will likely be used as a reference for future data sharing legislation or policies.

4.1.2. The Data Act

The scope of an eventual Data Act is not, at present, well delineated. Following the Data Strategy, the Data Act may introduce measures concerning business-to-government (B2G) and B2B data sharing.[94] For B2B data sharing, the approach described in section 2.2. will be largely maintained. The intervention will be mostly targeted at facilitating voluntary data sharing. This will be achieved by addressing issues such as usage rights for co-generated data, unnecessary hurdles to data sharing, and legal liability. Mandatory access to data in the B2B context might take place '*only where specific circumstances so dictate'*.[95]

The Data Act could possibly revise the legal framework for intellectual property rights (in particular, database and trade secret protection) '*with a view to further enhance data access and use'*. [96]Against this backdrop, the Data Act might (at best) help to clarify part of the issues previously highlighted in section 3.1 and section 3.2 of this paper, concerning the scope of the rights of data holders, especially in the case of non-personal co-generated

[88] Proposal for a Data Governance Act, Art. 2 (1): ''data' means 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'. This definition seems to be based on the definition of 'document' in the Open Data Directive (see Recital 30 of the Directive). Strictly speaking, the proposed Data Governance Act would not be the first legislation to introduce a definition of data. However, previous definitions of 'data' in EU law are rather circular. For example, the General Data Protection Regulation (GDPR, (EU) 2016/679), defines 'personal data' as *information* relating to identified or identifiable natural persons (Art. 4(1)). The Regulation on a framework for the free flow of non-personal data (EU 2018/1807) defines 'data' as *data other than personal data* as defined by the GDPR (Art. 3(1)).

[89] Proposal for a Data Governance Act, Art. 2 (5): ''data holder' means 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'.

[90] Proposal for a Data Governance Act, Art. 2 (6): ''data user' means a natural or legal person who has lawful access to certain personal or non-personal data and is authorised to use that data for commercial or non-commercial purpose.'

[91] Proposal for a Data Governance Act, Art. 2 (7): ''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'.

[92] Proposal for a Data Governance Act, Art. 2 (8): ''access' means processing by a data user of data that has been provided by a data holder, in accordance with specific technical, legal, or organisational requirements, without necessarily implying the transmission or downloading of such data'.

[93] Proposal for a Data Governance Act, Art. 1.

[94] European Commission, 'A European Strategy for Data, COM/2020/66 Final' (n 3).

[95] European Commission, 'A European Strategy for Data, COM/2020/66 Final' (n 3) 13.

[96] European Commission, 'A European Strategy for Data, COM/2020/66 Final' (n 3) 13.

data. However, its envisioned scope, in principle, would not address the shortcomings explained in section 3.3 and section 3.4.

4.1.3. The Implementing Act on High-Value Datasets

The regulatory instrument will be adopted pursuant to the Open Data Directive. The implementing Act will be crucial to achieve the Directive's goal of improving the accessibility and re-use of public sector data, since it will identify specific datasets with high potential for re-use, considering their socioeconomic and environmental benefits that can be derived from them. It will also introduce rules (e.g., concerning format, charging and ways of publication) to facilitate the re-use of the identified datasets. This will be done with the aim of increasing their impact. The specific content of the implementing act is not known yet, but it is expected that it will be adopted in 2021.

This measure targets only public sector data, hence, it does not directly help to address the issues identified in Part 3. However, the Inception Impact Assessment of the envisioned suggests that high-value datasets will also become *'reference data for other (public or private sector) data and encourage the re-use of these related data (e.g., high value public geospatial data bundled with data derived from sensors or mobile devices/cars)'*.[97]

4.1.4. The common European data spaces

Next to horizontal regulatory measures, the Data Strategy also announced sectoral intervention to support the development of nine common European data spaces in strategic sectors and domains of public interest: industrial (manufacturing), Green Deal, mobility, health, financial, energy, agriculture, public administration and skills.[98] The notion of *'data spaces'* is not clearly defined in the Data Strategy, but the text describes them as encompassing data sharing architectures (including standards and tools) and governance mechanisms.

The intervention envisioned by the Commission might include 'legislation *for data access and use, and mechanisms for ensuring interoperability.'*[99] What is interesting about these data spaces is that they aim at pooling both publicly held data and privately held data for use in the abovementioned domains, [100] although the extent to which that is possible

[97] European Commission, 'Inception Impact Assessment - Implementing Act on a List of High-Value Datasets' (European Commission 2020) Ares(2020)3977569 2 <https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12111-Implementing-act-on-a-list-of-High-Value-Datasets> accessed 29 September 2020.

[98] European Commission, 'A European Strategy for Data, COM/2020/66 Final' (n 3) Appendix.

[99] European Commission, 'A European Strategy for Data, COM/2020/66 Final' (n 3) 21.

[100] In this regard, the Inception Impact Assessment for the implementing act on a list of High-Value Datasets states: 'The European Strategy for Data of 19 February 2020 incorporates the [High-Value Datasets] as a common data layer facilitating, in conjunction with data coming from the private sector, the rollout of sectoral data spaces in strategic areas such as manufacturing, environment, agriculture,

depends on the specific sector.[101] The Commission also wants to encourage use and sharing of data across sectors.

There is still a great deal of uncertainty regarding the specific functioning of the data spaces, in terms of who can take part in them, the conditions that will apply to the sharing of data and how cross-sectoral data sharing will take place. Therefore, it is difficult to anticipate to which extent this initiative might contribute to overcome the shortcomings of the public-private dichotomy exposed in this paper. From the examination of the (envisioned) scope of the above measures, it is observed that the EU policymakers will largely continue to follow the current approach for regulating G2B and B2B data sharing. In addition, none of the measures here reviewed contributes significantly to address the shortcomings discussed in this paper.

4.2. Starting points to further the discussion on the public-private data dichotomy

The limits between the public and private sector have become more fluid under the changing dynamics of data production. However, current and upcoming EU legislation and policy do not acknowledge that fluidity. This section proposes a number of starting points for further research and debate toward a more comprehensive regulation of data sharing.

The shortcomings identified in Part 3 of this paper refer to two main problems of the public-private dichotomy. First, the distinction is difficult to apply in a context in which the rights of data holders are not well delineated and situations in which actors from both the public and private sector contribute to the creation of data. In this regard, further research, guidance and eventually regulatory intervention could contribute to clarify what '*holding data*' means and the applicable legal regime for the sharing of data that have been created with the intervention of public and private actors.

The second type of issues points at a more fundamental and difficult question. The private sector is increasingly entering the public sphere, due to delegation or privatisation of public sector tasks, and due to the influence over the general public that especially big technology companies enjoy as a result of the engagement of citizens with their products and services. In that context, private actors are becoming, formally and informally, providers of public services. Yet, as a result of the current regulatory approach to data sharing, privately held data are excluded from the scope of regimes that foster the access to and re-use of data by a broad range of users, in particular, the Open Data Directive.

The problem with the Open Data Directive is that it targets public sector data, emphasizing the public nature of the data holder as the criterion that defines its scope and justifies the

energy, finance and mobility.', European Commission, 'Inception Impact Assessment - Implementing Act on a List of High-Value Datasets' (n 97) 1.

[101] For example, the industrial data space seems to be mostly intended for private actors only, while the data spaces for mobility, health and agriculture data space lend themselves better to pooling both private and public sector data.

need to regulate how data should be made available. A possible way forward could be reframing the current understanding of what *'public'* means for the purposes of data accessibility and re-use, to allow that certain private datasets can also be covered by a horizontal data sharing regime, such as the Open Data Directive or a comparable legal instrument. This would entail understanding *'public data'* not as data held by the public sector but as data that should be made available for re-use by the general public (under certain conditions), regardless of the nature of the data holder.

A first step in that direction could be expanding the scope of the Open Data Directive, to cover not only data held by public sector entities but also privately held data, when private undertakings perform a public task or a service of general interest (such as the provision of utilities). The Open Data Directive left the door open for Member States to go beyond the minimum harmonising rules and apply its requirements to private undertakings, particularly when they provide services of general interest.[102] The experiences of Member States when implementing this legislation might provide useful insights that could justify (or not) further expansion of the scope of the Open Data Directive.

At the time of writing, only Greece and France have transposed the Open Data Directive into national legislation. [103] The Greek legislation[104] did not go beyond the minimum harmonising rules in the Open Data Directive, hence private undertakings are not included in its scope of application. In contrast, French legislation introduced since 2016 (already before the adoption of the Open Data Directive in 2019)[105] provisions requiring concessionaires of public services to provide the contracting public authority with the data(bases) collected or produced when operating the public service that are essential for the execution of the concession contract.[106]

The contracting authority can, directly or by means of third party, extract and use the data(bases), in particular *'with a view of making them available free of charge for the purpose of re-use for free or against payment'.*[107] It remains to be seen whether the rest of the Member States will go beyond the minimum harmonising rules of the Open Data Directive concerning private undertakings.[108] The discussion can go further than just changing the scope of the Open Data Directive.

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[102] Open Data Directive, Recital 19.
[103] As reported by the web portal of EU legislation 'EUR-Lex - 32019L1024 - EN - EUR-Lex' <https://eur-lex.europa.eu/legal-content/EN/NIM/?uri=uriserv:OJ.L_.2019.172.01.0056.01.ENG> accessed 19 February 2021. The transposition deadline of the Open Data Directive is July 17, 2021.
[104] ΝΟΜΟΣ ΥΠ' ΑΡΙΘΜ. 4727/2020.
[105] Art. 17 of the *Loi n° 2016-1321 du 7 octobre 2016 pour une République numérique*, JORF n°0235 8 october 2016. Currently enshrined in the Public Procurement Code, Codified by the Ordinance n° 2018-1074 of 26 november 2018 (*portant partie législative du code de la commande publique*), JORF n°0281 5 december 2018.
[106] Art. L3131-2 of the French Public Procurement Code, free translation.
[107] Art. L3131-4 of the French Public Procurement Code, free translation.
[108] The bill of the legislation that will transpose the Open Data Directive in Germany, published On January 29, 2021 by the federal government, does not include private undertakings in the scope of application arguing that there are 'structural differences between public and private companies' (free

A higher-level question to explore would be whether certain privately-held datasets should be subject to a horizontal and cross-sectoral regime that facilitates re-use on the basis of the high socioeconomic value of the datasets, even if the data holders do not formally perform a public task or a service of general interest. This would acknowledge the increasing involvement of the private sector in the production of data with high socioeconomic relevance, and would break with the assumption that only data held by the public sector should be widely available for re-use.

Therefore, the question to be asked would be under which conditions privately-held data could be subject to such regime? The notion of *'high-value datasets'* introduced by the Open Data Directive could be helpful in identifying which privately held datasets could be eligible for broad re-use. As stated previously, the European Commission expects that the rules concerning high-value datasets in the Open Data Directive and its implementing acts, will become a reference for other datasets, including those that are privately held. In addition, observing the development of the common European data spaces might also provide insights to articulate in which cases and under which conditions, privately held datasets could be made available for re-use across sectors.[109]

Furthermore, it would be necessary to identify the rationale that justifies that the general public could have access to privately-held data for the purposes of re-use. In the case of public sector data, the implicit rationale is that the data have been obtained with taxpayers' money. Consequently, businesses and citizens should be allowed to benefit from public sector data by re-using it for commercial and non-commercial purposes. Since such basis is not present in the case of privately-held data, EU policymakers would have to find a different rationale for that.

Another aspect to address is the extent to which regulating the sharing of privately held data would constitute a disproportionate burden for private companies, and whether it would reduce the incentives to keep investing in the production or collection of data. This issue was raised during the review of the PSI Directive that resulted in the adoption of the Open Data Directive, and it was one of the reasons adduced by the European Commission

translation). Bundesministerium für Wirtschaft und Energie, 'Gesetzentwurf der Bundesregierung: Gesetz zur Änderung des E-Government-Gesetzes und zur Einführung des Gesetzes für die Nutzung von Daten des öffentlichen Sektors' (2021) 3 <https://www.bmwi.de/Redaktion/DE/Downloads/G/gesetzentwurf-aenderung-des-e-government-gesetzes-und-%20Gesetz-fuer-die-nutzung-von-daten-des-oeffentlichen-sektors.pdf?__blob=publicationFile&v=8> accessed 19 February 2021.

[109] At the moment of writing, the European Commission is preparing a proposal for legislation to govern the European Health Data Space. Among the policy alternatives that will be explored, the Commission announced possible intervention concerning the re-use of data held by private data holders. European Commission, 'Inception Impact Assessment - A European Health Data Space' (2020) Ares(2020)7907993 <https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12663-A-European-Health-Data-Space-> accessed 18 February 2021.

to propose a lower intensity policy package that did not include private undertakings in its scope.[110]

The rules introduced by the Open Data Directive for data held by public undertakings could serve as a reference to find a balance between the interests of the private data holders and the re-users. Of particular relevance here is the exemption from the rules governing the processing of requests for re-use. This also includes the possibility of charging re-use fees above marginal costs (including a reasonable return on investment). The future Data Governance Act, specifically the measures concerning protected data held by the public sector, could serve as a reference to devise mechanisms that allow the re-use of private datasets that are commercially sensitive.

These starting points can guide further research toward a more comprehensive regulation of data sharing in the EU, beyond the limitations of the public-private data dichotomy here scrutinised.

5. Conclusion

This paper has examined one of the dichotomies around which the EU rulemakers have built legislation and policies to facilitate and stimulate data sharing as a key element of a thriving data economy. Specifically, the distinction between public sector and private sector data. The paper has investigated the assumptions underlying the public-private data dichotomy and whether the distinction can still stand under the current dynamics of data production.

Data sharing for the purposes of fostering innovation and economic growth is regulated by two broad regimes in the EU, that is, one for publicly held data (G2B) and the other one for privately held data (B2B). The findings of this paper suggest that the main criterion to trigger the application of one or the other regime is the public or private nature of the data holder. Factors such as the context in which data are produced or the socioeconomic value of the data are not relevant to define the public or private character of data under the current legal and policy frameworks.

It has been observed that the two regimes follow a very different approach. G2B data sharing is much more regulated and aims at facilitating, and harmonizing, public sector data re-use across the EU to the benefit of a broad and undetermined range of re-users. In contrast, B2B data sharing is still largely unregulated and regulatory intervention to mandate data sharing and standardise its conditions is usually exceptional and sector specific.

[110] European Commission, 'Commission Staff Working Document - Impact Assessment Accompanying the Document 'Proposal for a Directive of the European Parliament and of the Council on the Re-Use of Public Sector Information'' (2018) SWD(2018) 127 final 42.

In the B2B context, the beneficiaries of data sharing are a selected number of re-users, chosen voluntarily by the data holder or mandatorily by the policymakers. This contribution has argued that the public-private data dichotomy evidenced in the way EU policymakers approach the regulation of data sharing has important shortcomings. Firstly, *'holding data'* is still an expression with a vague legal meaning. Secondly, making a clear distinction between public and private sector data is becoming every time more difficult, considering that data are increasingly produced with the intervention of actors from both sectors.

The idea that only data from the public sector should be subject to regimes fostering re-use by the general public is coming under pressure as the private sector is more involved in the collection of data with high socioeconomic value, even in the absence of ties with the public sector. Against this backdrop, the main conclusion to be drawn from this paper that the public-private data dichotomy, as currently embodied in EU data sharing law and policy, has important flaws to the extent that it does not reflect the complexity and changing dynamics of data production.

This paper does not claim that the distinction between public and private data for the purposes of data sharing is completely irrelevant or useless. It claims that this binary approach (as it is now) has limitations that should be acknowledged and addressed to develop a more consistent legal framework for data sharing. This study has also offered '*a glimpse of the future'* in terms of examining whether upcoming regulatory initiatives will address the shortcomings of the public-private data dichotomy identified in this paper.

It is submitted that the Commission will largely keep the same approach when regulating G2B and B2B data sharing and that none of the reviewed measures contributes significantly to address the inadequacies of the public-private data dichotomy herein discussed. The paper has also suggested avenues for further research to advance the academic and policy debate on how to regulate data sharing in a more consistent way, beyond the limitations of the dichotomy examined in this study.
Particular attention was devoted to the importance of breaking with the idea that only data from the public sector should be widely available for re-use and exploring whether and under which conditions privately held data could also be subject to a regime that facilitates accessibility by a broad range of re-users.

The legal and policy frameworks that will shape the EU data economy in the coming years are in the making. As noted by Graef, researchers play an important role in commenting on proposals from policymakers, in order to *'advance discussions about how to create value from data as a means to stimulate societal progress'*.[111] In that spirit, the findings of this paper contribute to the on-going academic and policy debate concerning the regulation of data sharing as a key subject of data governance.

[111] Graef (n 8) 24.

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