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Public sector information in the European Union policy: The misbalance between economy and individuals

Clarissa Valli Buttow and Sophie Weerts

Abstract

Algorithmic technologies and artificial intelligence are centred on data and generate new business models, known as the data-driven economy. In the European Union context, the development of such new business is accompanied by a regulatory and political framework. An important aspect of this regulatory framework regards the legal conditions that enable the data collection, availability, sharing, use and reuse. Within the larger context, this article analyses the development of the European Union regulatory framework governing the availability, sharing and reuse of public sector data, also referred to as Public Sector Information policy. Anchored in the analytical tools provided by Discursive Institutionalism and Critical Data Studies and after studying the evolution of this policy over 25 years, this article argues that economic considerations have been overwhelmingly decisive in the European Union Public Sector Information policy and much less attention has been paid to fundamental rights and democracy issues. It also shows how European Union Public Sector Information policy contributes to the data infrastructure, enabling a thriving data-driven economy. In doing so, this article argues that the possible problematic effects of this new data-driven economy are not only affordances of the technology itself but are also the result of political and regulatory choices. More globally, the article stresses the need for policymakers to inscribe each of the policies and regulations affecting the digital transformation in the framework of fundamental rights and democracy.

Keywords

Public sector information, open government data, data economy, regulation, discursive institutionalism, critical data studies

Introduction

Recent technological advances in algorithmic technology and Artificial Intelligence (AI) are centred on data (Van Noordt and Misuraca, 2020). Such innovations are generally embraced as potential solutions to social, political, and environmental problems, but foremost they are considered crucial economic boosters (European Commission, 2017). In this sense, data is regarded as generating innovative business models built on new opportunities and efficiency gains made possible by improved possibilities of data collection, sharing and processing. This new economic sector is commonly referred to as 'data-driven economy' or simply 'data economy' (König, 2017).

Data feed the data-driven economy. Within this perspective, governments are called to improve the conditions of collection, sharing, use and reuse of data. One of the central pillars of this improvement concerns the liberalisation of data collected and produced in the realm of governmental action (Haberer, 2020; Magalhaes and Roseira, 2020; Matheus et al., 2018; Ruijer et al., 2017). Policies and regulations aiming to increase the availability of public sector data are important building blocks of the regulatory framework, which enables the emergence of this new economic model (Jetzek et al., 2014). This public sector data policy is known in the European Union (EU) context as the Public Sector Information (PSI) policy.

At the same time, data release and reuse have raised concerns. Scholars in the information management and public administration field note that such a policy could reinforce the dominant position of a few skilled actors (Kitchin, 2022; Nikiforova and Lnenicka, 2021; Zuiderwijk and Janssen, 2014). Other scholars highlight that public data is never raw. Instead, it is 'cooked' in real-life, replicating

Swiss School of Public Administration, University of Lausanne, Switzerland

Corresponding author:
Clarissa Valli Buttow, Swiss School of Public Administration, University of Lausanne, Quartier UNIL-Mouline, Bâtiment IDHEAP, Unité Droit Public et Regulation, Bureau: 1002, CH-1015 Lausanne, Switzerland.
Email: clarissa.vallibuttow@unil.ch

discrimination, inequalities and social gaps (Johnson, 2014; Meng and DiSalvo, 2018; Ratner and Ruppert, 2019). Additionally, warnings concerning the potential harm to privacy and data protection rights were voiced, given the fragility of anonymisation processes (Rocher et al., 2019). More broadly, in what concerns the data-driven economy itself, criticisms have been raised regarding its possible perverse social effects and the pitfalls of increased use of data-based innovation. Such concerns are, for instance, linked with data misuse, privacy breaches, violations of principles such as fairness, non-discrimination and individual autonomy, as well as the ethical implications associated with the reuse of data by for-profit actors (Jobin et al., 2019; Liu, 2019; Meijer and Thaens, 2020; Mikhaylov et al., 2018; Ratner and Ruppert, 2019; Van Noordt and Misuraca, 2020; Veale and Brass, 2019; Wachter et al., 2021). To this list, we can add that the reuse of data can also lead to efficiency problems and thus to a counterproductive effect on society. For example, mobility data made available by the administration can be used by private companies to develop transport offers that undermine the fight against global warming from the point of view of mobility and environmental policies.

In reaction to such concerns, international organisations and national authorities are currently developing a regulatory framework to tame the rapid rise and use of data innovations and AI technologies. The EU plays a leading role in this context. Indeed, the implementation of its successful data protection framework illustrates the EU's ability to set standards regarding data protection and fundamental rights (FR) (Bradford, 2020). More recently, the proposals of the Artificial Intelligence Act (European Commission, 2021), the Digital Market Act (European Commission, 2020c) and the Digital Services Act (European Commission, 2020b) confirm the EU's position as a regulatory champion. These three proposals aim to ensure that technological advances remain fair and avoid collective and individual harm (European Commission, 2020d). Simultaneously, the EU seeks to improve the conditions for the flourishing of the data-driven economy. The proposals drawn up within the Data Governance Act (European Commission, 2020a) and the Data Act (European Commission, 2020d) reveal the EU's political will, which seeks to pursue economic growth through a data-driven economy.[1] Combining these regulatory efforts would provide the optimal conditions for developing a thriving economy while ensuring that democratic values and FR are preserved. However, finding an optimal balance between taming innovation and boosting the economy is a big challenge for regulators and policymakers.

This paper contributes to the discussion on the data-driven economy by resituating the EU efforts to open public sector data. The EU policy effort to make public sector data available is materialised in the enactment of the PSI Directive in 2003 (EU, 2003), which was amended in 2013 (EU, 2013) and recast in 2019 (EU, 2019). We argue that, in the case of the PSI policy, the balance between economic growth and social welfare, including FR protection, has so far favoured the development of the data-driven economy regardless of its possible problematic effects. This argument is built on an in-depth empirical analysis covering 25 years of EU PSI policy. For this purpose, the work produced by the European Commission (EC) was studied. Emphasis on the EC's work is justified by its relevance to the EU's institutional design as the competent authority to propose public policies. The EC embodies the EU's interest, and its work is deemed to represent the EU's vision best (Bradford, 2020). More broadly, this paper also participates in the study of the emergent EU data law[2] (Streinz, 2021).

While the intrinsic links between the data-driven economy and PSI policy remains opaque and scarcely studied, Discursive Institutionalism (DI) and Critical Data Studies (CDS) offer some robust insights that can shed light on the issue. Through DI's analytical tools, policy documents and regulations can be valid objects of observation (Schmidt, 2008). Moreover, CDS explains how socio-technical conditions (such as regulation, policies, tools, mechanisms, etc.) enable and shape the development of data technologies (Iliadis and Russo, 2016). Both frameworks underline the importance of the discourse and ideas shaping realities. Therefore, these analytical lenses provide clarity on the role and function of PSI policy in constructing the data-driven economy (Lynggaard, 2019). Within this framework, this study will be useful for scholars and policymakers as it provides a better understanding of the relationship between legal texts and their policy context. Thus, an informed approach to the political and legal challenges posed by the data-driven economy will be rendered.

Following this introduction, 'Understanding regulation as a means of shaping social realities' presents relevant concepts from the literature on DI and CDS. 'PSI in the context of the data-driven economy' presents the main concepts and ideas underlining the PSI policy and resituating it in the data-driven economy context. Subsequently, 'PSI policy and the EU' will discuss the sources that ground this inquiry and its methodological considerations. Finally, the article critically analyses the data and presents its conclusion.

Understanding regulation as a means of shaping social realities

The institutionalist approach in political sciences perceives institutions as the (more or less) stable systems that frame social relations; institutions are, among other things, organisations, rules, laws and interpretative frameworks (Schmidt, 2010). In this literature, the concept of regulation is

described in a broad sense as the deliberate effort to shape the behaviour of others in such a way to achieve specific goals considered legitimate in a given society (Baldwin et al., 2011; Black, 2002). The EC produces many documents – that is, strategies, action plans, green and white papers, directives and regulations (*strict sense*) – all intending to influence or constrain the behaviour of various of stakeholders – that is, national governments, civil society, entrepreneurs and private actors. In this sense, the work produced by the EC can be considered as regulation, regardless of its legal status (Black, 2002).

Institutionalists consider that regulation is a kind of institution and that it constitutes the economic life 'through its cognitive, normative and regulative dimensions' (Black, 2013: 24). Investigating this constitutive feature of regulation and studying the EU process of integration, Fligstein and Sweet show that the construction of a large-scale (in the EU case, single) market depends heavily on regulation (Fligstein and Sweet, 2002). It should not be different in the case of the data-driven economy. Among the institutionalist approach, discourse institutionalism takes discourse as the main object of analysis, investigating the dynamics of ideas and their evolution. The process through which discourses become structures and, therefore, institutions frames and shapes social relations in a certain sense (Lynggaard, 2019).

From this perspective, regulation has an impact on innovation. Butenko and Larouche emphasise that the regulatory environment where innovation emerges is *constitutive* of such innovation. In this regard, regulation directly affects the scope and determines the direction of innovation (Butenko and Larouche, 2015). In other words, innovation does not occur in a vacuum, instead it is dependent on material conditions. CDS refers to the concept of 'data infrastructures' as complex socio-technical assemblages involving a variety of actors, tools and mechanisms (Kitchin and Lauriault, 2014; Micheli et al., 2020). Such assemblages construct technological advances and imaginaries which shape our social reality (Kitchin and Lauriault, 2014). These scholars consider the regulatory framework as a part of the socio-technical assemblages. The concept of 'data infrastructures' as the 'socio-technical assemblage' through which technological innovation emerges also includes the legal and policy framework governing the action of actors in the system. A particular niche of this infrastructure specifically governs data and determines who can collect it, how value can be extracted from it, the conditions of sharing, as well as use and reuse. The regime governing this specific niche is known as data governance (Zygmuntowski et al., 2021).

The PSI policy has the potential to foster innovation and as a result, be a building block of the data-driven economy. The policy is based on encouraging openness and the reuse of public data, which can be seen as a model of data governance in the field of public sector data. From this perspective, PSI policy participates in the data governance debate and could be seen as the first large-scale project of data sharing. It is possible to say that PSI policy is enmeshed in a broader policy and regulatory web, being part of a larger socio-technical assemblage enabling the rise of the data-driven economy. While new data governance models are being debated (especially through the EU proposals of the Data Act and the Data Governance Act), the existing ones need to undergo an in deep investigation.

The investigation of EU PSI policy as a part of the data infrastructure enabling the data-driven economy through the lens of DI entails a discussion of the policy context. Within the analytical tools of DI, the institutional context plays a key role in the investigation (Schmidt, 2008) because institutions work at the same time as constraints and enablers of meaning (Schmidt, 2010, 2015). In this sense, for our object of analysis, a few aspects of EU goals and modes of action deserve attention, in particular on how the protection of FR and the economic development constrain the cognitive and normative action of the EC.

The most salient EU goal is to pursue economic development through economic integration (Bradford, 2020). Given this foundational goal and its context, an important question to address concerns the place of FR within the regulatory web (or socio-technical assemblage) of the data-driven economy. From a legal point of view, article 6 of the Treaty of European Union (TEU) recognises the Charter of Fundamental Rights of the European Union (the Charter) as one of the foundational texts of the Union and qualifies the FR as general principles of Union's law[3] (EU, 2007). The Charter binds not only the Member States but also the Union and all its institutions to respect FR in the implementation of the EU law (art. 51(1)) (EU, 2012). Hence, the EC, which has the competence to propose legislation and formulate public policies (art. 17(1), (2) TEU), is required to consider FR in every policy or legislation proposal. Considering that the promotion and fulfilment of FR also remain in the hands of State Members, the EU and the State Members 'are explicitly required to use existing respective competencies to protect and promote fundamental rights' (Altafin et al., 2020). Nevertheless, the competency problem is a source of legal uncertainty (Lassen, 2020). Legal scholarship has noticed that the 'Union's competences up to today remain primarily socio-economic in nature, with very limited law-making and enforcement powers in the area of human rights proper, resulting in an asymmetry that undermines the Union's potential to effectively deliver on its own human rights commitments' (Wouters, 2020). This noted asymmetry between EU responsibilities and the implementation power for concerning FR results in coherence problems in EU policymaking. As a consequence, policy coherence is identified as the main challenge in the EU engagement with FR (Ginsborg and Finlay, 2020). Williams comes to the same conclusion drawing attention to the fact that institutional reasons could

explain why other interests take precedence over FR in the EU framework. In the author's words: 'The matter is not one of individual ethics but of institutional ethos. That has been framed [the institutional ethos] by an economic functionality where the integrated and single market is its founding precept. Though fundamental rights can be interpreted to form a component part, they cannot be allowed to challenge it' (Williams, 2015).

In this context, the PSI policy is a crucial field of study because it is at the intersection between the data-driven economy and the agenda of FR: it is said to be one of the building blocks of the data-driven economy, while fulfilling the rights agenda, ensuring government transparency and improving democracy (Dalla Corte, 2020). In the next section, we explore the evolution of PSI policy and the context of its development in more detail.

PSI in the context of the data-driven economy

Building on the literature on legal studies, public administration, and information management, this section briefly presents the concept of PSI policy, its relationship to Open Government Data (OGD) and its double functions (economy and democracy). Additionally, this section underlines the link between PSI policy and the data-driven economy.

At the core of PSI policy is the idea of extracting value from public information. In the EU, Janssen and Dumortier trace this idea back to the late 1980s, with the first mention of the information market and the importance of public information for such a market (Janssen and Dumortier, 2003). This matter was the subject of a legal framework in 2003, in Directive 2003/98/CE (EU, 2003). At the centre of this directive was the idea of promoting the release of publicly funded information. Years after the first EU PSI Directive, the discussion around PSI received newfound attention in 2008, with the Open Government program proposed by then newly elected US President Barack Obama. The program strongly emphasised the need to increase the availability of public sector data, which led scholars, civil society advocates, private actors and international institutions to push the OGD agenda around the world (see, e.g. the Open Government Partnership, launched in 2011, the G8 Open Data Charter [G8, 2013], and the OECD's working paper in 2013 [Ubaldi, 2013]).

PSI policy share with OGD a similar goal of exploiting the full social and economic potential of information generated in public sector activities. However, the similitudes between the two concepts contain a few nuances. The common idea is that the liberalisation of public sector data would unlock innovation leading to economic development and the increased openness of governments, which, in turn, would improve democracy. Nevertheless, the actual openness of OGD and PSI policy significantly varies (Janssen, 2011). In what concerns OGD, publicly funded data should be made available without legal, technical or organisational barriers. In contrast, EU PSI Directive simply establishes uniformised conditions for reusing PSI. In this perspective, the EU PSI policy, in its early versions, did not fully embrace OGD principles (Janssen, 2011), yet early PSI regulation is thought to have contributed to the implementation of OGD at the national level (Janssen, 2011). The most recent version of the PSI Directive, now called the Open Data Directive, embraces, to a large extent, the OGD principles (EU, 2019).

The publication of public sector data is usually connected with two important political agendas: (a) the open government agenda, concerned with strengthening democracy and increasing the public sector's efficiency, and (b) the agenda of innovation and economic development, concerned with unlocking the economic potential of data and fostering data-based innovation (Janssen, 2011; Lourenço, 2015; Ruijer et al., 2017; Ruijer and Meijer, 2020; Tonon, 2020). Scholars consider OGD and PSI policy central to many governments worldwide (Ruijer and Meijer, 2020; Zuiderwijk and Janssen, 2014).

In this context, PSI policy is interlinked with the data-driven economy. Indeed, technological developments have led researchers to explore how PSI policy could be useful in developing data-driven innovations, both inside and outside the public sector (Clarke and Margetts, 2014; Magalhaes and Roseira, 2020; Poel et al., 2018). These innovations could enable significant efficiency gains and support the emergence of new products and services (Jetzek et al., 2013). In this perspective, governments supply stakeholders with publicly funded data and call private actors to create value from such data, primarily through innovative products and services (Hardy and Maurushat, 2017; Jeannot, 2020; Valli Buttow and Weerts, 2022).

This significant potential of the data-driven economy is not without problems (Jobin et al., 2019; Meijer and Thaens, 2020; Mikhaylov et al., 2018; Rocher et al., 2019; Van Noordt and Misuraca, 2020; Veale and Brass, 2019; Wachter et al., 2021). Aside from the obvious privacy risks, collecting, processing and using new data could lead to harms linked with the nature of information itself (Meng and DiSalvo, 2018; Ratner and Ruppert, 2019; Viljoen, 2021). In this sense, Viljoen underlines the fact that the new economic arrangements of the data-driven economy could 'marginalise social groups, amplify differences in wealth and power, and create social, political, and economic winners and losers' (6). Such risks are generally linked with data innovation, not specifically to the PSI policy. Indeed, scholars pointed out that the threats to FR are multiple, multifaceted and hard to trace back to specific data sets (Liu, 2019). However, it is clear that the

availability for reuse of public data at a large scale corroborates the development and deployment of such technologies and, therefore, should be considered by regulators.

Considering that regulation – in the broad sense – is constitutive of innovation, the next section is dedicated to the analysis of the EU PSI policy as a part of the socio-technical assemblage enabling the emergence of data-driven technologies and its new business models. The section sheds light on PSI policy discursive features and elucidates how it arbitrates between the data-driven economy's potential beneficial and malicious outputs.

A detailed account of the methodological approach is presented in Annex I. Annex II presents a list of all the analysed documents.

PSI policy and the EU

This section is dedicated to the analysis of the PSI policy formulated by the EC. The central document is the PSI directive, first adopted in 2003, reviewed in 2013 and recast in 2019. These three versions of the PSI Directive are key milestones in the development of the EU data environment. In this path, our analysis goes deeper in the EU policy chain to trace back the context in which the regulations were adopted, identifying their links to the broader EU policy and political agenda. Each of these strategies builds on the previous one but has its own features and vision for the future of the EU. In this context, we identified four periods, with names based on the EC's wording: Information Society, Digital Society, Data-driven Economy and European Digital Future. The different policy chains and the links between them are illustrated in Figure 1 (the names of the documents have been simplified).

PSI in the information society

The first broad agenda addressing PSI can be traced back to an Action Plan document issued in 1996, which presented an updated and revised version of the 1994 Action Plan (EU, 1994), titled 'Europe at the forefront of the Global Information Society' (EU, 1996). It aimed to ensure that Europe remains competitive in a 'global and networked society' (EU, 1996: 2), establishing three axes of action: (a) Improving business development, (b) Investment in the future and (c) People in the centre. Within the third axis, the EC envisaged publishing a Green Paper on PSI, on the topic of 'citizens access to public information and exploitation of public sector information by private information content providers in developing value-added services' (EU, 1996: 14).

The Green Paper addressing the PSI issue was launched in 1999 (UE, 1999). In this document, the EC treated the difficulty of accessing public information as a threat to citizens' and businesses' rights and freedoms (UE, 1999: 3). Access to public information was viewed as a key factor in promoting the mobility of individuals within the EU and ensuring that people and businesses could take full advantage of the single market. From this perspective, governments were seen as essential drivers of change that should have an active and leading role to 'convince citizens and businesses to adopt new technologies themselves and invite the ICT industries to explore new pathways' (UE, 1999: 10).

In 2000, the EC adopted the 'eEurope 2002: An Information Society For All' Action Plan (UE, 2000), which aimed to 'ensure that citizens have easy access to essential public data, as well as promoting online interaction between citizens and government' (UE, 2000: 22). The document mentioned 'data' and not 'information', without elaborating on the conceptual differences. In this document, public information availability was linked with the development of eGovernment, and both were considered political priorities (p. 22). Within this Action Plan, the EC launched a Communication, which summed up the results of the debate on the PSI Green Paper (EU, 2001). It is important to note that in this Communication, the EC made explicit its choice to adopt an economic approach towards PSI; indeed, it recognised 'the importance of PSI for democratic and civic life'. However, it narrowed the scope: 'this Communication focuses on the economic and internal market aspects of PSI' (p. 3). Aiming to foster the creation and development of 'pan-European information products', the EC deemed it necessary to step forward and assure a minimum of harmonisation concerning rules and procedures to obtain and reuse PSI. In this context, PSI was described as 'an important prime material' with 'unprecedented possibilities to combine data taken from different sources into added-value products and services' (EU, 2001: 4).

Building on previous work, the EC announced the proposal for a directive to regulate the exploitation of PSI throughout Europe (EU, 2002), which was adopted by in December 2003 (EU, 2003). The main aim of the Directive was to promote the reuse of PSI. It stipulates rules to eliminate discriminatory practices, monopoly markets and a lack of transparency on the availability and reuse of PSI.

The analysis of this first period leads to three observations. Firstly, the EU choice to adopt an economic approach to PSI was not obvious. As mentioned above, PSI was first addressed within the Action Plan, where it was framed mainly as an essential factor to improve citizen relations with governments. However, the regulatory choice of the EU has largely focused on PSI's economic potential. While the economic potential of data becomes a central political argument, other perspectives of PSI were given less importance. Indeed, questions such as the potential use of data for the common good or the inherent risks of the increasing reliance on data, in general, were not a political

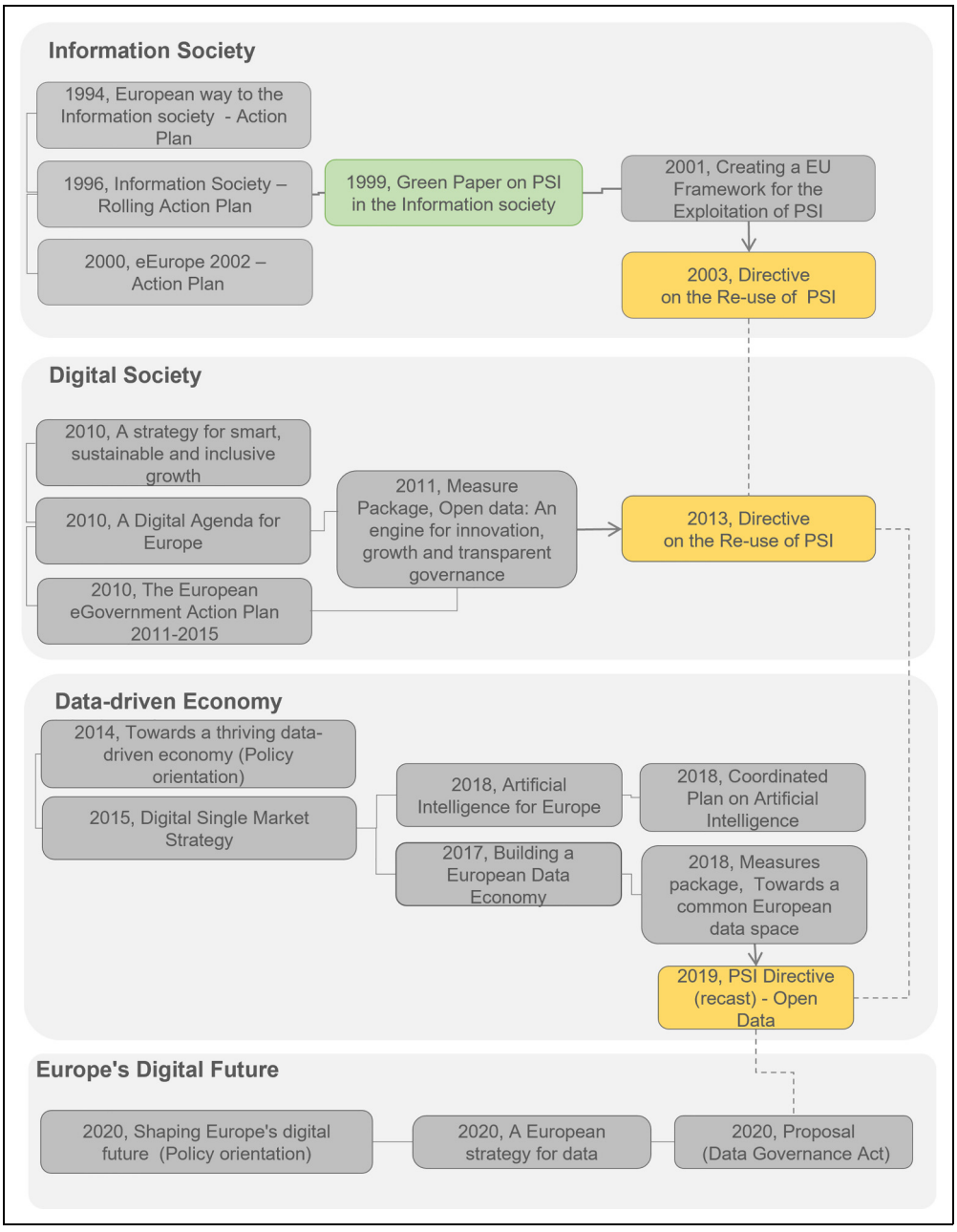

Figure 1. The European Public Sector Information (PSI) policy chain.

priority to the EC. Secondly, the EC raised concerns about Europe's competitiveness from a global scenario perspective. This argument is used to justify political action. Finally, it was clear that the EC adopted a position in which the development of technologies was not only the result of a natural evolution process, but it is something that was directly affected and driven by governments' actions, which can be understood as threefold: (a) directly employ technology (government as technology user), (b) provide information to the private sector (government as data supplier) and (c) implement the right policy and regulatory environment (government as the regulator). The observed features of this first policy package will persist in the following periods, becoming gradually institutionalised and framing the further development of the policy.

PSI in the digital society

In 2010, the EC launched a 10-year strategy titled 'Europe 2020: A strategy for smart, sustainable and inclusive growth'. Within this strategy, the concept of Information

Society was replaced by the idea of Digital Society (EU, 2010a), and a Digital Agenda for Europe is adopted (EU, 2010b). The Agenda praised the use of Information and Communication Technologies (ICT) as a tool to address social challenges, and the main preoccupation was Europe's position in relation to other economic forces: 'They show that Europe is lagging behind its industrial partners' (EU, 2010b: 5). Under the topic 'A vibrant digital single market', PSI is mentioned as a tool to promote a market for online content and other services (EU, 2010b: 9). Also in 2010, as part of the same policy package, the EC launched an Action Plan addressing eGovernment (EU, 2010c). Overall, it was optimistic in its expectations concerning the potential of PSI: 'The public sector holds a gold mine of information' (EU, 2010c: 6). The Action Plan also foresaw the proposition of reviewing the PSI Directive.

The proposal for amending the PSI Directive was preceded by a Communication in which the EC approximated the ideas of the PSI policy and those embraced by the OGD movement (EU, 2011a). It presented a package of actions aiming to harness the potential of PSI. The measures were of three orders: (a) Review of the legal framework (the proposal for a review of the PSI Directive), (b) Financial investments to support open data and (c) Promote the sharing of expertise and best practices among the Member States. The EC praised the potential of open data and used strong rhetorical tools to advance this agenda. Data was described as 'an innovation currency' and 'the lifeblood of the knowledge society' (EU, 2011a: 3). It referred to 'public open data', but not to OGD, and did not mention the developments of the OECD (one of the most influential institutions working on this subject). The EC only mentioned that: 'The economic importance of open data, in particular government data, as a basis for new information services and products is now more widely recognised than in 2002, when the EC made its proposal for a Directive' (EU, 2011a: 10).

In 2013, the PSI Directive was amended (EU, 2013). The main argument for this review was to unlock the economic potential of PSI. The EC aimed to 'provide the market with an optimal legal framework to stimulate the digital content market for PSI-based products and services' (EU, 2011b: 2). The new version improved harmonisation regarding the basic principles, the charging regime, the scope and enforcement mechanisms.

During this period, although the EC argued that the PSI Directive had the potential to positively impact democratic participation and accountability, none of the diagnosed problems nor the proposed solutions tackled any of these points. Indeed, all the political arsenal was mobilised to unlock the economic potential of PSI. PSI was presented as the gold mine, emphasising the importance of Member States' engagement with the data release. In this sense, the analysis of this second period shows the consolidation of the economic perspective, revealing the political will to implement policies to realise the full (economic) potential of data. Besides this, we see that the concern about the European geopolitical position becomes central and demands action from both the EU and the Member States. In this phase, the constraining force of the economic ideas in the EC discourse is confirmed.

PSI in the digital single market

The 2019 recast of the PSI Directive, now named the Open Data Directive, is the third milestone in EU PSI policy. The Recast was part of a new strategy called the 'Digital Single Market (DSM) Strategy' (EU, 2015), which was based on an extensive consultation process summed up in the 2014 Communication, 'Towards a thriving data-driven economy' (EU, 2014). In this Communication, the EC sketched the features of the data-driven economy and set 'some operational conclusions to support and accelerate the transition towards it' (EU, 2014: 2). It noted that Europe 'has been slow in embracing the data revolution' (EU, 2014: 2) and mentioned the EU regulatory environment and the lack of access to data as a barrier to development. In this sense, the document said that: 'The complexity of the current legal environment together with the insufficient access to large datasets and enabling infrastructure create entry barriers to SMEs and stifle innovation' (EU, 2014: 3, the abbreviation in the original stands for *small and medium-sized enterprises*). The EC was again very optimistic about the possibilities opened by the data-driven economy and asserted that this new model would enhance the well-being of citizens, promote new business opportunities and innovate public services (EU, 2014: 12). In this context, the PSI issue is a priority action: 'To be able to seize these opportunities and compete globally in the data economy, the EU must […] extensively share, use and develop its public data resources and research data infrastructures' (EU, 2014: 3).

As a follow-up to the 2014's consultation, the EC launched its DSM Strategy in 2015. In this strategy, ICT was 'no longer a specific sector but the foundation of all modern innovative economic systems' (EU, 2015: 3). Therefore, the reinforcement of the DSM became a pressing and priority matter. Again, the EC is optimistic regarding the potential of data:

> The enormous diversity of data sources and types, and the rich opportunities for applying insights into this data in a variety of domains, including for public policy development, are only beginning to emerge. To benefit from these opportunities, both public and private players in the data market need to have access to large and diverse datasets. (EU, 2015: 3)

In 2017, in accordance with its legislative process, the EC launched a new consultation (EU, 2017). The results

of this consultation generated a new Communication, 'Towards a common European data space' (EU, 2018b). In this document, the EC launched a policy package (EU, 2018b) to promote the idea of a common European data space that is described as the infrastructure for developing data-driven innovation based on the advances in AI and algorithmic technologies. The Communication builds on the premise that 'Data-driven innovation is a key driver of growth and jobs that can significantly boost European competitiveness in the global market' (EU, 2018b: 1). The EC put data at the core of economic development and citizens' well-being. It also addressed public policy and public service delivery: 'Data-driven innovation can also improve public policymaking, public service provision and ease the administrative burden' (EU, 2018b: 2). In this context, the EC underlines that PSI policy is a 'major cornerstone of a common European data space' (EU, 2018b: 5).

In parallel to the common European data space measures package, the EC published a Communication addressing AI (UE, 2018a), which states that the EU should 'lead the way in developing and using AI for good and for all'. To unlock the potential of AI, the EC proposed investing in research in the field, strengthening the DSM and opening up more data (the raw material for AI), in particular, public sector data (EU, 2018a: 2). In this regard, the EC made the link between PSI policy and AI development clear. This Communication gives place to a Coordinated Action Plan on the subject, also published later in 2018 (EU, 2018e). The plan reinforces the importance of PSI to feed AI: '[D]ata generated and held by the public sector is often of very high quality and constitutes a major asset for European innovators and businesses' (EU, 2018e: 14). Concerning the use of AI by governments, the EC stated that 'AI-enabled solutions can deliver shorter and richer feedback loops for all levels of governance, providing an opportunity to speed up, improve the efficiency and effectiveness of service delivery' (EU, 2018e: 19).

In this larger policy context, the EC proposed the recast of the Directive on the Reuse of PSI (EU, 2018c). In the Impact Assessment accompanying the proposal, the first arguments favouring PSI policy were transparency and efficiency (EU, 2018d: 2); however, these were not the primary purposes of the Directive. Indeed, the proposal's main objective was to strengthen the EU's data-driven economy by increasing the amount of PSI available for reuse, ensuring fair competition and easy access to markets and enhancing cross-border innovation based on data. The Impact Assessment asserted the economic importance of PSI, mentioning its role as a booster for start-ups. It also linked PSI and AI development: 'It is also a critical asset for the development of new technologies such as Artificial Intelligence, which requires the processing of vast amounts of high-quality data' (EU, 2018d: 6). Concerns were raised regarding the interaction of the PSI Directive and data protection law, especially regarding anonymisation techniques. As a response, the report pointed out that the public sector should be able to recover any supplementary costs of anonymisation procedures. Additionally, the report noted that participating European research programs aim to improve privacy-enhancing technologies (EU, 2018d: 4).

From a legal point of view, the Directive's proposal (recast) announced finally two targets: first, to enhance free access to publicly held and publicly founded data; second, to increase and assure data interoperability. The European Parliament approved the PSI Directive in 2019 – named Open Data Directive – and entered into force in the same year (EU, 2019).

The analysis of this third stage shows a deliberate and significant effort to build the proper regulatory framework that enables the flourishing of new business models. From this perspective and in addition to the idea of governments being an important data supplier in the data-driven economy, the EC foresees the possibility of using data-driven innovation to improve policymaking and public service delivery. More importantly, the EU clearly recognises that fostering data innovation through the use of PSI presents some risks to data protection. In response to this concern, rather than withdrawing from its project, the EC proposes increasing investments in research and development to improve the anonymisation process. This solution shows a narrow view of the risks involved in the data economy, which is restricted to data protection rights. It neglects other potential negative social impacts involved in large uses of data processing techniques. Overall, it favours economic development to the detriment of other concerns. Finally, the EC also emphasises the link between the data-driven economy and citizens' well-being in its arguments. In the EC's view, the data-driven economy will enable economic growth, which will, in turn, ensure citizens' well-being. In this context, the PSI policy is an essential building block of this structure. Although important, this argument fails to consider possible systemic pitfalls linked to the data. This phase shows the persistence of the idea of data as an immense and unfulfilled source of positive outcomes. Such an idea frames the whole design of the policy and structures the discourse of EC.

The way forward: PSI in Europe's digital future

In 2020, the EC addressed the unfulfilled potential of data, providing a glimpse of the future ahead, by launching a political and regulatory *chantier* that aims to 'pursue the digital transformation in its own way' (EU, 2020a: 2).

This large project was first expressed in the Communication 'Shaping Europe's Digital Future', where the EC adopted a holistic approach to digital transformation and emphasised its anchoring in liberal values such as human dignity, autonomy, freedom, equality and democracy.

In this Communication, while present, the economic argument is less central, and issues such as social inequality, the environment and democracy are deemed important. This is both a clear change of language and the expression of the EC's intention of consolidating the EU role as a global regulatory leader, inspired by the success of the EU data protection regulation. The document sets three key objectives: (a) technology that works for people, (b) a fair and competitive economy and (c) an open, democratic and sustainable society. These objectives will guide the EC's regulatory and investment propositions for the next five years (EU, 2020a).

Regarding the objective covering the economy, the EC announced the 'European Strategy for Data', published in a different Communication on the same occasion (EU, 2020b). This Strategy underlines the centrality of data in Europe's Digital Future and sets the guidelines for policy measures and investment 'to enable the data economy' (EU, 2020b: 1). The text confirms the EU desire to drive the economy towards a data-driven model:

> The EU should create an attractive policy environment so that, by 2030, the EU's share of the data economy – data stored, processed and put to valuable use in Europe – at least corresponds to its economic weight, not by fiat but by choice. (EU, 2020b: 4)

Nevertheless, the EC identifies certain barriers or problems that prevent the full development of the data-driven economy, including the scarcity of data. As a response, the EC aims once again to improve access to data, including public sector data, and proposes a set of actions to facilitate sharing and reuse of data in general. To do that, the strategy establishes measures of two natures: regulatory interventions and investments in infrastructures and people. Within the regulatory measures, the EC plans three key actions: (a) to build a structure of governance for the common European data spaces, (b) the proposition of a Data Act to regulate ownership or control of data, and therefore enable sharing of data across sectors (Business to Business [B2B], Business to Government [B2G], Government to Business [G2B]) and (c) the launch of the 'implementing act on high-value data sets', under the Open Data Directive. The Strategy underlines how government can undertake a leading role in the technological transition: '[F]urthermore; governments can also foster demand through increased use of data analytics and automated services in public services and decision making' (EU, 2020b: 14).

As part of the European Data Strategy, the EC published the European Data Governance Act's proposition at the end of 2020.[4] The Act aims to enable an increased data sharing regime, seeking to implement a regulatory framework that enables the linkage among data silos previously isolated. In the explanatory memorandum presenting the proposal, the EC states that the Act complements the 2019 Open Data Directive, providing a legal regime for sharing data not covered in the Directive (EU, 2020c).

In parallel with the effort to build a regulatory framework that boosts a data-driven economy, the EU aims to tame the development of data-driven technologies. In 2020, the EC published a White Paper on AI (EU, 2020d),[4] which sets the foundation of a 'European AI', with a human-centric approach. It has two key modes of action based on the creation of an ecosystem of *excellence* and *trust*. On the one hand, to achieve excellence, the EC enumerates several activities, including increased conditions of data reuse. On the other hand, the EC aims to build a risk-based regulatory framework to achieve an ecosystem of trust.

This last of period analysis shows that the proposals encapsulated in the European Data Space Strategy are supposed to finally unlock the potential of PSI in Europe. Data is viewed as a crucial source of economic growth. It remains that the EC does not seem satisfied by the current status of data availability as the diagnosed scarcity continues to be a major problem. In this context, it is possible to say that, if considered in isolation, the promised value of public data could be a mirage. As a possible answer to this limitation, the new regulatory package aims to, among other goals, enable the linkage between isolated data silos. In this sense, the EC is searching for a data governance framework that enables new economic and legal relationships to scale up. At the same time, the EC is also taking a significant step by proposing to tame the technology in order to protect FR and European values. In doing so, the idea of 'people at the centre', already present in the first analysed document (EU, 1996), is retrieved and reframed in the expression' human-centric approach'. This phase demonstrates the constraining force of the ideas developed throughout the policy cycle: the positive potential of data and the need of data for economic development. These two premisses drive the EC to look for new policy solutions aiming at the same time to unlock the potential of data and to tame technological development in order to avoid negative outcomes.

Conclusion

This paper contributes to the study of the emergent EU data law by exploring the balance between data-driven economy, FR and democracy in the EC's discourse. This analysis has focused on the EU PSI policy. It illustrates that in this specific field, the primary concern of the EC is to provide the right conditions for the flourishing of the data-driven economy. The in-depth analysis shows a progressive conceptual development from establishing an information society, to a digital society, later followed by the digital single market and finally the European data spaces. This change from 'society' to the 'market' narrative is already illustrative of how the EC's balance is inclined to

respond first and foremost to economic interests. Thus, in the growing body of EU data law, not all pieces of regulation or fields of public action systematically integrate concerns regarding FR and democracy.

In this sense, one must note that the risks associated with the data-driven economy are hard to trace back to specific datasets. Even if it could be argued that most of such risks are today primarily in non-governmental data, PSI, being increasingly available, participates in and corroborates to the development and deployment of data-driven technologies. Therefore, it participates in both positive and negative outcomes of the data-driven economy. Considering such uncertainty, any public policy aiming to enhance the data-driven economy should consider such risks in a precautionary-based approach. For example, public actors could consider an alternative to making the reuse of public data conditional on a public good purpose. Such an approach is already proposed in the literature on responsible research and innovation. From this perspective, exclusive profit-driven data reuse would be put into question.

The in-depth analysis of the PSI policy reveals some details of how the balance is constructed at the discourse level. On one side, we find the need to provide the conditions for economic growth. Two main arguments are leveraged to reinforce this point. First, the data-driven economy is the most important (probably unique) path to economic success. Following this reasoning, public sector data liberalisation is framed as one of the core elements enabling the fulfilment of the data-driven economy potential (even if real-world evidence of such potential remains scarce). Second, there is the competitiveness argument whereby: the EU's economic performance is constantly compared with other international actors, such as China or the United States of America. The underlying idea is that the EU needs to ensure its leading political and economic role in the broader geopolitical context. Building on these two premises, the EC encourages governments to act on three fronts: (a) supplying data to private actors and civil society (government-supplier), (b) leading the innovation as users of technology (government-user) and (c) regulating to ensure that technological innovation complies with fundamental European values (government-regulator).

On the other side of the balance, there is the argument for the improvement of citizens' well-being. This argument has so far received little attention in the PSI policy. It is worth remembering that the analysis of the first documents revealed some awareness of how the public data liberalisation could impact democracy and thus citizens' well-being. However, the EC explicitly decides to focus on the economic potential of public data and thus the potential for data to improve democracy is no longer promoted. Moreover, the well-being of citizens has been assumed simply as an automatic result of the data-driven economy. Such an understanding is contrary to the view of scholars of different fields (Cohen, 2019; Zuboff, 2019). Indeed, the literature covering the threats that data-based systems pose to FR is vast and growing fast.[5]

At this point, one must observe that the EC chooses to use expressions such as improvement of 'citizens' well-being' or 'human-centric approach'. However, these are vague and undetermined concepts that do not offer protection against the intrinsic risks of the data-driven economy. A more concrete and effective approach would have been grounded on FR, which provides a concrete legal framework to respond to such threats. Even if the EU has been at the forefront of protecting individual data protection rights, the risks posed by the data-driven economy go far beyond the possible solutions put forward by the advances brought by the European data protection framework (Liu, 2019; Viljoen, 2021; Zygmuntowski et al., 2021).

Moreover, the assessment of a balance that leans towards economic growth, overlooking its risks, is problematic considering the constitutive role played by regulation. Indeed, the analytical framework of DI and CDS contributes to understanding how the layering and consolidation of ideas in political discourse determine social realities, shaping the direction and scope of innovation and economic relations. From this perspective, the cumulative conceptual layers provided by regulation (in its broad sense) participate in the data assemblage in which the data-driven economy should thrive. Therefore, if the assemblage fails to consider and address the risks to FR, society remains exposed to considerable real-life harms. If the policymakers aim to protect individuals, the data assemblage should fully embrace a discourse that better articulates the market, FR and expresses the will of a fair economic model (that does not jeopardise the FR of individuals – such as freedom, autonomy and dignity). On this point, the evidence gathered in this study shows that the EC's discourse is not sufficiently protective of FR.

Finally, this situation illustrates the complexity of the interaction between the quest for economic development, preserving democratic values and FR. In this context, the regulator needs to harmonise and coordinate different levels of regulation in a context that is constantly evolving. While this article did not aim to provide answers on how to achieve such harmonisation and coordination, it shows how the articulation of ideas becomes the framework in which new social realities are formed. Furthermore, this article illustrates the philosophical orientation in which specific policies such as PSI are embedded. These insights ought to foster discussions on policy coherence and lead to a more holistic approach to policymaking. In alignment with other scholars, we understand that the training of policymakers on FR, especially on the intersection of the data economy and FR is crucial to ensure policy coherence (Ginsborg and Finlay, 2020). In this sense, policymakers should be more concerned with whether the regulatory environment complies with the FR and other legal

principles rather than with the design of regulations *ex-post* of a given innovation (Butenko and Larouche, 2015). Indeed, a more holistic consideration of FR during the policymaking phase would also entail a more profound analysis of the impact of new policies and help find a renewed balance between economic interests and FR. Therefore, an improvement of FR impact assessment in the policymaking phase should be envisioned.

Further research on different pieces of regulation and areas of public action could enrich these conclusions. In the same manner, studies focusing on the work of other institutions (such as the European Parliament, the Council of Europe, the OECD or national governments) could bring some interesting insights to the field. Finally, a study focusing on the legal value of concepts such as the 'human-centric approach' could be an interesting path for further research.

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ORCID iD

Clarissa Valli Buttow https://orcid.org/0000-0002-7842-6402

Supplemental material

Supplemental material for this article is available online.

Notes

1. All the referred proposals are currently under discussion in the European Parliament.
2. We refer to EU data law as the growing body of law enacted by the EU having for object data, the internet and the digital space.
3. The history of the inclusion of FR protection as a foundational element of the EU has been an object of study itself by scholars. On the subject, see Wouters (2020) and De Búrca (2021).
4. The White paper was followed by a Proposal for a Regulation named Artificial Intelligence Act, and that is currently in discussion in the European Parliament. For an updated vision of the discussions, see https://www.europarl.europa.eu/legislative-train/theme-a-europe-fit-for-the-digital-age/file-regulation-on-artificial-intelligence/06-2021 (last time consulted 09 July 2021).
5. For a conceptual overview of the problems, refer Liu H-Y (2019).

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