

Institution: University of Oxford		
Unit of Assessment: 17 – Business and Management		
Title of case study: Advancing legal rules mandating data sharing to ensure innovation		
Period when the underpinning research was undertaken: 2013 - 2018		
Details of staff conducting the underpinning research from the submitting unit:		
Name(s): Viktor Mayer-Schönberger	Role(s) (e.g. job title): Professor of Internet Governance and Regulation	Period(s) employed by submitting HEI: Oct 2010 - present
Period when the claimed impact occurred: June 2018 – December 2020		
Is this case study continued from a case study submitted in 2014? N		
1. Summary of the impact (indicative maximum 100 words)		
<p>Mayer-Schönberger's research explores the impact of machine automatized-learning on market composition and competition. To neutralise the negative effects of this, he proposes mandated data sharing – forcing large digital superstar firms such as Google and Amazon to share the data they have collected with competitors and society to ensure competition and bolster innovation. This concept was adopted in 2019 by the German social democratic party SPD, the second largest party in parliament and governing in a grand coalition with the CDU/CSU. It became a key part of the German legislative agenda in 2020. In parallel, the European Commission also developed legislative proposals that include mandated data sharing initiatives.</p>		
2. Underpinning research (indicative maximum 500 words)		
<p>'Big Data' has significant potential to influence society and science. Mayer-Schönberger, together with American journalist Kenneth Cukier, discuss in [R1] how a shift from collecting small amounts of data for a particular purpose to huge amounts of data collected opportunistically, fundamentally changes the role that data has – from answering questions we have, to prompting better questions to ask. This has huge consequences for decision making in industry, economic, political, and health settings. [R1] identified Big Data as a driver for a new corporate mindset that embraces the opportunities afforded by data analysis. Through its use, data turns into a 'significant corporate asset', and indeed central to the way most corporations work, even when they are not obviously in the data business.</p> <p>The potential benefits of this, especially in furthering our scientific knowledge, are explored in [R2]. In [R3], Mayer-Schönberger and Thomas Ramage, a German technology journalist, explain how the ascendance of data represents a radical shift in business, in that the source of innovation is shifting from human ingenuity to automatized learning from data. Hence, we are witnessing the advent of an economy in which data matters more than capital, a change that represents a 'fundamental reorganization of our economy'. As innovation becomes increasingly driven by data-based machine learning, those with access to data and the ability to process such data become innovative. This 'feedback effect' [R4] aligns with scale and network effects to favour large digital superstars and disadvantages smaller competitors and start-ups.</p> <p>Policy makers around the world grapple with this problem. A variety of policies have been suggested as a remedy, from new taxes to splitting up digital superstars. None of these measures, however, tackle the structural problem of vastly uneven access to data. In his research [R3, R4], Mayer-Schönberger suggests mandated data-sharing – a legal duty of firms to share (upon request) some of their (anonymized) data with competitors – to ensure innovation remains widespread and counters market concentration in a few large corporations. The larger the firm, the more data must be shared. Sharing would be directly between the firm requesting data and the data holder through a technical interface (an API), without a (costly) middleman. This measure not only focuses on the structural issue, but also offers several advantages over</p>		

related ideas, such as data pools: it does not diminish competition, but is open and transparent, decentral in nature, and hence robust and agile.

3. References to the research (indicative maximum of six references)

R1. Viktor Mayer-Schönberger and Kenneth Cukier, *Big Data: A Revolution that will transform how we live, work, and think* (Boston: Houghton Mifflin Harcourt 2013), ISBN-10: 0544227751. [output type: A]

R2. Viktor Mayer-Schönberger, 'Big Data – Eine Revolution, die unser Leben verändern wird', *Bundesgesundheitsblatt – Gesundheitsforschung – Gesundheitsschutz*, 58 (2015), 788-793. DOI: [10.1007 / s00103-015-2180-z](https://doi.org/10.1007/s00103-015-2180-z) [output type: D]

R3. Viktor Mayer-Schönberger and Thomas Ränge, *Reinventing Capitalism in the Age of Big Data* (John Murray 2018), ISBN-13: 9780465093694. [output type: A – available on request]

R4. Viktor Mayer-Schönberger and Thomas Ränge, 'A Big Choice for Big Tech – Share Data or Suffer the Consequences', *Foreign Affairs (Council on Foreign Relations)*, (September/October 2018), 48-54. <https://www.foreignaffairs.com/articles/world/2018-08-13/big-choice-big-tech> [output type: D]

Awards and prizes

R1 was shortlisted for the Financial Times and McKinsey Business Books of the Year Awards, 2013. **R3**, published in German as *Das Digital*, won Strategy+Business Best Business Book category for Innovation, 2018 and the getAbstract International Book Award

4. Details of the impact (indicative maximum 750 words)

Faced with an accelerating pace of innovation in Big Data and artificial intelligence in the US and China, European nations have been working on policy measures to escape being on the receiving end of what has been termed 'data colonialism', in which digital superstar firms from abroad collect vast amounts of data from European businesses and consumers to innovate and improve their products and services, but without providing a tangible value to European citizens in return. Various options have been considered to deal with this, including a digital tax or the creation of European digital champions (by France for instance). Recently, more innovative ideas are taking hold, especially the 'progressive data sharing mandate' proposed by Mayer-Schönberger [**R3**, **R4**].

Impact on the German Political Agenda

Mayer-Schönberger's data-sharing proposal was formally adopted as policy by Germany's Social Democratic Party (SPD) in December 2019. The SPD is Germany's second largest political party and has been part of the ruling coalition government with the conservative Christian Democratic Union (CDU) party since 2013. Initially, former SPD head Andrea Nahles advocated for individuals to be able to 'extract' their data from digital platforms (often called 'data portability'). After becoming aware of Mayer-Schönberger's research [**R2**, **E1**], Nahles and her team became particularly interested, in the words of the SPD's head of the media policy division, 'in the so-called 'progressive data sharing mandate... and how it could be implemented in Germany and/or the European Union' [**E1**]. Seeking further information on the subject, in autumn 2018 Nahles and her staff reached out to Mayer-Schönberger and his co-author, Thomas Ränge, for advice. A number of meetings followed, and both Mayer-Schönberger and Ränge participated in a public expert forum organised by the party on the subject [**E1**].

The result was a policy adjustment, and from this point Nahles in her speeches began to advocate a legal duty for companies to share some of their data with competitors [E2]. The consultations between SPD leadership and Mayer-Schönberger intensified. Mayer-Schönberger was asked to collaborate with competition economist Professor Justus Haucap to specify the fundamental building blocks of such a data sharing, or 'Data for all' law. They delivered their paper to the SPD in December 2018. In February 2019, Nahles published a discussion paper, in which she reprised Mayer-Schönberger's conceptual argument and argued explicitly for a 'data sharing mandate' [E3, lines 170-251]. Nahles also invited experts and stakeholders to an expert hearing at SPD headquarters in Berlin on 14 February 2019, where Nahles reiterated her support for a data sharing law [E4].

In August 2018, Mayer-Schönberger was invited to join the 'Digitalrat' or digital council. This advisory body was created, according to its chair, in accordance with the stipulation in the CDU/CSU and SPD agreement *'that the digital transformation should be a central theme of the work of the coalition'* [E5]. This council *'does not engage in public consultation processes and does not produce a final report, like most other such bodies do, but directly advises the Chancellor and her ministers for the entirety of the 4-year legislative period'* [E5]. Consequently, the Digitalrat is highly confidential, and its interactions with the government are not in the public domain, but the chairman highlights that one of its key topics was the role of data in a digital economy and society, and Mayer-Schönberger's research in this area saw his selection as one of 10 members. Furthermore, Mayer-Schönberger was asked by the chair *'to lead the Digitalrat's work on the role and governance of data'* based on his expertise as demonstrated in his recent research and publications [E5].

In September 2019, the Commission for Competition Law 4.0 (Kommission Wettbewerbsrecht 4.0) published its report, 'A new competition framework for the digital economy'. This report explored various options for digital competition regulation, dwelling at length on the 'Data for all' proposal put forward by Nahles [E6, p35-7]. Mayer-Schönberger had also met with the Commission and talked at length on several occasions with its chair. The new co-leaders of the SPD, Saskia Esken and Norbert Walter-Borjans, continued to support the data sharing proposal and in November 2019, at its annual party conference, the proposal for a data sharing mandate was put to a party vote and the overwhelming majority of delegates agreed to make it an official party policy [E7]. SPD's head of media policy highlighted Mayer-Schönberger crucial role in shaping the SPD's data policy, stating that *'Mayer-Schönberger's work and ideas have influenced and helped us better conceptualize our position on a 'data-for-all' law and we are grateful for that. We now hope to advance the proposed law and make it a reality.'* [E1]

After extensive consultations with the Digitalrat, the SPD adoption of a mandated data sharing policy, and production of the Commission for Competition Law report, the German Government, in late 2019, issued the key elements of a 'Datenstrategie' for Germany. In it, according to Digitalrat's chair, *'innovative forms of data pooling and sharing are explicitly mentioned, which reflect the importance of data sharing that Professor Mayer-Schönberger has highlighted in his work. It is the hope of the German government that such a data strategy will greatly aid German economy and society in transitioning into the data age.'* [E5] The eventual Datenstrategie white paper, published January 2021, formally maps out the executive and legislative agenda regarding data and specifically makes provision for an evaluation of whether data sharing in data-driven markets should be mandatory [E8, p.24].

The resulting legislative agenda manifested in the design of the Tenth Amendment to Germany's Competition Act, a draft of which was officially published in January 2020. This legislation, which

owed much to the Competition report, was designed to provide a 'digital regulatory framework' and address the increasing importance of data by introducing access to 'competition-relevant data' (section 18 (3) GWB) [E9]. Moreover, the law stipulates that if a dominant company refuses to grant another company access to its data, this behaviour can be classified as abusive under certain conditions (section 19 (2) no.1). The draft bill was endorsed by the federal government of Germany on 9 September 2020, remained prominent on the legislative agenda throughout 2020, and was finally enacted by the German Parliament in January 2021.

Impact on European Policy

In parallel to these national policy initiatives, the SPD also incorporated the concept of a 'Data for all' law in the policy platform of the SPD for the elections to the European Parliament [E1]. SPD lead candidate Dr. Katarina Barley, also German minister for justice and consumer protection, declared her support for a data sharing mandate on German national television on 8 April 2019 [E10]. The proposal of a data sharing mandate is reflected in the official SPD manifesto for the European elections: '*For that we will oblige [monopoly firms] to share their anonymized and non-personal data and make it publicly accessible*' [E11, p.43]. The Council of the EU is currently under German Presidency, and Barley serves as its Vice-President.

Influenced by the national debate in Germany, the central idea of the data sharing mandate has also been discussed by the President of the EU Commission, Ursula Von Der Leyen, in an op-ed piece published in February 2020 on presentation of the Commission's strategies for data and Artificial Intelligence. In it, she stated her support for such a policy initiative: '*Big commercial digital players must accept their responsibility, including by letting Europeans access the data they collect. Europe's digital transition is not about the profits of the few but the insights and opportunities of the many...We will develop a legislative framework and operating standards for European data spaces.*' [E12]

The Commission's Strategy for Data [E13], published in February 2020, reflects these principles and those outlined in Mayer-Schönberger's research [R3]. The strategy acknowledges the potential in the '*increasing volume of non-personal industrial data and public data in Europe, combined with technological change in how the data is stored and processed*' as a '*potential source of growth and innovation that should be tapped*' and therefore '*that data should be available to all – whether public or private, big or small, start-up or giant*' [E13, p.1]. To this end, the Commission committed to exploring '*the need for legislative action on issues that affect relations between actors in the data-agile economy.*' Though the general principle was to encourage voluntary rather than mandated sharing in the first instance, '*where specific circumstances so dictate access to data should be made compulsory.*' [E13, p.13]

Two legislative proposals were subsequently submitted to the European Parliament and European Council on 15 December 2020: The Digital Services Act, and the Digital Markets Act. The latter acknowledges the business advantage inherent in the generation and possession of large quantities of data by Big Tech companies (p.15, 22, 24, 26), and makes provision to ensure that Big Tech firms, or 'gatekeepers', provide unhindered, free access to data generated by their businesses on the gatekeeper's platforms. Aggregated datasets gathered by online search engines regarding online searches and the use of such information constitutes '*an important barrier to entry and expansion*' and therefore gatekeepers should provide access '*to these ranking, query, click and view data in relation to free and paid search generated by consumers on online search engine services*' to other business users, whilst ensuring the protection of the personal data of end users [E14, pp.26-27].

5. Sources to corroborate the impact (indicative maximum of 10 references)

E1. Letter by the Head of Media Policy, SPD

E2. Opinion piece by Andrea Nahler, dated 13 Aug 2018 (accessed 13/1/21), in which she advocates mandating data sharing by large digital companies.

<https://www.handelsblatt.com/meinung/gastbeitraege/gastkommentar-die-tech-riesen-des-silicon-valleys-gefaehrden-den-fairen-wettbewerb/22900656.html?ticket=ST-36658836-W0bTBOntJVQCscNLxZPm-ap3>

E3. Discussion Paper 'Digitaler Fortschritt durch ein Daten-für-Alle-Gesetz', February 12, 2019, also published on the SPD website -

https://www.spd.de/fileadmin/Dokumente/Sonstiges/Daten_fuer_Alle.pdf

E4. SPD Expert Hearing - https://youtu.be/W3k6H9vvS_Q

E5. Letter from the Chairman of the Digital Council (Digitalrat)

E6. The Federal Ministry for Economic Affairs - 'A new competition framework for the digital economy: report by the Commission for 'Competition Law 4.0'

E7. SPD Press Release (December 2019): 'Daten teilen für digitalen Fortschritt'

E8. Die Bundesregierung: Datenstrategie der Bundesregierung, 27 January 2021

E9. The Federal Ministry for Economic Affairs Press Release (24 January 2020), 'In the digital age we need to update our competition rules'. Webpage includes link to the draft of the GWB digitization law. <https://www.bmwi.de/Redaktion/DE/Pressemitteilungen/2020/20200124-altmaier-brauchen-im-digitalen-zeitalter-update-unserer-wettbewerbsregeln.html>

E10. Interview with Minister of Justice and SPD lead candidate for the European elections Dr. Katarina Barley, ARD, April 8, 2019,

<https://www.ardmediathek.de/ard/player/Y3JpZDovL2Rhc2Vyc3RILmRIL3JlcG9ydGFnZSBfIGRva3VtZW50YXRpb24gaW0gZXJzdGVuLzBiNGU1NzNILTQxODUtNDQyMy1hN2I1LWYzNWl0MDZlZjQwOQ/der-grosse-umbruch> (see minute 31 and onwards)

E11. SPD-Manifesto for EU parliamentary elections, p. 43

E12. President of the EU Commission, Ursula Von Der Leyen, in an Op-Ed piece, sets out her vision for Digital Transition - https://ec.europa.eu/commission/presscorner/detail/en/ac_20_260

E13. European Commission communication to the European Parliament (February 2020): 'A European Strategy for Data' - <https://ec.europa.eu/digital-single-market/en/policies/building-european-data-economy>

E14. European Commission (December 2020)– Proposal for a Regulation of the European Parliament on contestable and fair markets in the digital sector (Digital Markets Act) - <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52020PC0842&from=en>