Big Data: Understanding and Analysing Its Competitive Effects

*Bill Batchelor and Caroline Janssens**

This contribution is based on Bill Batchelor's presentation at the conference 'Dynamic Competition in Dynamic Markets: A Path Forward' (24 October 2019, Brussels), co-organised by CoRe and CPI and sponsored by CCIA.

I. Introduction

We generate around 2.5 quintillion bytes of data each day.[1] Large companies store terabytes or even petabytes of data.[2] Data from searches, internet history, social media, photos, emails, mobiles, apps and, increasingly, internet of things (IOT) devices relentlessly feed algorithms and artificial intelligence, driving innovation, new products and services.

Scarcely a month goes by without new reports being published that debate the potential for 'big data' to help or harm competition. Some advocate a rush to regulation, suggesting a variety of non-discrimination, access and even unbundling remedies including harms presumed, proof burdens reversed and new layers of notification or digital regulators created to police the sector.

Others feel that restraint is the best approach. These are not legacy or heritage assets, like sewers or last mile copper cabling, that are at risk of market failures unless forced access or more severe remedies are imposed. They are fast moving markets, many of which did not exist in the last decade and will be leapfrogged in the next. Over-regulation may entrench incumbents, deter entrants and penalise invention.

A review of the decisional practice suggests the cautionary school is correct. The case law demonstrates regulators well attuned to big data. They have used existing frameworks nimbly to assess alleged big data theories of harm. This year of the EU Platforms-to-Business Relations Regulation (EU Platform Regulation) introduces relatively light touch rules on non-discrimination, transparency and self-help remedies.[3] There is little evidence of a gap unaddressed by antitrust or other legislation.

II. Big Data and Anticompetitive Conduct

1. Merger Control

a. Horizontal Issues

In merger control, the EU has so far applied traditional merger tools.[4] There is no big data market. Rather the European Commission (Commission) has examined whether combining datasets and related services might cause horizontal competition concerns. In *Thomson/Reuters*, the parties' high market shares in financial data products, and high barriers to entry for creating rival datasets, led to a divestment of copies of the relevant databases and related assets, personnel and customer base.[5] Similarly, in

* Bill Batchelor is a partner and Caroline Janssens is a senior professional support lawyer/non-practicing solicitor at Skadden, Arps, Slate, Meagher and Flom LLP. For correspondence: <bill.batchelor@skadden.com> and <Caroline.Janssens@skadden.com>.

1 TechJury, 'Big Data Statistics 2020' (22 March 2019) and citing International Data Corporation's and IBM statistics <https://techjury.net/stats-about/big-data-statistics/> accessed 28 January 2020; Bernard Marr, 'How Much Data Do We Create Every Day? The Mind-Blowing Stats Everyone Should Read' *Forbes* (21 May 2018) <https://www.forbes.com/sites/bernardmarr/2018/05/21/how-much-data-do-we-create-every-day-the-mind-blowing-stats-everyone-should-read/#7f3097660ba9> accessed 28 January 2020.

2 Big Data LDN Intelligence, 'Big Data: The 3 Vs Explained' <https://bigdataldn.com/intelligence/big-data-the-3-vs-explained/> accessed 28 January 2020.

3 Regulation (EU) 2019/1150 of the European Parliament and the Council of 20 June 2019 on promoting fairness and transparency for business users of online intermediation services [2019] OJ L 186/57.

4 The Commission historically devoted considerable attention to big data, and has incorporated elements of datasets analysis in its merger practice at least since 2008, eg cases M.4726 *Thomson/Reuters*; M.4731 *Google/DoubleClick*; M.4854 *TomTom/Tele Atlas*; M.5727 *Microsoft/Yahoo! Search*; M.6314 *Telefonica/Vodafone/ Everything Everywhere JV*; M.7023 *Publicis/Omnicom*; M.7217 *Facebook/WhatsApp*; M.8180 *Verizon/Yahoo*; M.7337 *IMS Health/Cegedim*; M.7813 *Sanofi/Google/DMI JV*; M.8124 *Microsoft/LinkedIn*; M.8084 *Bayer/Monsanto* and M.8788 *Apple/Shazam*.

5 *Thomson/Reuters* (Case M.4726) Commission Decision of 19 February 2008.

Bayer/Monsanto horizontal concerns arose for 'digital agriculture' data services. These combined public data (satellite pictures and weather data), private data (from farmers), agricultural knowledge and algorithms provide farm management recommendations to farmers (variety and volume of seeds to use, use of pesticide and fertiliser, etc). To remedy potential loss of competition between Bayer's Xarvio and Monsanto's Climate FieldView platforms (a platform soon to be launched in Europe), Bayer licensed its global digital agriculture products (and pipeline) to 'ensure that the race to become a leading supplier in Europe in this field remains open.'[6]

b. Vertical Issues

When looking at non-competitor mergers, the issues examined have been more varied. But essentially the concerns have been traditional ones – whether essential inputs are foreclosed or could permit a predatory strategy.

i. Input Foreclosure

A classic foreclosure risk was examined in *IMS Health/Cegedim Business*, combining IMS' pharmaceutical sales 'big data' set with Cegedim's customer relationship management (CRM) and healthcare professional databases. Despite IMS' strong position, an anticompetitive tying/bundling strategy was not likely. IMS' and Cegedim's products were sold at different points in time, to different individuals within pharmaceutical companies, the vast majority of which sourced data and services from different providers according to different procurement cycles. Single-product players could also partner to provide competing integrated services. Neither party had hitherto engaged in bundling strategies and were unlikely to do so in the future.[7]

Conversely, foreclosure risk was found to be a real concern in *Sanoma Learning/Iddink*. Iddink owned Magister an e-learning management system used by more than half of Dutch secondary schools. The acquirer, educational publisher Sanoma Learning, could have prevented rival publishers from accessing schools and students through Magister. Access to Magister performance and usage data – letting publishers monitor student progress - was considered essential to enable rivals to improve their own products. The parties agreed to grant competitors access to Magister, as well as to performance and usage data, on fair, reasonable and non-discriminatory (FRAND) terms.[8]

A more complex foreclosure theory was unsuccessfully alleged in *Microsoft/LinkedIn*. LinkedIn data was supposedly an important input for machine learning artificial intelligence for CRM software. But on the facts there was neither ability nor incentive to foreclose. LinkedIn did not have a significant degree of upstream market power. There were many data sources for rival software providers and LinkedIn was 'unlikely to be essential.' Microsoft had little incentive to foreclose competing providers based on internal documents, the unprofitability of a foreclosure strategy and limited proportion of the CRM market for which LinkedIn data could be an input.[9]

ii. Competitor Targeting

In *Apple/Shazam* the concern was not one of foreclosure but a potential predatory targeting strategy. The EU examined whether Shazam's data on rival music service users might allow Apple to target Spotify or Google Play Music users to switch to Apple Music. Ultimately there were no concerns. Apple would not be able to shut out competing music services using customer data and Shazam's data was not unique. Apple's rivals had opportunities to access and use similar databases.[10]

iii. Insuperable Advantage

More exotic vertical theories – essentially that large datasets might create insuperable advantages rivals could never match – have also been addressed. On the facts these were all dismissed, not because there was no potential for concern, but rather the data was either not unique or otherwise did not confer an unmatchable downstream advantage. In *Google/Dou-*

6 *Bayer/Monsanto* (Case M.8084) Commission Decision of 21 March 2018; Commission, 'Commission clears Bayer's acquisition of Monsanto, subject to conditions' (Press release, 21 March 2018) IP/18/2282.

7 *IMS Health/Cegedim* (Case M.7337) Commission Decision of 19 December 2014.

8 Dutch Competition Authority, 'ACM Conditionally Clears Acquisition of Iddink Group by Sanoma Learning' (Press release, 29 August 2019).

9 *Microsoft/LinkedIn* (Case M.8124) Commission Decision of 6 December 2016.

10 *Apple/Shazam* (Case M.8788) Commission Decision of 6 September 2018.

bleClick, the Commission considered whether the parties combined databases would improve the merged entity's ad targeting systems. On the facts, there were few concerns, including that contractual limitations existed as to how DoubleClick used customer data, Google's competitors could access comparable data through multiple channels and rivals would continue to exercise a constraint on the merged entity.[11]

Similarly, in *Microsoft/Yahoo!*, the EU examined whether access to more user search query data would create an insuperable advantage, as the data was used to train and improve the search algorithm to achieve more relevant results, therefore attracting more users and strengthening the platform's position for online search services. The Commission concluded that, if anything, the merged entity's enhanced access to data post-transaction would be pro–competitive as it would enable the merged entity better compete with Google.[12]

In *Facebook/WhatsApp*, the EU dismissed concerns that Facebook's use of WhatsApp user data would strengthen its position in online advertising through better targeted Facebook ads. Consumer data was readily available elsewhere and companies, such as Microsoft, Apple, Amazon, eBay, and Twitter, had similar 'big data' sets.[13] Similar concerns were dismissed in *Microsoft/LinkedIn*.[14] The parties were small market players, competed with each other to a limited extent and internet user data was amply available elsewhere. The lack of uniqueness of the merging parties' data was similarly grounds for dismissing concerns in T*elefónica UK/Vodafone UK/Everything Everywhere/JV*[15] and *Verizon/Yahoo*.[16]

c. Data Regulation as a 'Fix' for Foreclosure Concerns

The EU has been sympathetic to arguments that the regulatory framework for 'big data' diminished competition concerns. In *Microsoft/LinkedIn*[17] and *Verizon/Yahoo*[18] the Commission found foreclosure concerns mitigated by the European General Data Protection Regulation[19] (GDPR) limits on the merging parties' ability to access and process users' personal data. The GDPR allows individuals more control over their personal data, including the right to request the portability of their personal data to alternative services, limiting the risks of locked-in users. Any combination of the datasets could only be implemented to the extent allowed by applicable data protection rules. In *Sanofi/Google/DMI JV*, there were complaints that a joint venture (which would collect, process and analyse patient data to manage and treat diabetes) would lock in patient data, preventing rival ventures. The Commission found that the GDPR would provide patients with the right to request the portability of their personal data, so making market power unlikely.[20]

2. Abuse of Dominance

a. Barriers to Entry

In dominance cases, the EU once again has been inclined to fit data within the classic constructs of Article 102 of the Treaty on the Functioning of the EU (TFEU) case law.

Big data allegedly can be an asset that creates barriers to entry, so supporting a finding of market power. In *Google Shopping*,[21] the Commission alleged the accumulation of data was a barrier to entry, despite the fact the data itself was freely available. But its accumulation generated network effects. The more consumers use a search engine, the more attractive it becomes to advertisers. Profits generated from advertisers can then be used to attract even more con-

11 *Google/DoubleClick* (Case M.4731) Commission Decision of 11 March 2008.

12 *Microsoft/Yahoo! Search* (Case M.5727) Commission Decision of 18 February 2010.

13 *Facebook/WhatsApp* (Case M.7217) Commission Decision of 3 October 2014.

14 *Microsoft/LinkedIn* (n 9).

15 *Telefonica/Vodafone/ Everything Everywhere JV* (Case M.6314) Commission Decision of 4 September 2020.

16 *Verizon/Yahoo* (Case M.8180) Commission Decision of 21 December 2016.

17 *Microsoft/LinkedIn* (n 9).

18 *Verizon/Yahoo* (n 16).

19 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 (General Data Protection Regulation) [2016] OJ L 119/1.

20 Case M.7813, *Sanofi/Google/DMI JV*, Commission Decision of 23 February 2016.

21 Google Search (Shopping) (Case AT.39740) Commission Prohibition Decision (art 102 TFEU) of 27 June 2017, paras 287, 319.

sumers.[22] Similarly, the consumer data a search engine gathers can in turn be used to improve results. These network effects allegedly contributed to Google's dominance in online search.[23]

Data is not just an asset that may be seen as creating entry barriers supporting an allegation of dominance, it also can be part of the allegation of unlawful abusive conduct. For example, misuse of proprietary data can be part of a predatory or foreclosure strategy. The French Competition Authority (FCA) fined EDF €13.5 million for abusing its dominant position by targeting likely solar energy prospects within its proprietary (and allegedly unique) customer database to EDF Energies Nouvelles. The dataset's over 20 million customer contact details was a legacy of EDF's monopoly which rivals could not replicate.[24] It was held unlawful for a dominant company to use proprietary data to raise entry barriers to rivals where that dataset was neither accessible to competitors nor replicable.[25] Similarly, the FCA ordered GDF Suez (now ENGIE) to grant its competitors free access to customer data to enable them to compete on an even footing in the liberalising gas market. Like EDF, GDF Suez also had used the historical consumer database inherited from its former monopoly to facilitate customer switching from regulated to unregulated offers, and to 'win back' customers who had switched to competing offers. Rivals could not reasonably replicate these advantages.[26]

In extreme cases, refusal to provide data can be found to be an abuse. One such case followed the *Thomson/Reuters* merger decision (noted above). Following the approval of the merger, the Commission opened an investigation under Article 102 TFEU alleging that Thomson Reuters may have abused its dominant position by imposing certain restrictions regarding the use of Reuters Instrument Codes which prevented customers using rival services. The case was settled with commitments to license the codes for rival services.[27]

Similarly, in *Independent Car Repairers* , restricting access to technical information on parts and repair specifications restricted competition between independent and franchised repair garages. The major vehicle manufacturers gave commitments to provide parts and repair information to the independent aftermarket.[28] Data access in the automotive sector was subsequently regulated by type approval regulations and the Motor Vehicle Block Exemption, the latter describing technical information as an 'essential input' to compete.[29]

Ultimately, however, the case law suggests data refusal as an abuse tends to arise only on extreme facts. There is a high bar for establishing abusive refusals to deal under the *IMS* line of case law[30], not least be-

22 This is often (mistakenly) referred to in the antitrust literature as a network effect but is perhaps not the correct use of the term in economics. Network effects are where the value of a service increases according to the numbers of users, not simply due to increased profits, otherwise any successful firm (gaining more users) that invests those profits in research and development (improving quality, increasing value) could be said to be generating advantage based on network effects. See Hal Varian, 'Use and Abuse of Network Effects' in Martin Guzman (ed), *Toward a Just Society: Joseph Stiglitz and Twenty-First Century Economics* (Columbia University Press 2018) 227–239.

23 The Commission made the exact same point in *Google Android* (Case AT. 40099) Commission Prohibition Decision (art 102 TFEU) of 20 September 2019, paras 688, 719 and 721. The Commission noted that it was irrelevant that Google uses the valuable user data it collects in order to improve its general search service. The Commission did not object to Google collecting data in order to improve its general search service but to the fact that the different forms of conduct described in the decision prevent competing general search services from acquiring traffic and valuable user data to expand and become or remain viable competitors. (para 1355)

24 French Competition Authority, Decision 13-D-20 of 17 December 2013 concerning the practices implemented by EDF in the photovoltaic solar power sector [in French].

25 *EDF v French Competition Authority*, Paris Court of Appeal, judgment of 27 September 2018, para 48 [in French].

26 French Competition Authority, Decision 14-MC-02 of 9 September 2014 relative to a request for interim measures submitted by Direct Energie in the gas and electricity sectors. The decision was upheld by the Paris Court of Appeal. GDF's practice to use its historical data to maintain its position on the market was eventually found abusive and the company was fined €100 million – see French Competition Authority's Decision 17-D-06 of 21 March 2017 regarding practices implemented in the sector of gas, electricity and energy services.

27 *Reuters Instrument Codes* (Case AT. 39654) Commission Decision of 20 December 2012.

28 Cases AT. 39140 *DaimlerChrysler;* AT. 39141 *Fiat;* AT. 39142 *Toyota Motor Europe* and AT. 39143 *Opel*.

29 European Commission Regulation 461/2010 on the application of Article 101(3) TFEU to categories of vertical agreements and concerted practices in the motor vehicle sector. Access to information was also made mandatory by EU Regulation 715/2007 on type approval for motor vehicle: unless the manufacturer gave access to spare data to independent repairers in an open and structured format then their vehicles would not be type approved.

30 Case C-418/01 *IMS Health GmbH & Co. OHG v NDC Health GmbH & Co. KG.* [2004] ECR I-05039. According to settled case-law, refusal to grant a licence, even if it is the act of an undertaking holding a dominant position, cannot in itself constitute abuse of a dominant position. However, in exceptional circumstances, exercise of an exclusive right may involve abusive conduct. (paras 34 and 35).

cause of the potential for forced access to disincentivise innovation.[31]

3. Privacy Breaches as Alleged Abusive Conduct

Since 2006, there has been the strongest authority that antitrust and data privacy are separate concerns. The European Court of Justice (ECJ) in *Asnef-Equifax*[32] stated that privacy concerns raised by big data are outside of the scope of intervention of competition authorities. In *Facebook/WhatsApp* and *Microsoft/LinkedIn,*[33] the Commission confirmed that privacy-related concerns do not generally fall within the scope of EU competition law. The quality of privacy, or lack of it, might be a parameter of competition, but antitrust would not examine data privacy issues.

That orthodoxy was upended by the German Federal Cartel Office (FCO) in *Facebook*, finding that Facebook's terms and data collection, allegedly without the user's full consent, *both* violated users' privacy *and* abused Facebook's allegedly dominant position.[34] Facebook was allegedly able to collect extensive user data from third party sources, allocate these to the users' Facebook accounts and use them for a wide range of processes. These allegedly 'inappropriate contractual terms and conditions' were an 'exploitative abuse' of a dominant position, finding 'this applies above all if the exploitative practice also impedes competitors that are not able to amass such a treasure trove of data'. Facebook was not fined, but required to change its practices.

On appeal, the Higher Regional Court of Düsseldorf suspended the FCO's decision because it failed to explain how Facebook's violation of the GDPR affected competition.[35] It held that 'even if the challenged data collection practices breached data protection rules, they would not breach competition law at the same time'. Data volume alone, moreover, was not decisive for successfully operating a social network. Otherwise, the court observed, the unsuccessful social network Google+ would have quickly overtaken Facebook.[36] An appeal before the German Federal Supreme Court is pending.

4. Data Facilitating Switching: Financial Services

A refrain of antitrust regulators is the need to enable switching of data intensive products by consumers, who otherwise feel their data history locks them into a particular provider. This concern has arisen in the financial services sector. The UK Competition and Markets Authority (CMA) pioneered open banking (ie, facilitating switching *via* availability of information on banking customers) to address a perception of weak competition between UK retail banks.[37] A similar solution was subsequently adopted EU-wide in the revised Payment Services Directive (PSD II).[38]

There are ongoing investigations alongside these regulatory measures. The Commission is investigat-

31 The European Commission Guidance on enforcement priorities in applying Article [102 TFEU] to abusive exclusionary conduct by dominant undertakings of 24 February 2009, states that consumer harm may arise where the competitors that the dominant undertaking forecloses are, as a result of the refusal to supply, prevented from bringing innovative goods or services to market and/or where follow-on innovation is likely to be stifled. This may be particularly the case if the undertaking which requests supply does not intend to limit itself essentially to duplicating the goods or services already offered by the dominant undertaking on the downstream market, but intends to produce new or improved goods or services for which there is a potential consumer demand or is likely to contribute to technical development. (para 87) The Commission will also consider claims by the dominant undertaking that its own innovation will be negatively affected by the obligation to supply, or by the structural changes in the market conditions that imposing such an obligation will bring about, including the development of follow-on innovation by competitors. (para 89)

32 Case C-238/05 *ASNEF-EQUIFAX* [2006] ECR I-11125, para 63: 'any possible issues relating to the sensitivity of personal data are not, as such, a matter for competition law'.

33 *Facebook/WhatsApp* (n 13) and *Microsoft/LinkedIn* (n 9).

34 Case B6-22/16, *Facebook exploitative business terms*, Bundeskartellamt Decision of 6 February 2019.

35 Oberlandesgericht Düsseldorf Decision, *Facebook v Bundeskartellamt*, VI-Kart 1/19 (V), 26 August 2019 [in German] <https://www.olg-duesseldorf.nrw.de/behoerde/presse/Presse_aktuell/20190826_PM_Facebook/20190826-Beschluss-VI-Kart-1-19-_V_.pdf> accessed 28 January 2020.

36 Non-official English translation of Oberlandesgericht Düsseldorf Beschluss, *Facebook v Bundeskartellamt*, VI-Kart 1/19 (V), 26 August 2019 by the University of Düsseldorf, 30 <https://www.d-kart.de/wp-content/uploads/2019/08/OLG-D%C3%BCsseldorf-Facebook-2019-English.pdf> accessed 28 January 2020.

37 UK Competition and Markets Authority, 'Retail Banking Market Investigation, Final Report' (9 August 2016).

38 Directive (EU)2015/2366 of the European Parliament and the Council of 25 November 2015 on payment services in the internal market, amending Directives 2002/65/EC, 2009/110/EC and 2013/36/EU and Regulation (EU) No 1093/2010, and repealing Directive 2007/64/EC [2015] OJ L 337/35.

ing Polish and Dutch banking groups over online access to bank account information by competing service providers.[39]

III. Legislation

The GDPR introduced a right to data portability (Article 20) as a means to avoid data-driven lock-ins, and making switching easier. The effectiveness of the right to data portability however depends very much on the way it will be implemented in practice and interpreted, for example, it remains unclear which data can be ported. The GDPR, however, was not designed to grant access to data or request data interoperability between services and must be distinguished from the PSD II which sets out a much more elaborated data sharing system for the financial sector.

Alongside the GDPR, the EU Platform Regulation[40] offers a set of rules aimed to create a fair, transparent and predictable business environment for smaller businesses and traders using online platforms and offers new possibilities for handling and resolving disputes and complaints. To ensure greater transparency, online platforms are required to disclose what data they collect, and how they use it – and in particular how such data is shared with other business partners they have. They also must be explicit about any options to opt out where the provision of data to third parties is not necessary (Article 9). Where personal data is concerned, the rules of the GDPR apply. Platforms also must disclose any self-preferencing practice, as well as the main ranking parameters they use to help sellers optimise their presence on the platforms. The Regulation also bans certain unfair practices such as sudden, unexplained, account suspensions, and requires plain and intelligible terms and advance notice for changes. Platforms must set up internal complaint-handling systems and alternative dispute resolution options such as mediation. Platform providers must comply with the EU Platform Regulation by 12 July 2020. The Commission complemented the EU Platform Regulation with an 'Observatory on the Online Platform Economy'[41] – a group of experts in the online platform economy and a dedicated team of Commission officials – to monitor developments in the sector and the effective implementation of the rules.

Moreover, under the lead of Executive Vice-President Magrethe Vestager, the Commission is developing a new Digital Services Act to address digital platforms rules and to look into how non-personalised data can be used and shared to develop new technologies and business models.[42]

IV. The Policy Debate

A series of papers has been published detailing the challenges of big data, and more widely the digital sector, for competition law policy. Starting with the French and German joint study on big data and competition law[43], there have been national and international studies, including by the Organisation for Economic Co-operation and Development (OECD),[44] the UK (the Furman Report),[45] the EU (the Crémer Report),[46] Germany (Competition 4.0 Report),[47] the Netherlands[48] and Australia[49]. In the UK, the CMA

39 Commission, 'Antitrust: Commission confirms unannounced inspections concerning access to bank account information by competing services' (Press release, 6 October 2017) MEMO/17/3761.

40 Regulation 2019/1150 of the European Parliament and the Council of 20 June 2019 on promoting fairness and transparency for business users of online intermediation services [2019] OJ L 186/57. It will have direct effect in EU Member States from 12 July 2020.

41 Commission Decision C(2018) 2393 Final, of 26 April 2018 on setting up the group of experts for the Observatory on the Online Platform Economy.

42 Mission Letter to Magrethe Vestager, Executive Vice-President-designate for a Europe fit for the Digital Age, 10 September 2019. 'Google, Facebook, Amazon face new data-sharing rules as EU prepares 'Data Act' for 2021' (Mlex, 30 January 2020).

43 French Autorité de la Concurrence and the German Bundeskartellamt, joint 'Report on Competition Law and Data', 10 May 2016.

44 OECD, executive summary with key findings on the roundtable discussion 'Big Data: Bringing Competition Policy to the Digital Era', DAF/COMP/M(2016)2/ANN4/FINAL, 26 April 2017 and background note by the secretariat, DAF/COMP(2016)14, 27 October 2016.

45 'Unlocking digital competition', a report of the Digital Competition Expert Panel appointed by the UK Chancellor of the Exchequer and chaired by Professor Jason Furman, former chief economist to U.S. President Obama (the Furman Report), 13 March 2019.

46 'Competition policy for the digital era', a report by Jacques Crémer, Yves-Alexandre de Montjoye, Heike Schweitzer, three Special Advisers appointed by Competition Commissioner Margrethe Vestager (the Crémer Report), 4 April 2019.

47 'A new competition framework for the digital economy', a report by Germany Competition Law 4.0 Expert Panel set up by Germany's Federal Ministry for Economic Affairs and Energy, 9 September 2019.

48 'Dutch Digitalisation Strategy 2.0', a report by Dutch Ministry of Economic Affairs and Climate Policy, 13 November 2019, supported by the Dutch Competition Authority and calling for additional regulatory tools regarding online platforms.

49 'Digital Platforms Inquiry', final report by Australian Competition & Consumer Commission, June 2019.

is also examining whether consumers are able and willing to control how data about them is used and collected by online platforms in its digital advertising inquiry. In an interim report issued on 18 December 2019, the CMA moots regulatory intervention to give users greater control over their data and promote data access. [50]

The table below compares key recommendations made.

All these reports describe the main characteristics of the digital economy (market dynamics, extreme returns to scale, network effects and role of data). These features both encourage and reward innovation, but also can raise entry barriers favouring incumbents.

The UK Furman Report and German Competition 4.0 Report set out their stalls as regulatory hawks. The Furman Report proposes a Digital Markets Unit tasked with ensuring personal data mobility and open standards. This should give consumers greater control of their personal data, similar to the UK's 'Open Banking' initiative (encouraging competition in retail banking through portability of current account data). As part of an update of the merger control rules to better tackle transactions in digital markets, it also proposes an obligation on digital companies that hold a strategic market status to make the CMA aware of *all* intended acquisitions.

The Competition 4.0 Report favours data portability. It suggests an EU digital user directive (following the model of the PSD II) and data trustees granting third party data access based on user preferences. In addition, it advocates banning platform self-preferencing *via* EU regulation and EU-level digital agencies, the EU Digital Markets Board and EU Digital Transformation Agency. Most eye-catchingly it recommends that digital collaborative agreements be subject to notification to the Commission for approval within three months, a surprising re-introduction of an EU notification system abolished in 2003.

Other German officials urge caution. Germany's competition advisory board[51] stated that new types of abuse for companies in digital markets should not be introduced in haste, and there should still be a causal link between dominant position and exploitative abuses.[52]

The EU Crémer Report strikes a more pragmatic tone. It finds the existing EU competition law framework remains sufficiently flexible to protect digital competition. Indeed, the report encourages pro-competitive data sharing (without fear of being condemned as unlawful information exchange). Conversely, while merger control does not need reform, the Crémer Report is concerned by big tech buying up nascent rivals or entrants in adjacent fields to shore up their core franchise. These may be addressed through burden reversals, requiring the acquirer to show why no harm arises, the report states. The report also examines potential data-sharing or interoperability remedies, but stresses that this must be balanced against incentives for firms to invest in collecting and processing data, as well as protecting privacy and business secrets. Commenting on the report, Commissioner Vestager stated that 'collecting data also takes effort and time. So if we insist that companies share it with others, without proper compensation, we could discourage others from putting in those efforts in the future.'

The Crémer Report discounts the need for structural remedies, stating that data regulation may be an efficient alternative to breaking up big tech companies. Competition Commissioner Vestager has stated she remains sceptical of structural remedies. These are 'the last resort' in her view, as EU enforcers should use existing antitrust rules.[53]

The OECD Report cautions against a rush to judgment on big data. Authorities should examine on a case-by-case basis whether, in the relevant market, (i) the data is replicable, (ii) it can be collected from other sources, (iii) the degree of substitutability between datasets, (iv) how quickly data becomes outdated and (v) how much data a potential entrant needs to compete. Extreme remedies such as forced data sharing should be carefully weighed and only used absent less intrusive alternatives.[54]

---

50 The CMA is carrying out a market study into online platforms and the digital advertising market in the UK. An interim report was issued on 18 December 2019 setting out initial findings and possible interventions. A final report is expected to be published in July 2020.

51 Federal Ministry for Economic Affairs and Energy, Referentenentwurf eines Zehnten Gesetzes zur Änderung des Gesetzes gegen Wettbewerbsbeschrän-kungen für ein fokussiertes, proaktives und digitales Wettbewerbsrecht 4.0 (GWBDigitalisierungsgesetz), [ie draft bill for a Tenth Act to amend the Act against Restraints of Competition for a focused, proactive and digital competition law 4.0 (Competition Law Digitisation Act)], 7 October 2019.

52 Germany's Monopolkommission, Policy Brief, Issue 4 (Mlex, January 2020) <https://bit.ly/2OJLyfK> accessed 12 February 2020.

53 'Warren Proposal to Break Up Big Tech Is "Very Far-Reaching," Vestager Says' (MLex, 11 March 2019); 'Antitrust Remedies Should 'Reinstate Competition', Vestager tells EU lawmakers (update*)' (MLex, 8 October 2019).

54 OECD (n 43) 3-4.

Table 1. *Summary table of key competition policy recommendations for the digital economy*

Recommendations	Joint French / German Report (2016)	OECD Report (2017)	UK Furman Report (2019)	EU Crémer Report (2019)	Germany Competition 4.0 Report (2019)
Antitrust rules reform	No	No	No - However, recommends adjustments to established concepts and strengthened enforcement powers (fast track-enforcement, less reliance on large fines, greater use of interim measures, lower standards for review of CMA decisions).	No - However, recommends 'adjustments' to established concepts.	Yes - Recommends enhanced set of competition rules at EU and Member States level and greater use of interim measures.
Merger control reform for tech acquisitions	No	No	Yes - Recommends updating merger assessment guidelines; clarifying standards for blocking or conditioning mergers; requiring digital companies with 'strategic market status' to make the CMA aware of all intended acquisitions.	No – Too early to change EU Merger Control rules.	No – Too early to change EU Merger Control rules, but advocates guidelines on theories of harm and systematic monitoring and evaluation of EC's handling of Tech acquisitions.
Reversal of burden of proof	No	No	Yes – Recommends that burden be on companies that so-called 'killer acquisitions' will not be anti-competitive.	Yes – Recommends that dominant platforms bear the burden of demonstrating efficiencies of conduct. For so-called 'killer acquisitions', burden is on acquiring company to prove no anti-competitive effects or offsetting efficiencies.	Yes – Recommends that burden be on dominant platforms to justify their conduct.
Ban on self-preferencing	No	No	No – However, advocates introduction of a digital platforms code of conduct that clarifies acceptable conducts.	No – However, recommends that burden be on dominant platforms to demonstrate efficiencies of self-preferencing.	Yes

Break-up of firms	No	No	No - Co-operative approach, to remedies as alternative to break-up of firms.	No – Data interoperability suggested as alternative to calling for the break-up of firms.	No
Data access, interoperability and portability	No	Any data sharing remedies should be carefully weighed.	Yes – Recommends data access, interoperability and portability to remedy key barrier to entry. But careful consideration of proportionality and effectiveness of remedies.	Yes - Recommends data access or interoperability remedies for dominant tech companies. But authorities to refrain from intervention in cases where data is not indispensable. Block-exemption on data sharing and data pooling being considered.	Yes - Recommends enhanced EU rules on data access and portability.
Notification of digital collaborative agreements	No	No	No	No	Yes - Recommends voluntary notification system at EU level for novel and economically significant digital collaborative agreements.
New 'digital' agencies	No – However, on 9 January 2020, the French Competition Authority announced the creation of a 'specialised digital economy unit'.	No	Yes – Recommends the establishment of a pro-competitive Digital Market Unit to work on a code of conduct for large platforms, and on measures on data access, portability and open standards.	No	Yes - New EU Digital Markets Board and new EU Digital Transformation Agency to supervise policy makers, regulators and enforcers across the EU Member States.

Beyond these reports, authorities at EU and national level have been heavily focused on fintech, with reports and studies from the European Parliament's ECON Committee, the UK Financial Conduct Authority, and the Dutch, Spanish and Portuguese authorities. France announced a study on the impact of the digital revolution on the financial sector to be completed in 2020. The European Parliament's ECON Committee stated that a refusal to access/supply constitutes an anticompetitive conduct only in cases of 'essential facilities', a concept that may not easily apply to datasets.[55] Indeed, in *Oscar Bronner,*[56] the ECJ ruled that an input is indispensable if there are no alternatives available and it is impossible or unreasonably difficult to develop competing products without that input. The ECON Committee concludes 'in the age of big data, where advanced data

55 Directorate General for Internal Policies, 'Competition Issues in the Area of Financial Technology (FinTech)' (Study requested by the European Parliament ECON Committee, July 2018) 88.

56 Case C-7/97 *Oscar Bronner GmbH & Co. KG v Mediaprint Zeitungs- und Zeitschriftenverlag GmbH & Co. KG* [1998] ECR I-07791, paras 38–46.

capture techniques allow for the creation of valuable datasets at a reasonable cost, it is difficult to consider a dataset as "indispensable".'[57]

V. Conclusion

Big data is now a regular fixture in regulators' consideration of mergers and conduct investigations. But policymakers must address whether economic features of 'big data' bring market failure risks or enforcement gaps that require regulatory intervention.

As policy makers rightly note intervention in dynamic markets creates longer term risks. Regulation is typically reserved for obvious and systemic market failures, such as the liberalising of the legacy energy, telecoms and water national monopolies formerly characterised EU national markets.

It is difficult to discern an enforcement gap in the existing antitrust framework. The economic features of data (scale economies, network effects, customer lock-ins) are well known to EU antitrust analysis, and the decisional practice shows EU and national regulators able to enforce antitrust rules in data-rich markets effectively. For that reason existing EU legislative measures have trodden lightly.

A balanced consideration of the merits and risks of a rush to regulation is essential to properly address competition concerns in digital markets.

57 Directorate General for Internal Policies (n 52) 88–89.