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THE “OBJECTIVE TEST” AND THE
DOWNSTREAM MARKET PRESENCE
REQUIREMENT IN BIG DATA ACCESS CASES
UNDER THE ESSENTIAL FACILITIES DOCTRINE -
A CRITICAL ASSESSMENT

by

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One possible way to gain access to competitively relevant sets of Big Data is to apply the essential facilities doctrine. However, the European Commission and the European Court of Justice have established several different criteria for applying the doctrine. Since neither institution has yet applied the doctrine in Big Data access cases, it is not clear which of the criteria applies in such positions. This paper attempts to analyze the impact of the “objective test” and the requirement that the controlling company be active in the downstream market (which are included in all assessment criteria) in Big Data access cases, with the goal of answering the research question, “Do the application of the “objective test” and the requirement that the controlling company be active in the downstream market impede the effectiveness of the doctrine in Big Data access cases under EU competition law, and if so, how should they be changed?” The conclusion is that in Big Data access cases, the “objective test” should be mitigated and replaced by the “subjective test” or the “average company test” and the requirement that the controlling company be active in the downstream market should be discarded altogether in order for the doctrine to be an effective tool for accessing competitively relevant sets of Big Data.

KEY WORDS

The Essential Facilities Doctrine, Big Data, Mandated Data Access, Bronner Ruling

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1. INTRODUCTION AND STRUCTURE OF THE PAPER

Big Data, also called the “new oil”¹ is undoubtedly one of the most economically important resources of the modern age, which companies can use to offer new and innovative products in countless markets. Even traditional (brick-and-mortar) industries (such as construction, automotive, and banking) are being heavily influenced by Big Data which is used to improve the products they offer.²³

At the same time, Big Data and Big Data-driven markets pose unprecedented challenges to competition policy and law, as traditional competition law tools are not tailored to the specifics of Big Data-driven markets⁴ The purpose of this paper is to shed light on the possibilities of applying the essential facilities doctrine (henceforth: the doctrine), an institute of competition law that allows a company to demand access to a product controlled by another (dominant) company under particularly restrictive conditions, to Big Data. It will do so by examining whether the conditions developed in the Court’s⁵ jurisprudence for the application of the doctrine in European union (henceforth: EU) competition law, can address the specificities of Big Data and Big Data-driven markets. No single set of criteria for the use of the doctrine has emerged, as the precise conditions

¹ The Economist. (2017) *The World's Most Valuable Resource Is No Longer Oil, But Data*. [online] London: The Economist. Available from: <https://www.economist.com/leaders/2017/05/06/the-worlds-most-valuable-resource-is-no-longer-oil-but-data> [Accessed 12 April 2023].

² In the interest of greater clarity of the text, the term “product” is used to refer to both products and services.

In the automotive industry, for example, Big Data is being used to improve vehicle safety, maintenance, and customer experience by analyzing sensor data from vehicles and customer feedback in real time. By collecting and analyzing data from these sensors in real time, manufacturers can identify patterns and trends related to accidents and near misses. For example, if incidents of abrupt braking are consistently reported for a particular model, the manufacturer can investigate and address potential safety issues such as faulty brakes.

³ For more see: Minevich, M. (2020) *The Automotive Industry and the Data Driven Approach*. [online] 13 July. Jersey City: Forbes. Available from: <https://www.forbes.com/sites/markminevich/2020/07/13/the-automotive-industry-and-the-data-driven-approach/?sh=84cfedcf9a53> [Accessed 8 September 2023].

⁴ A notable and much discussed example is the difficulty of defining a market (which is the first step in abuse of dominance cases) when the relevant products have no monetary price. This is rarely the case in “brick and mortar” markets, but is common in Big Data-driven markets, where the phenomenon of “two-sided markets” is common. In these cases, the SSNIP test, which defines markets based on the impact of a hypothetical small but significant and non-transitory price increase on consumer demand, cannot be applied. For a more in-depth discussion see: Mandrescu, D. (2018) *The SSNIP Test and Zero-Price Strategies*. *European Competition and Regulatory Law Review*, 2(4), pp. 244-260.

⁵ The term Court is used as a generic term for the Court of Justice of the European Communities, the Court of Justice of the European Union, and the General Court of the European Union, unless otherwise indicated.

for its application depend on the type of facility requested. However, an analysis of prior cases involving essential facilities suggests three distinct lines of reasoning: the Bronner criteria, applicable to tangible facilities and services; the IMS Health criteria, applicable to facilities protected by intellectual property rights (henceforth: IPRs); and the Microsoft criteria (a milder version of the IMS Health criteria), the precise scope of which remains unknown in the absence of subsequent case law. It is beyond the scope of this paper to explore which of the above criteria are best suited for application to Big Data or, rather, whether an entirely new set of criteria should be developed.

However, this paper explores two conditions that are common to all of the above criteria, namely the “objective test” and the requirement that the controlling (dominant) company⁶ be active in the downstream market (henceforth: downstream market presence requirement). It does so with the aim of answering the research question: “Do the application of the “objective test” and the requirement that the controlling company be active in the downstream market impede the effectiveness of the doctrine in Big Data access cases under EU competition law, and if so, how should they be modified so as to make the doctrine an effective tool for accessing sets of Big Data”.

The impact of Big Data on competition policy and law is the subject of a number of theoretical contributions⁷ while the position of Big Data as

⁶ The paper uses the term “controlling company” to refer to the company controlling the (alleged) essential facility.

⁷ Cr mer, J., de Montjoye, Y. A. in Schweitzer, H. (2019) *Competition Policy for the Digital Era*, Luxembourg: Publications Office of the European Union; Hayashi, S. and Arai, K. (2019) How Competition Law Should React in the Age of Big Data and Artificial Intelligence. *The Antitrust Bulletin*, 64 (3), pp. 447-456; Kadar, M. and Bogdan, M. (2017) ‘Big Data’ and EU Merger Control - a Case Review. *Journal of European Competition Law and Practice*, 8 (8), pp. 479-491; Katz, M. L. (2019) Multisided Platforms, Big Data, and a Little Antitrust Policy. *Review of Industrial Organization*, 54, pp. 695-716; Kup ik, J. and Mikeš, S. (2018) Discussion on Big Data, Online Advertising and Competition Policy. *European Competition Law Review*, 39 (9), pp. 393-402; Lasserre, B. and Mundt, A. (2017) Competition Law and Big Data: The Enforcers View. *Rivista Italiana di Antitrust*, (1), pp. 87-103; Lugard, P. and Roach, L. (2017) The Era of Big Data and the EU/U.S. Divergence for Refusals to Deal. *Antitrust*, 31 (2), pp. 58-64; Modrall, J. (2018) Big Data and Merger Control in the EU. *Journal of European Competition Law & Practice*, 9 (9), pp. 569-578; Pfeiffer, R. A. C. (2019) Digital Economy, Big Data and Competition Law. *Market and Competition Law Review*, 3 (1), pp. 53-89; Qi, J. (2020) Application of Essential Facilities Doctrine to “Big Data”: US and EU Perspectives. *European Competition Law Review*, 40(4), pp. 182-189; Ryan, D. (2021) Big Data and the Essential Facilities Doctrine: A Law and Economics Approach to Fostering Competition and Innovation in Creative Industries. *UCL Journal of Law and Jurisprudence*, 10 (1), pp. 84-112; Sivinski, G., Okuliar, A. and Kjolbye, L. (2017) Is Big Data a Big Deal? A Competition Law Approach to Big Data. *European Competition Journal*, 13 (2/3), pp. 199-227

an essential facility is discussed in only a handful of articles.⁸ However, these do not discuss the issues addressed in this paper, but rather provide a more general overview of the possibilities of applying the doctrine to sets of Big Data, focusing mostly on the transatlantic comparative aspect. This paper is therefore novel in that it offers an analysis of aspects of the doctrine's application that have not yet been the subject of scholarly debate. The paper is divided into three main parts. The first part highlights the institutes and concepts necessary for its understanding. It analyses the concept of the doctrine and the relevant case law of the Court and explains that no uniform criteria have been developed in EU competition law for assessing the character of a facility as essential under the doctrine. In addition, this part of the paper attempts to define the basic characteristics of Big Data and to present the current position of Big Data as an essential facility. The second part of the paper analyses the possibilities of applying two conditions common to all sets of criteria for assessing the potentially essential character of a facility under the doctrine, namely the "objective test" and the downstream market presence requirement. It concludes that both of these conditions severely limit the applicability of the doctrine to Big Data-driven markets. In addition, it suggests replacing the "objective test" with a "subjective test" or the "average company test" and removing the downstream market presence requirement in Big Data access cases to increase the doctrine's effectiveness. The third and final part of the paper summarizes its findings.

2. SETTING THE SCENE

2.1. THE ESSENTIAL FACILITIES DOCTRINE

In competition law, the doctrine is an idea that "the owner of a facility which is not replicable by the ordinary process of innovation and investment, and without access to which competition on a market is impossible or seriously impeded has to share it with a rival."⁹ Essential facility cases typically involve two vertically related markets, where the product from the upstream market is an essential input for the activity on the downstream market, i.e. the activity in the downstream market is impossible without access to the product

⁸ Colangelo G. and Maggiolino M. (2017) Big Data as Misleading Facilities. *European Competition Journal*, 13 (2/3), pp. 249-281; Lugard, P. and Roach, L. (2017) The Era of Big Data and the EU/U.S. Divergence for Refusals to Deal. *Antitrust*, 31 (2), pp. 58-64; Qi, J. (2020) Application of Essential Facilities Doctrine to "Big Data": US and EU Perspectives. *European Competition Law Review*, 40(4), pp. 182-189.

⁹ Craig, P. and de Burca, G. (2015) *EU Law: Text, Cases, and Materials*. 6th ed. Oxford: Oxford University Press, p.p. 1074.

from the upstream market.¹⁰ In *Commercial Solvents*,¹¹ the upstream market was the market for the chemical aminobutanol, which is an essential input for the activity on the market for the chemical ethambutol (downstream market), since the latter cannot be produced without aminobutanol. In the *Bronner* case, the market for the delivery of daily newspapers in Austria was the upstream market, while the market for daily newspapers in Austria was the downstream market. If the company that denies access to the essential input is dominant in the upstream market and the refusal to supply is abusive,¹² the company that has been denied access to the input in question can demand (mandatory) access to it by invoking the doctrine.¹³

The doctrine has both ardent supporters and passionate opponents. Some argue that it allows smaller companies access to essential inputs they could not otherwise obtain, which increases the intensity of competition in the (downstream) market and thus the level of consumer welfare due to the higher quality and lower prices of products.¹⁴ However, more critical voices¹⁵ claim that the possibility of mandated access reduces incentives to invest in the development and/or improvement of (potentially) essential facilities in two ways. First, companies with dominant market positions (on upstream markets) will reduce their investment in existing and new essential facilities because of the threat of mandated access,¹⁶ and second,

¹⁰ See e.g. Judgement of 6 March 1974, *Istituto Chemioterapico Italiano S.p.A. and Commercial Solvents Corporation v Commission*, C-6/73, EU:C:1974:18, that concerned the refusal to supply the chemical aminobutanol, which is essential for the production of the chemical ethambutol.

¹¹ Judgement of 6 March 1974, *Istituto Chemioterapico Italiano S.p.A. and Commercial Solvents Corporation v Commission*, C-6/73, EU:C:1974:18.

¹² Refusal to supply an essential input is a form of abuse of market dominance, therefore, if the company refusing access to an essential input does not have a dominant market position on the relevant product market (upstream market), the doctrine cannot be invoked.

¹³ This article presents only the mere basics on the doctrine. For a more in-depth analysis see: Eilmansberger, T. (2005) *The Essential Facilities Doctrine Under Art. 82: What is the State of Affairs After IMS Health and Microsoft*. *King's Law Journal*, 16 (2), pp. 329-346; Hohmann, H. (2001) *Die essential Facility Doctrine im Recht der Wettbewerbsbeschränkungen*. Baden-Baden: Nomos; Muller, U. and Rodenhausen, A. (2008) *The Rise and Fall of the Essential Facility Doctrine*. *European Competition Law Review*, 29(5), pp. 310-329; Seelen, C. M. (1997) *The Essential Facilities Doctrine: What Does it Mean to be Essential*. *Marquette Law Review*, 80 (4), pp. 1117-1134.

¹⁴ E.g.: Hatzopoulos, V. (2006) *The EU Essential Facilities Doctrine*. Bruges: College of Europe.

¹⁵ Some of them being: Areeda, P. (1989) *Essential Facilities: an Epithet in need of Limiting Principles*. *Antitrust Law Journal*, 58 (3), pp. 841-853; Gerber, D. J. (1988) *Rethinking the Monopolist's Duty to Deal: a Legal and Economic Critique of "Essential Facilities"*. *Virginia Law Review*, 74 (6), pp. 1069-1113.

¹⁶ Also see: Opinion of AG Jacobs of 28 May 1998, *Oscar Bronner GmbH & Co. KG v Mediaprint Zeitungs- und Zeitschriftenverlag GmbH & Co. KG, Mediaprint Zeitungsvertriebsgesellschaft mbH & Co. KG and Mediaprint Anzeigengesellschaft mbH & Co. KG*, EU:C:1998:264, paragraph 57. In his seminal opinion AG Jacobs clearly gave priority to competition for the market over competition in the market.

companies that need the essential facilities to enter downstream markets will refrain from developing competing facilities (substitutes) because it is cheaper for them to “free-ride” on existing facilities. Herbert Hovenkamp, one of the doctrine’s harshest critics, even pointed out that it is “one of the most problematic, incoherent and uncontrollable institutes of competition Law, without which, the world would be a better place.”¹⁷

Despite the theoretical and practical controversy over the doctrine, both the European Commission (henceforth: the Commission) and the Court have frequently applied it, especially from the late 1980s to the beginning of the second millennium. However, despite the abundance of relevant case law, no universal criteria for the application of the doctrine developed. As a result, the requirements for its use vary from case to case and from essential facility to essential facility.

A careful analysis of the relevant case law, however, reveals several different sets of criteria for applying the doctrine. The criteria developed in the Bronner ruling¹⁸ are considered the gold standard upon which most essential facility cases rely, although they have been fully applied in only three cases.¹⁹ In general, the Bronner criteria²⁰ are applicable in cases where the alleged essential facility is either a materialized facility (such as a railroad or a local loop) or a non-digital service, as implicitly recognized in the recent Slovak Telekom²¹ and Lietuvos geležinkeliai²² cases. Both rulings state that the Bronner criteria are not applicable in the cases at hand, as a duty to grant access to the facilities in question (a local loop in Slovak Telekom and a railway in Lietuvos geležinkeliai) already exists on the basis of (ex-ante)

¹⁷ Hovenkamp, H. (2011) *Federal Antitrust Policy, the Law of Competition and its Practice*. 4th ed. St. Paul: West, p. 336.

¹⁸ Judgement of 26 November 1998, Oscar Bronner GmbH & Co. KG v Mediaprint Zeitungs- und Zeitschriftenverlag GmbH & Co. KG, Mediaprint Zeitungsvertriebsgesellschaft mbH & Co. KG and Mediaprint Anzeigengesellschaft GmbH & Co. KG, C-7/97, EU:C:1998:569.

¹⁹ Besides the Bronner case also in: Judgement of 9 September 2009, Clearstream Banking AG and Clearstream International SA v Commission of the European Communities, T-301/04, EU:T:2009:317; Commission Decision of 27 August 2003 relating to a proceeding pursuant to Article 82 of the EC Treaty of (COMP/37.685 GVG/FS). Official Journal of the European Union (2003/C-3057). 27th August. Available from: https://eur-lex.europa.eu/legal_content/EN/TXT/PDF/?uri=CELEX:32004D0033&qid=1681140533022&from=en [Accessed 10 April 2023].

²⁰ These conditions are: i.) The refusal to supply will eliminate all competition in the downstream market, ii.) there are no objective justifications for the refusal to supply, iii.) the facility is indispensable for competition in the downstream market as there are no actual or potential substitutes for it.

²¹ Judgement of 25 March 2021, Slovak Telekom v Commission, C-165/19 P, EU:C:2021:239.

²² Judgement of 12 January 2023, Lietuvos geležinkeliai v Commission, C-42/21 P, EU:C:2023:12.

sector regulation. If such regulation does not exist one can presume, ad contrario, that the Bronner criteria are applicable.²³

Importantly, the Bronner ruling introduced the “objective test”, according to which the economic unviability of the creation of a substitute by the demanding company²⁴ is not relevant, since the duplication of the facility must be economically unviable for a company with a comparable market position to the controlling company.²⁵ In other words, the economic weakness of the demanding company compared to the controlling company is in no way relevant for the doctrine’s application.²⁶ The second set of criteria applies to cases where the allegedly essential facility is protected by IPRs, in particular patents and copyrights.²⁷ In such a case, access to the IPR-protected facility (usually its licensing) is necessary for the activity on the downstream market. For example, in the Magill case,²⁸ access to the (copyrighted) television programs of the individual television stations in Ireland was necessary for the creation of a consolidated program of all television stations in Ireland (in other words, an essential input), while in the IMS Health case,²⁹ activity in the market for the supply of regional sales data for pharmaceutical products in Germany was impossible without access to the 1860 brick structure formatting. Thus, the alleged essential facility is not the IPR as such, but the facility it protects.

²³ For more see: Czapracka, K. (2021) The Essential Facilities Doctrine and the Bronner Judgment Clarified, Case C-165/19 P Slovak Telekom v Commission. *Journal of European Competition Law & Practice*, 13 (4), pp. 278-280.

²⁴ The paper uses the term “demanding company” to refer to the company demanding access to the (alleged) essential facility.

²⁵ Judgement of 26 November 1998, Oscar Bronner GmbH & Co. KG v Mediaprint Zeitungs- und Zeitschriftenverlag GmbH & Co. KG, Mediaprint Zeitungsvertriebsgesellschaft GmbH & Co. KG and Mediaprint Anzeigengesellschaft mbH & Co. KG, C-7/97, ECLI:EU:C:1998:569, paragraphs 44-46.

²⁶ This clearly shows that the doctrine does not protect individual companies but rather market competition as an institution.

²⁷ Despite this, the broader term “intellectual property conditions” is widely used in literature. See: Chen, Y. (2014). Refusal to Deal, Intellectual Property Rights, and Antitrust. *The Journal of Law, Economics, and Organization*, 30 (3), pp. 533-557; Cotter, T. F. (1999). Intellectual Property and the Essential Facilities Doctrine. *Antitrust Bulletin*, 44 (1), pp. 211-250; Ginsburg, D., Garadin, D. and Klovers, K. (2019) Antitrust and Intellectual Property in the United States and the European Union. In: Muscolo, G. and Tavassi, M. A. (eds.) *The Interplay between Competition Law and Intellectual Property: An International Perspective*. Alpen aan den Rijn: Kluwer Law International, pp. 99-120; Graef I (2011) Tailoring the Essential Facilities Doctrine to the IT sector: Compulsory Licensing of Intellectual Property Rights after Microsoft. *Cambridge Student Law Review*, 7 (1), pp. 1-20.

²⁸ Judgment of the Court of 6 April 1995, Radio Telefis Eireann (RTE) and Independent Television Publications Ltd (ITP) v Commission of the European Communities, joined cases C-241/91 P and C-242/91 P, EU:C:1995:98. Judgment of 29 April 2004, IMS Health GmbH & Co. OHG v NDC Health GmbH & Co. KG, C-418/01, EU:C:2004:257.

²⁹ Judgment of 29 April 2004, IMS Health GmbH & Co. OHG v NDC Health GmbH & Co. KG, C-418/01, EU:C:2004:257.

Although the Court first recognized the potential character of IPRs as essential facilities in the 1988 Renault³⁰ and Volvo³¹ rulings, systematic criteria for applying the doctrine in IPR cases were first established in the Magill judgement. These were further elaborated in the 2004 IMS Health ruling,³² which was also heavily influenced by the Ladbroke judgement.³³ The latter, importantly, introduced the requirement that the controlling company must be present in the downstream market,³⁴ which has not been surpassed by subsequent case law and thus still applies. The IPR criteria are even stricter than the (already strict) Bronner criteria, as the “new product” condition was added.³⁵ Accordingly, the doctrine can only be used if the denial to licence IPRs prevents the emergence of a new product for which there is at least potential consumer demand.³⁶ After the IMS Health ruling, the conditions for the application of the doctrine were relatively clear, with the Bronner criteria applicable in cases involving materialized facilities and services and the IMS Health criteria applicable in IPR cases. However, this dichotomy was turned on its head by the General Court’s 2007 Microsoft ruling,³⁷ which concerned Microsoft’s refusal to grant access to interoperability protocols that were protected by IPRs. Therein, the General Court replaced the “new product” condition with the “technical progress” condition. Thus, it was no longer necessary to prove that the refusal to licence IPRs hindered the emergence of a new product as it sufficed that it impeded technical progress. In my opinion the term “technical progress” is semantically ambiguous, as it can range from minimal improvements of the product to significant technical advances that already meet the “new product” condition. Moreover, it was no longer necessary to prove that the refusal to licence will eliminate all competition in the downstream market

³⁰ Judgement of 5 October 1988, *Consorzio Italiano della Componentistica di Ricambio per Autoveicoli and Maxicar v Régie des Usines Renault*, C-53/87, EU:C:1988:472.

³¹ Judgement of 5 October 1988, *AB Volvo v Erik Veng (UK) Ltd*, C-238/87, EU:C:1988:477.

³² Judgement of 29 April 2004, *IMS Health GmbH & Co. OHG v NDC Health GmbH & Co. KG*, C-418/01, EU:C:2004:257.

³³ Judgement of 11 November 1997, *Commission of the European Communities and French Republic v Ladbroke Racing Ltd.*, C-359/95 P, EU:C:1997:531.

³⁴ Rinaldi, A. (2020) Re-Imagining the Abuse of Economic Dependence in a Digital World. *European Competition Law Review*, 4 (2), pp. 253-256, p. 254.

³⁵ Van den Bergh and Camesasca argue that milder conditions would have a negative impact on dynamic efficiency. See: van den Bergh, R. and Camesca, P. D. (2006) *European Competition Law and Economics: A Comparative Perspective*. 2nd ed. London: Sweet & Maxwell, p. 280.

³⁶ Judgement of 29 April 2004, *IMS Health GmbH & Co. OHG v NDC Health GmbH & Co. KG*, C-418/01, EU:C:2004:257, paragraph 39 states that for the doctrine to be applied “three cumulative conditions must be satisfied, namely, that that refusal is preventing the emergence of a new product for which there is a potential consumer demand, that it is unjustified and such as to exclude any competition on a secondary market.”

³⁷ Judgement of 27 June 2012, *Microsoft Corp. v European Commission*, T-167/08, EU:T:2012:323.

but only that it will eliminate all effective competition in it. Due to the very specific factual situation, the mitigation of the “traditional” IPR criteria (IMS Health criteria) was necessary for the application of the doctrine,³⁸ but in the absence of subsequent case law, the exact scope of the Microsoft criteria remains unclear. It is therefore unsettled whether they were tailored to the present case or whether their applicability is broader or even general.

2.2. BIG DATA AS ESSENTIAL FACILITIES

Despite the importance of Big Data for today’s economy (also called economy or even society 4.0.), there is no unified definition of what exactly Big Data is and how it differs from “ordinary” data. However, all definitions of Big Data agree on several characteristics that distinguish Big Data from “ordinary” data, namely the huge volume of data contained in a set of Big Data,³⁹ the high velocity at which new data is collected and processed, and the wide variety of data in a set of Big Data.⁴⁰ This paper adopts the Commission’s definition of Big Data, as “large amounts of different types of data produced with high velocity from a high number of various types of sources, whose handling requires new tools and methods, such as powerful processors, software and algorithms.”⁴¹

³⁸ A more in-depth analysis of the Microsoft case can be, inter alia, found in: Andreangeli, A. (2009) Interoperability as an “Essential Facility” in the Microsoft Case: Encouraging Stifling Competition or Innovation? *European Law Review*, 4, pp. 584-611; Butts, C. (2010) The Microsoft Case 10 Years Later: Antitrust and New Leading “New Economy” Firms. *Northwestern Journal of Technology and Intellectual Property*, 8 (2), pp. 275-291; Eilmansberger (2005) op. cit., pp. 329-346.

³⁹ It is important to distinguish between Big Data and a set of Big Data, which are related but at the same time distinct concepts. While both terms refer to large amounts of structured and unstructured data from a large number of different sources that is being gathered at a quick rate, a set of Big Data is a subset of the larger universe of Big Data. A set of Big Data can be used for multiple purposes, including machine learning, analytics, artificial intelligence creation, and decision making. A set of Big Data is created for a specific business purpose and is typically more concentrated and smaller than Big Data.

⁴⁰ For other definitions of Big Data also see: de Hert, P. and Sajfert, J. (2019) Regulating Data in and out of the Data Protection Policy Field: two Scenarios of post-GDPR Law-Making and the Actor Perspective. *European Data Protection Law Review*, 5 (3), pp. 338-351, p. 338; van Schendel, S. and van der Sloot, B. (2016) Ten Questions for Future Regulation of Big Data: a Comparative and Empirical Legal Study. *Journal of Intellectual Property, Information Technology and Electronic Commerce Law*, 7 (2), pp. 110-145, p. 113.

⁴¹ European Commission. (2014) Communication from the Commission of 2 July 2014: Towards a thriving data-driven economy. COM/2014/0442. p. 4. Available from: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex\%3A52014DC0442>[Accessed 11 April 2015].

Although the Commission had the opportunity to do so in the Facebook/WhatsApp,⁴² Google/DoubleClick,⁴³ and Telefónica UK/Vodafone UK/ Everything Everywhere⁴⁴ decisions, it avoided taking a clear position on whether Big Data can be an essential facility.

It should be noted, however, that these decisions involved mergers and were not, in themselves, essential facility cases. They did, however, provide an opportunity for the Commission to clarify in an obiter dictum whether a set of Big Data could be an essential facility, which the Commission did not do. In my view, this was the case because Big Data was still a relatively new concept at the time of the decisions, relating to huge and complex data sets rather than tangible facilities, services, or IPRs, and therefore did not fit within the concept of essential facilities. Moreover, at the time the decisions were published, the debate about the relevance of Big Data for competition law and policy was only beginning to develop, reaching its peak at the end of the second decade of the new millennium.⁴⁵ Later on, however, with some provisions of the proposal for the Digital Markets Act,⁴⁶ which remaining unchanged in the adopted version,⁴⁷ the Commission has acknowledged that a set of Big Data can constitute an essential facility. Moreover, the fact that Big Data can be an essential facility is explicitly recognized in the German Act against Restraints of Competition (Gesetz gegen Wettbewerbsbeschränkungen) following its (recent) tenth amendment.⁴⁸ A similar conclusion can be drawn from the rulings in the hiQ

⁴² Commission Decision of 3 October 2014 declaring a concentration to be compatible with the common market (Facebook/WhatsApp), *Official Journal of the European Union* (COMP/M.7217) 3 October. Available from: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32014M7217> [Accessed 12 April 2023].

⁴³ Commission Decision of 11 March 2008 declaring a concentration to be compatible with the common market and the functioning of the EEA Agreement (Google/DoubleClick), *Official Journal of the European Union* (COMP/M.4731) 11 March. Available from: https://ec.europa.eu/competition/mergers/cases/decisions/m4731_20080311_20682_en.pdf [Accessed 12 April 2023].

⁴⁴ Commission Decision of 4 September 2012 declaring a concentration to be compatible with the internal market and the functioning of the EEA Agreement (Telefónica UK/ Vodafone UK/ Everything Everywhere/ JV), *Official Journal of the European Union* (COMP/M.6314) 4 September. Available from: https://ec.europa.eu/competition/mergers/cases/decisions/m6314_20120904_20682_2898627_EN.pdf [Accessed 12 April 2023].

⁴⁵ See inter alia: footnote 10.

⁴⁶ Regulation (EU) 2022/1925 of the European Parliament and of the Council of 14 September 2022 on contestable and fair markets in the digital sector and amending Directives (EU) 2019/1937 and (EU) 2020/1828. *Official Journal of the European Union* (OJ L 265) 12 October. Available from: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32022R1925> [Accessed 13 April 2023].

⁴⁷ *Ibid*, paragraphs 9 and 10 of article 5 and paragraphs 10 and 11 of article 6. Moreover, see recital 3.

⁴⁸ Gesetz gegen Wettbewerbsbeschränkungen in der Fassung der Bekanntmachung vom 26. Juni 2013 (BGBl. I S.1750, 3245), das zuletzt durch Artikel 4 des Gesetzes vom 20. Mai 2022

Labs⁴⁹ and PeopleBrowsr cases⁵⁰ in the United States of America, where sets of Big Data were an essential facility for operating in downstream markets.⁵¹ Thus, there is no question that Big Data can be an essential facility. However, it remains unclear which of the existing criteria should be used to assess whether a set of Big Data is an essential facility or whether entirely new criteria should be developed instead.

3. MODIFICATION OF THE EXISTING CRITERIA FOR THE USE OF THE DOCTRINE IN BIG DATA ACCESS CASES

3.1. IMPOSSIBILITY OF DUPLICATION OF THE FACILITY AND THE “OBJECTIVE TEST”

The application of the doctrine presupposes that it is impossible to duplicate the facility in question. This impossibility may be permanent or temporary⁵² and may be caused by topographical, technical, physical, legal, or economic reasons. Topographical, technical and physical impossibility of duplicating a facility is in principle permanent but can be overcome by technological progress, while legal and economic impossibility is temporary.⁵³ Topographical, technical, and physical impossibility of duplication is not relevant in cases of access to Big Data, since any set of Big Data can always be, from a purely technical point of view, duplicated with significant enough investment. One can imagine situations in which the duplication of a set of Big Data is legally impossible, but only if it contains personal data.⁵⁴ However, the most common reason for the impossibility of duplicating a set of Big Data is its economic unviability, i.e., too high (prohibitive) investments related to setting up the facilities needed for data collection and analysis (powerful processors, advanced software, skilled engineers, etc.).

(BGBl. I S. 730) geändert worden ist. Germany. Berlin: Das Bundesministerium der Justiz und das Bundesamt für Justiz. In German, point 4 of paragraph 2 of article 19.

⁴⁹ *hiQ Labs, Inc. v. LinkedIn Corp.* (2019) United States Court of Appeals for the Ninth Circuit, 9 September.

⁵⁰ *PeopleBrowsr, Inc. v. Twitter, Inc.* (2013) United States District Court for the Northern District of California, 6 March.

⁵¹ Although the doctrine was not used, as it was de facto banned from the U.S. legal system by the Supreme Court’s *Trinko* ruling. See: *Verizon Communications Inc. v. Law Offices of Curtis V. Trinko, LLP* (2004) United States of America Supreme Court, 13 January.

⁵² Rottenbiler, S. (2002) *Essential Facilities als ordnungspolitischer Problem*. Frankfurt: Peter Lang Verlag, pp. 28-37.

⁵³ Hohmann (2001) op. cit., p. 228.

⁵⁴ For a more in-depth discussion see: Dacar, R. (2022) Is the Essential Facilities Doctrine Fit for Access to Data Cases? The Data Protection Aspect. *Croatian Yearbook of European Law and Policy*, 18, pp. 61-81.

The possibilities for arguing that a facility's duplication is impossible due to economic unviability were severely limited by the "objective test" introduced by the Bronner ruling. This test does not consider the market position of the demanding company, as it requires that duplication of a facility be economically unviable for a company with a comparable market position to the controlling company. Consequently, in the Bronner ruling, the Court indicated that application of the doctrine requires that duplication of the newspaper delivery network be economically unviable for a company with a comparable market position to the controlling company, not just for the demanding company.⁵⁵ In other words, the low daily circulation and resulting low market share of the demanding company could not have been considered in determining whether duplication of the newspaper delivery network was impossible.⁵⁶ The goal of the "objective test" is to limit the application of the doctrine to cases where market competition as an institution, and not just the market position of individual companies, is threatened.⁵⁷ In my view, however, applying the "objective test" to Big Data-driven markets overshoots the mark and makes the application of the doctrine virtually impossible. The latter markets have several important distinguishing features as compared to brick-and-mortar markets, among others:

- Extreme and ad infinitum economies of scale (and the absence of diseconomies of scale), which are not present in brick-and-mortar markets, where the economies of scale reach a tipping point - if production continues beyond this point, diseconomies of scale occur. However, the economic efficiency of collecting and analysing Big Data increases linearly or even exponentially as the amount of data increases and never reaches the tipping point that leads to diseconomies of scale.⁵⁸ One of the main reasons for the extreme economies of scale in

⁵⁵ The controlling company, Mediaprint, had a market share of 46% while the demanding company, Der Standard, owned by Oskar Bronner, had a market share of 3,6% in the relevant (downstream) market.

⁵⁶ Also see: Judgement of 26 November 1998, Oscar Bronner GmbH & Co. KG v Mediaprint Zeitungs- und Zeitschriftenverlag GmbH & Co. KG, Mediaprint Zeitungsvertriebsgesellschaft mbH & Co. KG and Mediaprint Anzeigengesellschaft mbH & Co. KG, C-7/97, EU:C:1998:569, paragraphs 44-46.

⁵⁷ The ruling followed the opinion of AG Jacobs who showed great reticence towards the doctrine's application, pointing out that mandated access to a facility can increase the level of competition in the short-term, but lower it in the long-term by decreasing the incentives to invest in developing new facilities and improving existing ones. See: Opinion of AG Jacobs of 28 May 1998, Oscar Bronner GmbH & Co. KG v Mediaprint Zeitungs- und Zeitschriftenverlag GmbH & Co. KG, Mediaprint Zeitungsvertriebsgesellschaft mbH & Co. KG and Mediaprint Anzeigengesellschaft mbH & Co. KG, EU:C:1998:264, paragraph 57.

⁵⁸ Cédric. O. (2021), Le digital markets act: Un nouveau chapitre dans l'histoire du droit de la concurrence. *Esprit*, 472, pp. 126-138, p. 132. Also see: Bagnoli, V. (2020) Digital

Big Data-driven markets is the significant upfront investment required to build the infrastructure and technology needed to process massive amounts of data. Companies must build extensive data centers, acquire advanced hardware, develop sophisticated software, and hire data scientists and engineers. As these initial costs are spread over a growing volume of data, the cost per unit of data processing or storage drops significantly.

- Extreme direct and indirect network effects (network externalities)⁵⁹ that increase the market power of the leading companies and represent an important barrier to entry for potential competitors. Extreme direct network effects have been recognized by the German Federal Cartel Office (Bundeskartellamt) as the main reason for Meta’s ultra-dominant position in the market for social networks in Germany.⁶⁰ The stronger the network effects, the more difficult it is for a new product to compete with a product already on the market. Network effects, both direct and indirect, are particularly pronounced in Big Data-driven markets,⁶¹ where they are typically related to either the vast amount of data a company controls, its content, or both.⁶² A typical example of strong network effects in Big Data-driven markets are social platforms such as Facebook, Instagram, or Twitter. The more users join these platforms, the more data is generated in the form of posts, likes, shares and comments. This data, in turn, helps these platforms improve

Platforms as Public Utilities. *International Review of Intellectual Property and Competition*, 51(8), pp. 903-905; Pfeiffer, R. A. C. (2019) Digital Economy, Big Data and Competition Law. *Market and Competition Law Review*, 3 (1), p. 68.

⁵⁹ Direct network effects represent the increase in the value of a product to an individual user resulting from the increase in the total number of users, while indirect network effects represent the increase in the number and quality of complementary products with the increase in the number of users of the primary product. For more see e.g.: Kolasky, W. J. (1999) Network Effects: A Contrarian View. *George Mason Law Review*, 7(3), pp. 577-616, p. 579; Lemley, M. A. and McGowan, D. (1998) Legal Implications of Network Economic Effects. *California Law Review*, 86(3), pp. 479-612, p. 481; Waller, S. W. (2012) Antitrust and Social Networking. *North Carolina Law Review*, 90(5), pp. 1771-1806.

⁶⁰ In the seminal Facebook decision, the German Federal Cartel Office concluded that if consumers wanted to use social networks in general, they would have no choice but to use the social network Facebook, because there were no actual or potential substitutes for it due to extreme network effects. See: Decision of the Bundeskartellamt of 6 February 2019 in Facebook, B6-22/16. Available from: http://www.bundeskartellamt.de/SharedDocs/Entscheidung/EN/Entscheidungen/Missbrauchsaufsicht/2019/B6-22-16.pdf?__blob=publicationFile&v26v%3D5 [Accessed on 14 April 2023].

⁶¹ See: Graef, I. (2016), *Data as Essential Facility Competition and Innovation on Online Platforms*. [online] Ph.D. University of Tilburg, pp. 44-50.

⁶² Tucker, C. (2019) Digital Data, Platforms and the Usual (Antitrust) Suspects: Network Effects, Switching Costs, Essential Facility. *Review of Industrial Organization*, 54(4), p. 685.

their algorithms for content recommendations, ad targeting and user engagement. The more data they have, the better they can customize the user experience and make the platform more valuable to both users and advertisers.

- The first-mover advantage,⁶³ which leads to a rapid consolidation of market positions and a monopolistic (in the best case, oligopolistic) market structure from a global perspective, as evidenced by Meta, Apple, Google, Amazon and Netflix, among others. These companies gained enormous market shares and corresponding market power through their early market entry,⁶⁴ which gives them privileged access to extensive and unexplored data sources. Over time, first movers accumulate valuable data and, equally important, experience in data management and analysis. This becomes a formidable obstacle for potential competitors, leading to a “winner takes it all” structure of the market where a single dominant player can capture the lion’s share of the market, leaving little room for competition.⁶⁵
- The snowball effect in Big Data-driven markets symbolizes the remarkable growth of benefits derived from the continuous accumulation and effective use of data resources. By amassing increasingly rich data sets from multiple sources, companies gain deeper insights, foster innovation, and solidify their competitive position. This effect is gaining momentum over time, giving those who embrace it early on a significant head start. They use data not only for marketing and sales, but also for operational improvements, customer-focused strategies, and product innovation.⁶⁶

⁶³ A phenomenon (occurring mainly in markets that require high start-up costs) in which the first company to enter the market is more successful than its competitors simply because it entered the market first. The later company can thus consolidate its market position to such an extent that effective competition is no longer possible.

⁶⁴ Bughin J., et. al. (2016) *The Age of Analytics: Competing in a Data-Driven World*. [online]. Washington DC: McKinsey Global Institute, p. 26. Available from: <https://www.mckinsey.com/~media/mckinsey/industries/public/20and/20social/20sector/our/20insights/the/20age/20of/20analytics/20competing/20in/20a/20data/20driven/20world/mgi-the-age-of-analytics-full-report.pdf> [Accessed on 10 April 2023].

⁶⁵ de Moncuit, A. (2018) Connecting Competition Law Standards to the Internet of Things. *Concurrences*, 4-2018, p. 86.

⁶⁶ Also see: Gambaro, M. (2018) Big data competition and market power. *Market and Competition Law Review*, 2(2), p. 110.

The aforementioned characteristics lead to extremely high market concentration, which is not common in brick-and-mortar markets,⁶⁷ and reduce the intensity of competition in the market by erecting virtually insurmountable barriers to entry.⁶⁸ As a result, monopolistic or at best oligopolistic structures are not only common but rather the rule in Big Data-driven markets, with competitive markets being an exception.⁶⁹

The companies that control most of the world’s data are also among the most powerful companies in the world: 6 of the world’s 10 largest companies by market capitalization operate exclusively or largely in Big Data-driven markets (e.g., Meta, Netflix, Amazon, Apple, and Microsoft).⁷⁰ Because of their strong or even monopolistic positions in key Big Data-driven markets (such as the market for social networks, internet search and targeted advertising), they have built up significant market power and unprecedented access to factors of production.⁷¹ In my view, it is therefore reasonable to argue, that, at least in theory, they would be able to duplicate almost any set of Big Data if they decided to allocate sufficient factors of production to that end. An example of this is Meta’s recent attempt to duplicate Twitter (now X) with its Threads application, which included duplicating the Big Data that Twitter thrives on. Although Threads’ user base shrank radically about six weeks after the application’s launch, and the attempt to seriously compete with Twitter thus failed, the initial duplication was still possible and even quite successful, as evidenced by the initial high number of users.⁷² The reasons for the failure of Threads do not lie in Meta’s inability to duplicate Big Data, but rather in the strong network effects associated with Twitter and Threads’ design flaws.⁷³

⁶⁷ Graef, I. (2016), *Data as Essential Facility Competition and Innovation on Online Platforms*. [online] Ph.D. University of Tilburg, pp. 54, 55.

⁶⁸ The danger of market concentration for competition in Big Data-driven markets has been recognized by a number of scholars. See e.g.: de Loecker, J., Eeckhout, J. and Unger, G. (2020) The Rise of Market Power and the Macroeconomic Implications. *The Quarterly Journal of Economics*, 135(2), pp. 561-644; Orbach, B. (2021) Anything, Anytime, Anywhere: Is Antitrust Ready for Flexible Market Arrangements? *Antitrust Source*, 20(5), pp. 1-15.

⁶⁹ Also see: Gambaro, M. (2018), Big Data Competition and Market Power. *Market and Competition Law Review*, 2(2), pp. 110-111.

⁷⁰ See: Ventura, L. (2023) *World’s Largest Companies 2023*. [online] New York: Global Finance. Available from: <https://www.gfmag.com/global-data/economic-data/largest-companies> [Accessed 17 April 2023].

⁷¹ Kai, L. (2019) Keeping Big Tech at Bay. *International Financial Law Review*, 2019(5), pp. 18-21.

⁷² Chow, K., (2023) *Twitter’s Rival Threads is Already Unraveling*. [online] Time Magazine. Available from: <https://time.com/6305383/meta-threads-failing/> [Accessed 19 September 2023].

⁷³ See: Isaac, M., (2023) *Why the Early Success of Threads May Crash Into Reality*. [online] New York: The New York Times. Available from: <https://www.nytimes.com/2023/07/11/technology/threads-zuckerberg-meta-google-plus.html> [Accessed 19 September 2023]; Chow, op. cit.; Kantrowitz, A. (2023) *Threads is not an Automatic Win*

Now imagine a small start-up company in need of access to a set of Big Data controlled by one of the above companies (this set of Big Data is an essential input for activity on the downstream market). Since the “objective test” makes application of the doctrine conditional on the impossibility of duplication of the facility by a company with a comparable market position to the controlling company, the doctrine could only apply if the set of Big Data in question could not be duplicated by a company with a comparable market position to one of the “Big Tech” companies. Whether or not this is the case must, of course, be examined on a case-by-case basis. In general, however, it can be stated that a company with a market position comparable to Meta or the like would most likely be able to duplicate most sets of Big Data. There are, of course, cases where a set of Big Data cannot be duplicated, even by Big Tech. This could be the case if the data was collected over a long period of time and/or under very specific and non-reproducible circumstances.

While it should be noted that market dominance, which is a prerequisite for the application of the doctrine, generally involves significant economic power, it is clear that the economic power of a Big Tech company dominating a Big Data-driven market is far greater than that of dominant companies in the vast majority of traditional essential facility cases.⁷⁴ In other words, companies that are dominant in Big Data-driven markets tend to be far more economically powerful than companies in other markets where the doctrine has traditionally been applied.⁷⁵ This, by its nature, makes it much more difficult to meet the “objective test” in cases where the alleged essential facility is controlled by a Big Tech company than in traditional essential facility cases. Because most of the world’s data is controlled by a handful of powerful companies,⁷⁶ the “objective test” severely limits the usefulness of the doctrine in Big Data access claims, restricting it to the few cases where

for Meta. [online] Slate. Available from: <https://slate.com/technology/2023/07/threads-meta-twitter-risks-opportunities.html> [Accessed 20 September 2023]; Dooley, R. (2023) Threads Engagement Drops 70%. Here’s how it can Recover. [online] Forbes. Available from: <https://www.forbes.com/sites/rogerdooley/2023/07/25/threads-engagement-drop-not-shocking/?sh=42aabd66659c> [Accessed 20 September 2023].

⁷⁴ In Bronner, for example, Mediaprint had a dominant position on the market for newspaper delivery services in Austria, in Magill the relevant television stations had dominant positions on the market for individual television station programs in Ireland while in Lietuvos Geležinkeliai the said company had a dominant position on the market for the management of railway infrastructure in Latvia.

⁷⁵ One of such companies, for example is Meta, whom the German Federal Cartel Office (Bundeskartellamt) concluded had an “ultra dominant position” on the market for social networks. See: Decision of the Bundeskartellamt of 6 February 2019, Facebook, B6-22/16.

⁷⁶ Also see: Fukuyama, F. (2021) How to Save Democracy from Technology: Ending Big Tech’s Information Monopoly. *Foreign Affairs*, 100(1), pp. 98-110; Klick, J. (2021) Big Tech’s Robber Barrons. *Regulation*, 44(3), pp. 26-29.

the relevant sets of Big Data are either controlled by smaller companies or so specific that they cannot be reasonably duplicated even by another Big Tech company. Therefore, I believe that the “objective test” should be discarded in cases where Big Data is the alleged essential facility and replaced with a “subjective test”, or at least the “average company test”, where the “subjective test” takes into account the subjective ability of the demanding company to create a substitute set of Big Data and the “average company test” takes into account the ability of an average company operating in the relevant market to do so.

However, it should not be overlooked that competition law in the EU is based on the “as-efficient-competitor test”, which aims to protect competitors that have the same efficiency as dominant companies or the potential to achieve it. Adopting the “subjective” or even the “average company” test would result in an ambiguous standard under which the less competitive a company is, the more protection it would receive, while more innovative and expanding companies would receive less protection. This could tempt some companies to intentionally take a weak position and subsequently seek access rights. Despite this, I believe that the mitigation of the “objective test” is justified because of the peculiarities of Big Data-driven markets described above, which were not taken into account in its creation.⁷⁷ In addition, Big Data differs from traditional essential facilities in that access to it is an essential prerequisite for opening numerous (theoretically countless) downstream markets (which do not yet exist).⁷⁸ Thus, the relevance of the ability of companies to access competitively relevant sets of Big Data goes beyond the purely economic interests of individual companies, as it has a positive impact on the economy as a whole.⁷⁹

3.2. DOWNSTREAM MARKET PRESENCE REQUIREMENT

According to the Court’s *Ladbroke* ruling, the doctrine can only be applied in cases where the controlling company is itself present in the downstream market.⁸⁰ The *Ladbroke* case involved the refusal of the French *Sociétés des*

⁷⁷ Which is only natural, since Big Data-driven markets did not exist at the time.

⁷⁸ *Gambaro*, op. cit., p. 102.

⁷⁹ This is a traditional characteristic of infrastructure facilities. Moreover, Big Data may also have other characteristics of infrastructure facilities, such as high start-up costs, its non-rival nature, economies of scale related to Big Data collection and analysis, and others. Of course, not all sets of Big Data exhibit the characteristics of infrastructure, and even if they do, they are not necessarily an essential facility. For more see: Scholz L. H. (2019) Big Data is not Big Oil: The Role of Analogy in the Law of New Technologies. *Tennessee Law Review*, 86(4), pp. (2019), pp. 863-894, p. 884; Vezzoso, S. (2020) All Happy Families are Alike: The EDPS Bridges Between Competition and Privacy. *Market and Competition Law Review*, 4(1), pp.41-68, p. 45.

⁸⁰ Also see: Colangelo G. and Maggolino M. (2017) Big Data as Misleading Facilities. *European Competition Journal*, 13(2-3), pp. 249-281, p. 277; Korah, V. (2001) The Interface Between

courses (operators of horse races) to grant a licence to the Belgian company Ladbroke to broadcast, in Belgium, French horse races they operated. The Court concluded that no duty to deal existed, *inter alia*, because the Sociétés des courses were not present in the Belgian market for the broadcasting of horse races. The requirement that the dominant company must be active at least on the downstream market was retained in subsequent case law and thus remains valid.

This requirement is not problematic when the doctrine is applied in brick-and-mortar markets, where the downstream markets exist independently of the activity of the demanding company. For example, in *Bronner*, the market for daily newspapers in Austria existed independently of the activity of the newspaper *Der Standard*. In other words, there was no causal connection between the sale of the newspaper *Der Standard* and the existence of the market for daily newspapers in Austria. Ahead, in *IMS Health*, the downstream market for the supply of German regional sales data to pharmaceutical companies existed independently of the activity of the demanding company, *NDC Health*.⁸¹ The same can be said for most essential facilities cases, where the controlling companies usually transfer their market power from the upstream to the downstream market, while demanding companies seek to enter the already existing downstream market.

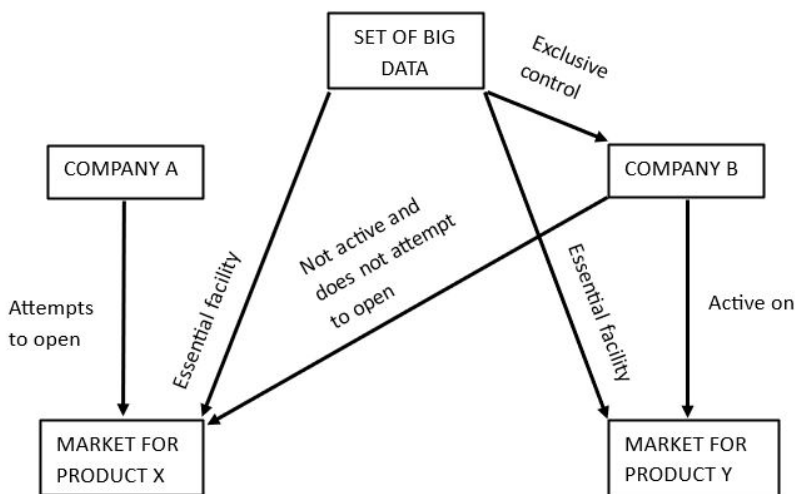
I argue that this is not necessarily the case in dynamic and propulsive markets driven by Big Data. Consider a hypothetical scenario in which an innovative startup (company A) wants to introduce a breakthrough (disruptive) product (product X) which is so innovative that it opens up a new, previously non-existent, market. An example of such a scenario is the creation of the dating app market, which was opened by the application *Tinder*. Later, other dating apps which were tailored to specific needs entered the market. The successful realization of product X is irrevocably dependent on company A gaining access to a specific set of Big Data that is under company B's exclusive control. In other words, this set of Big Data is an essential prerequisite for opening the market for product X. Company B uses this set of Big Data to offer a different product (product Y), but remains completely uninvolved in the emerging market for product X.⁸² Since opening the market for product X requires access to the corresponding set of Big Data, this market cannot be opened by company A until it obtains access

Intellectual Property and Antitrust: the European Experience. *Antitrust Law Journal*, 69(3), pp. 801-839, p. 814.

⁸¹ See: Judgement of 29 April 2004, *IMS Health GmbH & Co. OHG v NDC Health GmbH & Co. KG*, C-418/01, EU:C:2004:257, paragraph 46.

⁸² Since different information can be extracted from the same set of Big Data it can be an essential input for the offering of different (theoretically countless) products.

to this set of Big Data from company B. Should company B choose to deny access to this set of Big Data, the doctrine cannot be applied because company B cannot be present in the market for product X, which does not yet exist and thus the downstream market presence requirement cannot be satisfied. This situation is illustrated graphically below.



Even if company B does not actively participate in the market for product X, it may have compelling incentives to hinder the emergence of the market. In my view, two main motivations may underlie such behavior. First, company B may seek to reserve the market for product X as a precautionary measure to preserve it for possible future entry.⁸³ Second, company B may

⁸³ “Pre-emptive market reservation” refers to a strategic action taken by a company to secure or reserve a particular market or industry segment in anticipation of potential future entry. This pre-emptive strategy is often used to prevent or make it more difficult for competitors to enter or gain a foothold in that market. A practical example of pre-emptive market reservation is Microsoft’s bundling of Internet Explorer with the Windows operating systems in the late 1990s. Microsoft’s action was seen as an attempt to reserve the market for Web browsers and to prevent competition from other Web browsers such as Netscape Navigator. Microsoft’s actions sparked the “first browser war” and led to a significant antitrust case in the United States of America. See: *United States v. Microsoft Corp* (2001). United States Court of Appeals for the District of Columbia Circuit, June 28, 2001; Campbell, W. J. (2015) *The ‘90s Startup That Terrified Microsoft and Got Americans to Go Online*. [online] *Wired*. Available from: <https://www.wired.com/2015/01/90s-startup-terrified-microsoft-got-americans-go-online/> [Accessed 19 September 2023]; Usama, J. (2023) *29 years ago, Microsoft thought of bundling Internet Explorer with Windows*. [online] *XDA*. Available from: <https://www.xda-developers.com/>

be concerned that the emergence of the market for product X may increase company A's market power and thereby threaten company B's position in a related horizontal market, particularly if company B engages in activities that are relevant to the market for product X. In other words: In the absence of contractual arrangements, only company B (or another company granted access to the relevant Big Data by company B) can open the market for product X. This leads to the conclusion that the downstream market presence requirement actually means that only the company controlling a set of Big Data (without a data sharing contract, of course) can open a new market for which this set of Big Data is an essential input, as the use of the doctrine is not possible in such positions. It can therefore be concluded that the downstream market presence requirement hinders the establishment of new downstream markets and thus has a negative impact on (disruptive) innovation. This is especially problematic in Big Data-driven markets, which are already prone to high degrees of market concentration.

4. CONCLUSION

Despite the reluctance the Court to confirm the character of a set of Big Data as an essential facility, a set of Big Data may indeed be an essential input for activities on the downstream market, as has been confirmed, *inter alia*, by the German Act Against Restraints of Competition, the Digital Markets Act, and a handful of U.S. court cases.

However, it is not clear what criteria should be used in EU competition law to assess the character of a set of Big Data as an essential facility (the Bronner criteria, the IMS Health criteria, or the Microsoft criteria). Since this is a question of competition policy rather than competition law, this paper has not attempted to address it. However, it has examined how the application of the "objective test" and the downstream market presence requirement, which are common to all criteria for assessing the essential character of a facility under the doctrine, affect the effectiveness of the doctrine in Big Data access cases.

The application of the "objective test" means that, for the doctrine to apply, the duplication of the facility in question must be impossible for a company with a comparable market position to the controlling company, and not just for the demanding company, with the impossibility being projected especially in economic unviability. Thus, an economically weak company cannot request access to an essential facility on the grounds that it cannot duplicate it because of its own economic weakness. The "objective test" was

[com/microsoft-bundling-internet-explorer-windows-29-years/](https://www.com/microsoft-bundling-internet-explorer-windows-29-years/) [Accessed 23 September 2023].

introduced in the Bronner ruling with the aim of limiting the scope of the doctrine to cases where the denial of access to an essential facility threatens market competition as an institution and not just the position of individual competitors. This is intended to preserve the incentives of controlling companies to invest in the development of essential facilities. In my view, however, the “objective test” overshoots the mark in Big Data-driven markets. These markets are very different from traditional markets in that monopolistic or oligopolistic market structures are not only common, but the norm (due to several peculiarities of Big Data-driven markets, in particular (but not only) extreme economies of scale, extreme network effects, the “winner takes it all” operating principle, and the snowball principle). For example, the majority of the world’s data is controlled by a handful of powerful companies such as Meta, Alphabet, Apple, Netflix, Microsoft, etc., which have ample access to capital and other factors of production (as they are also among the world’s largest companies). In my opinion, it would be rare that a company with a comparable market position to one of those companies would not be able to duplicate most sets of Big Data if it decided to invest sufficient factors of production for that purpose. Applying the “objective test” thus severely limits the doctrine’s applicability on Big Data-driven markets, restricting it mainly to cases where duplication of a set of Big Data would not be possible even for a company in a comparable position to one of the most powerful companies in the world. This could be the case if the data in question was collected over a long period of time and/or under very specific circumstances. Moreover, taking into account the “objective test”, the doctrine can also be applied in cases where the set of Big Data in question is controlled by a smaller company and the company with a comparable market position is not able to duplicate the Big Data in question.

Therefore, I believe that the “objective test” should be discarded in Big Data access cases and replaced by the “subjective test” or the “average company test”. The mitigation of the “objective test” is controversial because EU competition law is based on the “as-efficient-competitor test,” which protects companies that are as efficient as the dominant company. Applying the “subjective test” or even the “average company test” could also create incentives for companies to remain small (and inefficient) in order to be able to use the doctrine to gain access to sets of Big Data on preferential terms over larger and/or more efficient companies. Nonetheless, I believe that the elimination of the “objective test” could be justified by the characteristics of Big Data-driven markets discussed above, as well as by the fact that access by innovative companies to competitively relevant sets of Big Data is not only in their interest, but also in the interest of society as a whole, as it enables

the development of new products, business models, or entirely new markets, which increases consumer welfare.

I also argue that the downstream market presence requirement should be eliminated altogether in Big Data access cases. The latter requirement, like the “objective test”, was introduced with the goal of limiting the scope of the doctrine and increasing investment incentives for controlling companies. In my view, however, it is extremely harmful in Big Data-driven markets, as it renders the doctrine virtually inapplicable in a large portion of cases. Traditionally, in essential facility cases, downstream markets exist independently of the activities of the demanding company and are usually controlled to a significant degree by the controlling company, which transfers its dominance from the upstream to the downstream market. In *Bronner*, for example, the market for daily newspapers (downstream market) existed independently from the activity of the company *Mediaprint* (demanding company) on it. In other words, the market for daily newspapers in Austria existed, regardless of whether *Mediaprint* was active on it or not. However, the situation is different in Big Data-driven markets. It is not uncommon that a demanding company needs access to a relevant set of Big Data to open a new, as of yet inexistent, market. Since the market has not yet been opened, the controlling company cannot have a presence in it. Therefore, as the downstream market presence requirement cannot be met, the doctrine cannot be applied. The only way for the demanding company to apply the doctrine in such a situation is to wait until the controlling company opens the market in question, which leads to that company being active in it, fulfilling the downstream market presence requirement. Companies controlling sets of Big Data may well have an interest in preventing the opening of new markets in which they do not operate, either as a preventive (market) reservation or to limit the market power of the demanding company (especially if they compete in another market).

In my view, the Commission and the Court will have to address the issue of Big Data as an essential facility in the near future, most likely in the context of Big Data access claims that go beyond the scope of the Digital Markets Act. To make the doctrine an effective tool for access to competitively relevant sets of Big Data, the existing conditions for the application of the doctrine will need to be modified. Regardless of what criteria will be used in the assessment, the above analysis has shown that the “objective test” must be mitigated, and the downstream market presence requirement dropped altogether.

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