

AUTOMATED DECISION-MAKING AND ACCESS TO DATA

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Abstract

This paper explores the mechanisms by which companies can gain access to data necessary for automated decision-making in scenarios without direct contractual agreements, focusing on market-driven approaches. It introduces the concept of the essential facilities doctrine under EU competition law and examines its applicability to sets of data, alongside an examination of current ex-ante regulatory instruments which grant data access rights, such as the Type Approval Regulation, the Open Data Directive, the Electricity Directive, the Digital Markets Act, and the Data Act. These legal instruments are analysed in terms of their ability to facilitate access to data necessary for the automation of decision-making processes. In addition, the study looks at the challenges and opportunities presented by these legal instruments, including the nuances of applying the essential facilities doctrine to data. The article concludes that the most efficient way for a company to gain access to sets of data required for automated decision-making (in the absence of a contractual agreement) is to base its data access claim on an act of ex-ante regulation. If, however, such legal basis does not exist, a company could still base its data access claim on the essential facilities doctrine. The practical applicability of the doctrine to sets of data, however, remains unclear.

Keywords: *automated decision-making; data access; data; access regulation; essential facilities doctrine*

1. Introduction, structure of the paper, and methodology

A prerequisite for automated decision making is access to a sufficient amount of data. In other words, without access to this data, automated decision making is not possible. This paper explores the research question: “*How can a company gain access to the data required for automated decision making in the absence of a contractual agreement?*” It must be pointed out that the research is centered purely on the market-side aspect of data access, without delving into non-

market considerations – such as data protection concerns (for more on that see, inter alia: Brkan, 2016; Dacar, 2022; Douglas, 2020; Wasastjerna, 2020). This, of course, does not mean that they are less important, but only that they are beyond the scope of this paper.

The paper first explains the concepts and institutes whose understanding is required, namely automated decision making, data, datasets, big data, and data-driven markets, as well as the essential facilities doctrine (hereafter: the doctrine). It then presents the various ex-ante regulatory instruments (access regulation)¹ currently in force in the European Union (hereafter: EU) that provide the legal basis for access to data, while also arguing whether the targeted sets of data could, in the first place, constitute the basis for automated decision making considering their scope and scale. In the absence of a suitable ex-ante regulatory instrument, a company could still gain access to relevant data if strict conditions for the application of the doctrine were met. Therefore, the paper analyses in detail the different criteria developed in the case law of the European Commission (hereafter: Commission) and the Court² on the application of the doctrine and examines the possibilities of applying them to sets of data required for automated decision making. Finally, the conclusions of the paper are presented and thus the research question is answered.

2. Setting the scene

This chapter sets the basic context for this paper's exploration by clarifying its main concepts. This initial foray sets the stage for a deeper dive into the relevant topic and ensures that subsequent discussions are based on a well-articulated framework.

2.1. Automated decision-making

Automated decision-making is a cutting-edge technological process that uses algorithms and artificial intelligence to analyze large amounts of data and generate decisions or recommendations without the need for direct human intervention. This dynamic mechanism involves several key stages, starting with data collection, where a large amount of data (big data) is collected for analysis. The data is then pre-processed to ensure that it is properly organized and ready for input into the algorithm. At the core of the process, the model is

¹ Ex-ante and ex-post regulation represent proactive and reactive approaches to market supervision respectively. Ex-ante regulation sets preventive rules and standards to avoid undesirable outcomes such as monopolistic practices and is often used in sectors with high barriers to entry such as telecommunications, electricity distribution and rail transport. Ex-post regulation, on the other hand, deals with problems after they have occurred and relies on monitoring and sanctions to correct market behaviour. It is suitable for dynamic markets where rapid innovation occurs.

² For reasons of clarity, this paper uses the term "Court" to refer to the Court of Justice of the European Communities, the Court of Justice of the European Union, and the General Court, unless explicitly stated otherwise.

trained using machine learning techniques, iteratively filtering out patterns, correlations, and trends from the data. Armed with this knowledge, the automated decision-making system moves into the final phase, where it processes new data and creates decisions, predictions or suggestions with a speed and precision unmatched by human efforts. In this regard, Hoffman points out, “that the data which is extracted from one or several large-scale data bases is used to calculate probabilities identifying a possible outcome (Hoffman, 2023, p. 1).” Automated decision-making has applications in a variety of sectors, including finance, healthcare, labor, public services, transportation, and digital platforms. It offers numerous benefits, including increased efficiency, objectivity, scalability, and improved accuracy. Nevertheless, automated decision-making also brings significant challenges and concerns, such as opacity in decision-making processes, the potential for data bias, accountability issues, and privacy and data protection implications (for more on automated decision making see: Araujo, 2020; Waldman, 2019; Knight, 2020; Huggins, 2021; Wihlborg, Larsson, Hedström, 2016; Davenport, Harris, 2005).³ Currently, systems of automated-decision making are most widely used in “agenda setting and investigation phases from which results can pre-define certain decision-making (Hoffman, 2023, p. 2),” but it can be expected that they will, in the foreseeable future, be used for other tasks as well. Although all phases in the process of automated-decision making are crucial for the final outcome, a necessary prerequisite for a high-quality automated decision-making process is access to sufficient amount of data (the exact scope of the word “sufficient,” of course, depends on the specificities of each individual case of automated decision-making). Some well-known large-scale information systems in the EU are, for example the Schengen Information System and systems in the areas regulating risk in food, animal feed, plant health human and veterinary medicine products (Hoffman, 2023, pp. 7-8). While these examples are centered in the public-policy sphere, automated decision-making is becoming crucial for companies who compete on the market as well. Automated decision-making systems can significantly increase the efficiency and competitiveness of companies on the market. By using algorithms to analyze large amounts of data, these systems can make quick, data-driven decisions that would otherwise require extensive human labor. In retail, for example, automated systems can optimize inventory management by predicting consumer buying trends and adjusting stock levels accordingly. In finance, algorithms can assess credit risk faster and more accurately than traditional methods, resulting in faster credit approvals and fewer defaults. In online advertising, automated decision making can dynamically tailor ads to individual users based on their browsing behavior and preferences, increasing conversion rates and marketing effectiveness.

³ Canada, for example, has adopted a Directive on automated decision-making that tackles some of the concerns connected with the wide-spread use of automated decision making. See: Scassa, 2021. A similar act is still missing on the European level.

Besides the quantity of data, their quality is also of crucial importance as even large quantities of low-quality data can be relatively useless compared to a smaller quantity of high-quality data (data which is, for example, fresh, in an easily readable form, from high quality sources, etc.).

2.2. Datasets, big data and data-driven markets

First, one must distinguish between datasets, data, and big data. A dataset⁴ is a structured collection of data (often presented in tabular form) that systematically organizes the information for analysis. It is defined by its scope, which pertains to a particular research question or hypothesis, and is characterized by the completeness and accuracy of its records. Each entry within a dataset usually has a standardized format to ensure data consistency, and metadata is provided describing the content, source, and collection method. The utility of a dataset lies in its ability to be analysed to gain insights, support decision-making processes, or train machine learning models. While a dataset is structured, this is not necessarily so with data or even more so with big data. Big data can be potentially chaotic and without context, requiring advanced processing before it becomes useful. Importantly, the distinction between ordinary data and big data is not clear cut, and it can be difficult to determine whether a given set of data should be qualified as big data or as ordinary data. Such a qualification depends on multiple factors, *inter alia*, the level of technological innovation, the nature of the data in question and broader specificities of context in which the data is used (for a more in-depth analysis see, for example: Gandomi, Maider, 2015, 137-144). Big data is of paramount economic and social importance and is described by some as the “new oil” (The Economist, 2017). Despite this, however, there is no generally accepted definition of big data. However, the Commission has defined 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 (Communication from the Commission: p. 4)”. Big data differs from normal data by three main characteristics: volume,⁵ velocity⁶ and variety.⁷ Data-driven markets differ significantly in their key characteristics from traditional markets, also known as brick-and-mortar markets (for a more in-depth analysis of these specificities see: Crémer, Montjoye, Schweitzer, 2019). Of particular importance are the high barriers to entry, extreme direct and indirect network effects, significant economies of scale and the rapid consolidation of market positions. Because of the above characteristics, big data-driven markets are particularly vulnerable to abuses of market dominance

⁴ The term “dataset” is not to be confused with the term “set of data,” which this paper uses to refer broadly to any collection of data, regardless of their organization or structure.

⁵ Volume refers to the enormous quantity of data that a set of big data contains.

⁶ Velocity refers to the high speed at which new data are added to the already existing data contained in a set of big data.

⁷ Variety refers to the large variety of different data contained in a set of big data.

by powerful companies and other types of anti-competitive behaviour (for more on the characteristics of big data and big data-driven markets see: Dacar, 2023a, pp. 915-923).⁸ In addition, traditional competition law instruments face several major challenges when applied in big data-driven markets, which significantly limits their effectiveness. One of the most discussed is the difficulty of identifying relevant markets in the case of zero-price⁹ markets due to the inapplicability of the SSNIP test.¹⁰

2.3. The essential facilities doctrine

In competition law, the doctrine is an idea that a company that controls a facility which is irreplicable in the normal process of innovation and investment must share it with its rivals, if access to the said facility is indispensable for activity on the downstream market (Craig, de Burca, 2015, p. 1074). In a traditional essential facility case, a company controlling a product¹¹ that is an essential input for activity on the downstream market refuses to grant access to the said product to a competitor from the downstream market, thereby excluding him from it and transferring its dominant position from the upstream to the downstream market. Refusal to supply (or allow access to) an essential facility constitutes an exclusionary abuse of market dominance.¹² Therefore, the company refusing access must be dominant in the upstream market for the doctrine to apply.¹³

In EU competition law the doctrine was first applied in 1974 in the Commercial Solvents case (CJEU, Case C-6/73 *Istituto Chemioterapico Italiano and Commercial Solvents v Commission* ECLI:EU:C:1974:18). Originally, the status of an essential facility was only granted to materialized facilities and services, but was later extended to intellectual property rights (hereafter: IPR's) in the 1988 *Volvo* (CJEU, Case C-238/87 *Volvo v Veng* ECLI:EU:C:1988:477)

⁸ A notable example being the practice of search engine manipulation, where a dominant search engine company prioritizes its own products and services in search results, thereby disadvantaging competitors and limiting consumer choice.

⁹ Zero-price markets are markets where the product has no monetary price. Rather, the true price for using the product is the personal information that the user conveys by using the product. This personal information is then monetized in another market, usually as input for targeted advertising (Graef, Husovec, Purtova, 2018, p. 1380).

¹⁰ Relevant markets are traditionally defined by using the SSNIP test (small but significant and non-transitory increase in price). If, however, the product does not have a monetary price, as is the case on zero-price markets, the test is not applicable. For more see: Newman, 2015, pp. 166-169.

¹¹ To achieve greater clarity of the text, the term "product" is used in this paper to refer to both products and services.

¹² Exclusionary abuses of market dominance are tactics used by a dominant company to exclude competitors, such as predatory pricing, exclusive contracts and tying, which aim to maintain or increase its market power by impairing competition. Exploitative abuses, on the other hand, occur when a dominant company uses its market position to directly exploit customers, for example by charging excessively high prices or imposing unfair terms and conditions. These practices exploit consumers and can occur without directly affecting competitors.

¹³ If not, the doctrine cannot be applied, even if the refusal is abusive.

and Renault (CJEU, Case C-53/87 CICRA and Others v Renault ECLI:EU:C:1988:472) cases. Systematic criteria for applying the doctrine in cases involving materialized facilities and services were developed in the Bronner judgment (CJEU, Case C-7/97 Bronner ECLI:EU:C:1998:569), while the same was done for IPR's (as alleged essential facilities) in the Magill (CJEU, Case C-241/91 P RTE and ITP v Commission ECLI:EU:C:1995:98) and IMS Health (CJEU, Case C-418/01 IMS Health ECLI:EU:C:2004:257) cases. Application of the doctrine was widespread, especially in the 1980s and 1990s, but declined at the beginning of the new millennium. The decline in the use of the doctrine was exacerbated by the General Court's Microsoft (CJEU, Case T-167/08 Microsoft v Commission ECLI:EU:T:2012:323) ruling of 2007, which altered the existing conditions for its application and caused continued uncertainty as to when the doctrine could be activated (see: Hou, 2013, pp. 251-271). This led to a pause in the use of the doctrine, which to some extent ended with the recent Slovak Telekom (CJEU, C-165/19 P Slovak Telekom v. Commission ECLI:EU:C:2021:239) and Lietuvos geležinkeliai (CJEU, C-42/21 P Lietuvos geležinkeliai v. Commission ECLI:EU:C:2023:12) judgements. It is, however, important to note that the doctrine was not, *per se*, applied in either of the two rulings, which merely concluded that the Bronner conditions did not apply in the cases at hand because the access obligations already existed on the basis of ex-ante regulation (see: Czapracka, 2021, pp. 278-280).

3. Access to sets of data through ex-ante regulation

Access to specific sets of data can be granted on the basis of ex-ante regulation if the appropriate legal acts are in place. Currently, access to data can be requested on the basis of the Type Approval Regulation (Regulation 2018/858), the national laws implementing the Open Data Directive (Directive 2019/1024), and the national laws implementing the Electricity Directive (Directive 2019/944). Moreover, the Digital Markets Act (Regulation 2022/1925) and the Data Act (Regulation 2023/2854) also contain important provision on data access. The basic characteristics of the said legal acts and their relevance in access to data cases is outlined below.

3.1. The Type Approval Regulation

The Type Approval Regulation standardizes the assessment and approval of motor vehicles within the EU, as it is a regulation it naturally does not require any implementing measures from member states. This Regulation requires that all motor vehicles, their trailers, systems, components, and separate technical units undergo a rigorous conformity assessment to ensure that they meet EU standards for safety, environment, and production consistency before they are placed on the market. It not only harmonizes technical requirements in EU member states to facilitate the free movement of goods, but also aims to improve road safety and environmental protection. Importantly, the Type

Approval Regulation applies not only to vehicles manufactured in the EU, but also to those imported from outside the EU to ensure a uniform level of safety and environmental protection for all vehicles sold in the EU. While the Type Approval Regulation primarily focuses on safety, environmental, and operational standards for vehicles in the EU, it also contains provisions on data access, particularly in relation to diagnostic, repair, and maintenance information for vehicles. In this respect, para. 1 of art. 61 is especially important as it lays down an obligation for manufacturers to provide access to certain categories of data required for vehicle repair and maintenance to independent operators (for a more in-depth outline of the data-access rules set forth by the Type Approval Regulation see: Kerber, Gill, 2019, 244-256, as well as point 3.6. of this paper).

3.2. The Open Data Directive

The Open Data Directive underlines the principle that public data should be considered a public good in order to maximize its availability, foster innovation, stimulate economic growth and increase administrative transparency. Under this Directive, public sector bodies are encouraged, and in some cases required, to provide access to their data in an open and machine-readable form to facilitate its use and sharing by individuals and businesses. This Directive aims not only to improve the efficiency of public services but also to encourage the development of new services and applications that use public sector data as an essential resource (for more on the Open Data Directive and open data in general use, *inter alia*: Riis, 2023, pp. 63-64).

3.3. The Electricity Directive

The Electricity Directive contains the legal framework for the creation of an internal market for electricity in the European Union. Its main objective is to strengthen competition, improve security of supply and promote sustainability in the electricity sector. The directive lays down rules for the generation, transmission, distribution, and supply of electricity and promotes fair access to the grid for all market participants. It also promotes the integration of renewable energy sources and supports consumer rights by giving EU citizens the freedom to choose their electricity suppliers. The Electricity Directive underlines the importance of access to data as a means of promoting innovation, competition, and consumer protection in the electricity market, data access rights are given both to consumers and to companies. It requires greater transparency and availability of data on electricity consumption, generation, and pricing, especially in relation to data gathered by smart metering systems (see art. 20 – 23). Moreover, the Electricity Directive also sets a high bar regarding the protection of personal data, this is of paramount importance, as data gathered by smart metering systems can reveal sensitive personal information.

3.4. The Digital Markets Act

The Digital Markets Act aims to ensure fair competition and innovation in the digital marketplace by targeting the practices of large online platforms known as gatekeepers – companies that control significant market power and access to large amounts of data and act as crucial intermediaries between businesses and consumers. The Digital Markets Act aims to prevent these gatekeepers from imposing unfair conditions on businesses and consumers, ensuring an open and competitive digital environment. Key measures include, inter alia, the ban on self-preferencing, the requirement for interoperability and the restriction on the use of data for advertising purposes without explicit consent. In addition, the Digital Markets Act emphasizes improving access to data as a key measure to promote competition in the digital market. To this end, it introduces far-reaching data access obligations that apply to gatekeepers. This access aims to create a level playing field and enable innovative services and new market entrants to compete more effectively (for more on the Digital Markets Act see, inter alia: Bostoen, 2023, pp. 263-306; Morbel, 2023, pp. 206-215). The Digital Markets Act contains provisions that require companies that are considered gatekeepers to grant access to the data they control to their competitors under certain conditions. Such provisions can be found in paras. 10¹⁴ and 11¹⁵ of art. 6 and paras. 9¹⁶ and 10¹⁷ of art. 5 (also see: Warren, 2021, pp. 171-188).

3.5. The Data Act

The Data Act aims to give both businesses and consumers more control over their data and make it easier to access, use and share data across different sectors. It specifically targets the imbalance in bargaining power between those who hold data and those who want to use it and promotes a more competitive

¹⁴ The gatekeeper shall provide business users and third parties authorised by a business user, at their request, free of charge, with effective, high-quality, continuous and real-time access to, and use of, aggregated and non-aggregated data, including personal data, that is provided for or generated in the context of the use of the relevant core platform services or services provided together with, or in support of, the relevant core platform services by those business users and the end users engaging with the products or services provided by those business users.

¹⁵ The gatekeeper shall provide to any third-party undertaking providing online search engines, at its request, with access on fair, reasonable and non-discriminatory terms to ranking, query, click and view data in relation to free and paid search generated by end users on its online search engines. Any such query, click and view data that constitutes personal data shall be anonymised.

¹⁶ The gatekeeper shall provide each advertiser to which it supplies online advertising services, or third parties authorised by advertisers, upon the advertiser's request, with information on a daily basis free of charge, concerning each advertisement placed by the advertise.

¹⁷ The gatekeeper shall provide each publisher to which it supplies online advertising services, or third parties authorised by publishers, upon the publisher's request, with free of charge information on a daily basis, concerning each advertisement displayed on the publisher's inventory.

environment that benefits small and medium enterprises and startups by encouraging innovation. In addition, the Data Act strengthens data portability rights so that users can move seamlessly between service providers. It sets clear guidelines for data usage and access, especially for internet of things (hereafter: IoT) devices. By establishing clear rules for data sharing and access, the Data Act ensures that valuable data generated by IoT devices and other digital services is more easily accessible to users and third parties. The Data Act's is focused on simplifying access to data and aims to unlock the potential of the digital economy and make data a public good that stimulates growth, innovation and competition, while ensuring that privacy and data protection standards are strictly adhered to (for more on the Data Act see, *inter alia*: Perarnaud, Fanni, 2022).

3.6. Practical applicability of selected ex-ante regulatory instruments for gaining access to data required for automated decision-making

The above analysis allows us to answer the question of whether a company can invoke the provisions of the aforementioned acts to forcibly, i.e. in the absence of a contractual agreement obtain access to data controlled by another company. In my opinion, the data access regime set forth by the Type Approval Regulation could not be used in most cases for access to data necessary for automated decision-making. In para. 1 of art. 61 the Regulation requires of manufacturers to provide “independent operators unrestricted, standardised and non-discriminatory access to vehicle OBD information, diagnostic and other equipment, tools including the complete references, and available downloads, of the applicable software and vehicle repair and maintenance information,” which is an essential input for the provision of vehicle repair and maintenance services. In other words, access to data under the Type Approval Regulation is provided strictly to independent operators (car repair and maintenance services which are not linked with the company producing a certain brand of cars) for the sole purpose of car repair and maintenance. Such services, by the nature of things, do not require procedures of automated decision-making to be executed. Therefore, I do not envision that such data could be used for the purposes of automated decision-making. However, the situation is different in the case of the Open Data Directive, the Electricity Directive, the Digital Markets Act, and the Data Act. These legal acts grant the right to request access to sets of data to a wide range of parties who may use the data thus acquired for a variety of purposes, including automated decision-making (in this regard see the article by Ducuing on the character of some categories of data as infrastructure: Ducuing, 2020, pp. 124-142; also see: Dacar, 2023a, p. 925). To give some examples, the Electricity Directive ensures access to energy data that can be used to optimize energy distribution and consumption through automated systems, i.e. through automated decision-making. The Open Data Directive facilitates access to a wide range of public sector information and makes it available for AI-powered analysis to improve policy decisions. The Digital Markets Act focuses on promoting fair competition and transparency in digital

platforms and provides access to data that can be used to monitor compliance and market behavior through automated tools. Finally, the Data Act aims to improve the sharing and use of data across sectors and enable companies to use data in innovative ways, including automating decision-making processes to increase efficiency and innovation.

4. Application of the essential facilities doctrine to sets of data necessary for automated decision-making

If it were not possible for a company to base its data access claim¹⁸ on an ex-ante regulatory act, it could still claim that the requested data constitutes an essential facility and request access on this ground. It is important, once again, to highlight, that the doctrine is a competition law tool and is thus an instrument of ex-post, and not ex-ante economic regulation. Moreover, the doctrine could only constitute a legal basis for access to data controlled by a company, but not for data controlled by public authorities.

Neither the Commission nor the Court have yet confirmed that data can constitute an essential facility according to the doctrine. However, this is, in my opinion, due to the lack of appropriate cases. Some ruling of national institutions of EU member states have clearly demonstrated that a set of data can indeed be essential for activity on the downstream market and thus constitute an essential facility (for example in the Sanoma Learning/Iddink [Dutch Competition Protection Agency, case ACM/19/035555 Sanoma Learning/Iddink] and GDF Suez [French Competition Protection Agency, case 14-MC-02 GDF Suez] cases). Moreover, the fact that data can be an essential facility was also confirmed by several legal acts, both on European as well as national level, that have either directly or indirectly confirmed the nature of data as essential facilities (for example the Digital Markets Act and the German Competition Protection Act [BGBl. I S. 1750, 3245]).¹⁹ This, coupled with the

¹⁸ To give some practical examples of data access claims relevant to automated decision making: A financial services company might request access to the algorithms and data used by a credit scoring company to understand how automated credit decisions are made. This will ensure that the criteria used are fair and can be integrated into their own risk assessment models. Similarly, a recruitment agency using AI-driven hiring platforms such as HireVue can request detailed information on how these platforms assess candidate applications. This allows the agency to ensure that the automated processes meet their hiring standards and avoid bias. In law enforcement, a technology company developing predictive policing tools may request access to data used by police departments in algorithms like PredPol. This access helps the company refine its tools to ensure that they promote fair and unbiased law enforcement practices. In addition, investment firms using algorithmic trading platforms like Robinhood can demand transparency in the decision-making processes of the trading algorithms. This will allow them to understand the data inputs and logic behind trade executions and ensure that the strategies are consistent with their investment objectives and regulatory compliance.

¹⁹ With para. 4, art. 19 of the said act indicating that: “An abuse (of market dominance) exists in particular if a dominant undertaking as a supplier or purchaser of a certain type of goods or commercial services refuses to supply another undertaking with such a good or commercial service for adequate consideration, in particular to grant it access to data, networks or other

fact that no limitation on the nature of facilities which can be essential under the doctrine (in other words, all facilities can be essential according to the doctrine, as long as they meet the criteria) exists, leads us to conclude that sets of data could constitute essential facilities. However, the doctrine could only be invoked as a *ultimum remedium*, namely in positions where no appropriate ex-ante regulation would be in place. Given the fact that a relatively broad body of such regulation was established, such positions would be rare.

4.1. Different criteria as developed by the Court's case law

The doctrine can only be applied under strict conditions in EU competition law. Three different sets of criteria for its use have been developed in the case law of the Court, but it is not clear which, if any, of these should be applied to data. Using different sets of criteria can have a crucial impact on determining whether a particular facility can be considered essential according to the doctrine.²⁰

4.1.1. The Bronner criteria

According to the Court's criteria developed in the Bronner judgment,²¹ which are traditionally applied to materialized facilities and services,²² a facility may be considered essential in the sense of the doctrine if: it is probable that the refusal to supply the facility in question would eliminate all competition on the downstream market; the refusal to supply (or grant access to) cannot be objectively justified; and the facility in question is intrinsically essential for activity on the downstream market, as there are no actual or potential substitutes for it (for more on the Bronner ruling and the Bronner criteria see, *inter alia*: Temple Lang, 2000, pp. 375-405; Evrard, 2004, pp. 491-526). Furthermore, the objective test must also be satisfied, which means, as stated in para. 66 of the Bronner ruling, that duplication of the facility in question must not only be impossible for the company demanding access, but also for a company with a comparable market position to the company controlling the facility. Duplication of a facility may be impossible for legal, economic, or physical reasons. Legal

infrastructure facilities, and if the supply or the granting of access is objectively necessary in order to operate on an upstream or downstream market.”

²⁰ Below, only the basic characteristics of each set of criteria is given, to enable the reader an understanding of their impact on access to sets of data necessary for automated decision-making. A more in-dept analysis was presented, *inter alia*, by Dacar (Dacar, 2023, pp. 1490–1496).

²¹ The case concerned the refusal of the newspaper publisher Mediaprint, which held a dominant position on the market for daily newspapers in Austria, to grant access to its newspaper delivery network to a competing company owned by Oskar Bronner, which published the daily newspaper Der Standard.

²² In the recent Slovak Telekom and Lietuvos geležinkeliai cases, which concerned the denial of access to a local loop and to a railroad line, the Court concluded that the Bronner criteria were not applicable because access to the aforementioned facilities was already mandated by sector-specific regulation. Conversely, the Bronner criteria are applicable in the absence of such regulation (Czapracka, 2021, pp. 278-280).

impossibility of duplication exists if the controlling company holds a legal monopoly, physical impossibility if it is, due to, for example, topographical reasons, impossible to establish a substitute facility, while economic impossibility exists if it is theoretically possible to duplicate a facility, but such duplication is economically unviable (most commonly due to prohibitive start-up costs). Finally, for the application of the doctrine, the controlling company must also be at least present on the downstream market. The above requirements must be met cumulatively (also see: Colangelo, Maggiolino, 2017, pp. 249-281).

4.1.2 The intellectual property criteria

Originally, IPR's did not fall under the auspices of the doctrine. This changed with the Court's rulings in the Volvo and Renault cases of 1988. These two cases, however, did not introduce general criteria for the application of the doctrine in IPR cases, which first occurred in the Magill judgment. The criteria thus formed were further elaborated in the IMS Health judgment. Accordingly, the doctrine can be applied in IPR cases: where the IPR-protected facility is indispensable for activity in the downstream market, as there are no actual and potential substitutes for it and the refusal to supply consequently eliminates all competition in the downstream market; the refusal is not based on an objective justification; the owner of the IPR is able to reserve the downstream market for himself; and the refusal of access to the IPR in question prevents the emergence of a new product for which there is at least potential consumer demand, i.e., the new product condition (see: Ridyard, 2004, p. 669). The IPR criteria introduced in the IMS Health ruling are similar to the Bronner criteria in all but one very important aspect, the new product condition. The new product condition limits the applicability of the doctrine in IPR cases to those cases in which the IPR does not achieve its goal of promoting effective competition in the market, but rather hinders it. In such cases, the Court seeks to strike a fair balance between the legitimate interests of the IPR owner and competing (demanding) companies (Evrard, 2004, 497; also see Dacar, 2023, p. 1495). The objective test introduced in the Bronner ruling has not been overturned by a subsequent ruling and is therefore applicable in IPR cases and indeed in all essential facilities cases. In summary, for the doctrine to apply in cases where the alleged essential facility is an IPR, all the conditions from the Bronner ruling must be met, along with the new product condition.

4.1.3. The Microsoft criteria

The established criteria for applying the doctrine in IPR cases were significantly altered in the General Court's 2007 Microsoft ruling (CJEU, case T-201/04 Microsoft Corp. v Commission ECLI:EU:T:2004:372). The latter stemmed from a complaint by the Sun company, claiming that Microsoft was denying its competitors access to interoperability protocols (protected by IPR's) that were an essential input for operating in the downstream market (the

work group server operating system market). The Commission found that Microsoft held a dominant position in both the upstream (the client PC operating systems market) and downstream market, which it abused, and ordered it to share the interoperability protocols in question with its competitors (Jones, Sufrin, Dune, 2019, p. 509). After Microsoft's appeal against the Commission's decision, the General Court upheld the decision in all important points. Most importantly, it held in para. 647 that "the circumstance relating to the appearance of a new product, as envisaged in *Magill* and *IMS Health*..., cannot be the only parameter which determines whether a refusal to license an intellectual property right is capable of causing prejudice to consumers within the meaning of Article 82(b) EC. As that provision states, such prejudice may arise where there is a limitation not only of production or markets, but also of technical development." In other words, the General Court confirmed that the application of the doctrine in IPR cases does not require that access to the facility in question be essential to the offering of a new product for which there is at least potential consumer demand, but that it is sufficient that the denial of access impairs technical progress.²³ In addition, the Court replaced the requirement that the denial of access eliminates all competition in the downstream market with the requirement that it eliminates all effective competition.

The Microsoft ruling significantly mitigated the conditions for applying the doctrine in IPR cases, which was the basis for heavy criticism. This ranged from claims that the doctrine should not have been applied at all because Microsoft's conduct represented an interoperability obstruction rather than a refusal to deal (Kerber, Schweitzer, 2017, p. 56), to more moderate critics who pointed out that the General Court ignored the delicate balance between the rights and interests of the company controlling the facility and the companies seeking access to that facility, established in the Court's prior rulings (Hou, 2013, 262). The Microsoft ruling has led to continued uncertainty about the conditions under which the doctrine can be applied in IPR cases, particularly where digital, or for that matter data-driven, markets are involved.²⁴

4.2. Application of different criteria to sets of data

As no Court ruling or Commission decision regarding the potential nature of data as an essential facility was yet passed by the Court or the Commission, it is not yet clear under which conditions the nature of a set of data as a potential essential facility would, or should, be assessed. This paper therefore analyzes

²³ The technical progress condition that has replaced the new product condition is semantically even more vague than the new product condition. Thus, it is not clear how great the technical progress must be for a product to satisfy this requirement, i.e., how substantial is the required technical progress (Angelov, 2014, p. 51; Dacar, 2023, p. 1505).

²⁴ All of the characteristics of digital markets, such as strong direct and indirect network effects, strong consumer lock-in, and rapid consolidation of market position, are even more present (i.e., on a larger scale) in data-driven markets. Adapting the doctrine to the specifics of digital markets was deemed necessary by Graef, for example (Graef, 2016, p. 192).

the specifics that a set of data must satisfy in order for the doctrine to apply under all of the above summarized criteria.

4.2.1. Application of the Bronner criteria

First, the company denying access to a set of data would have to be dominant in the upstream market and also be at least present in the downstream market. If the company controlling the essential set of data is not dominant in the upstream market, the doctrine cannot apply (Tombal, 2020, p. 71). Next, the dominant company would have to deny access to a set of data, which could take the form of either a direct or indirect refusal of access, such as offering access in a form that is not commercially useful. Companies that control commercially relevant data are in most cases not interested in providing access to it, as this would weaken their position in the downstream market. Therefore, they often use their monopolistic control over the relevant data to transfer their dominant position from the upstream to the downstream market (Santesteban, Longpre, 2020, pp. 481, 482). Ahead, the set of data in question would have to be essential to the activity in the downstream market, meaning that there would be no actual or potential substitutes for it. The assessment of whether potential substitutes exist is based on the objective test, meaning that the establishment of a substitute must be impossible for a company with a comparable market position to the dominant company, not just for the demanding company. Finally, the company controlling the relevant set of data would also have to be at least present in the downstream market. In summary, the conditions of elimination of all competition in the downstream market, absence of objective justification for the refusal of access, and absence of actual and potential substitutes may well be satisfied by a set of data. However, it is also important to note that the Bronner criteria are traditionally applied to materialized facilities and services. Sets of data are neither a materialized facility nor a service, which naturally raises the question whether the use of whether the Bronner criteria would be appropriate.

4.2.2. Application of the intellectual property criteria

As discussed earlier, two sets of criteria have been established for applying the doctrine in IPR cases: the traditional (IMS Health) criteria and the Microsoft criteria. If the IPR criteria were applied to sets of data, all of the conditions of the Bronner criteria would have to be met, as well as the new product or the technical progress condition.

However, it is highly questionable whether IPR criteria should apply to sets of data, since these are not necessarily (or even usually) protected by IPR's. To be protected by IPR's, a set of data would have to reflect in some way the creative effort of the author(s). Whether this is the case can only be judged on a case-by-case basis. Even if a set of data was protected by IPR's, its lack of intrinsic value could severely limit the applicability of the doctrine to it. The real commercial value for companies does not come from data *per se*, but from the

information they contain, which is extrapolated using advanced analytic tools. This can only be done once access to the set of data in question has already been granted (for a broader discussion see: Dacar, 2023, p. 1502-1503).

If it cannot be predicted with some certainty what type of information a particular set of data contains, the new product condition cannot be satisfied because the demanding company is unable to argue conclusively that the set of data in question is in fact essential to the offering of a new product for which there is at least potential consumer demand.

Therefore, for the IPR criteria to apply to a set of data, two conditions must be cumulatively met. First, the set of data in question would have to be protected by IPR's, and second, the nature of the information contained in that set of data would have to be known prior to its analysis. This does not mean, of course, that the exact information contained in a particular set of data would have to be known in advance, but only the nature of the information. Consider, for example, a health monitoring app developed by a technology company. Without needing to know the specific details of each person's health data, one can assume that the set of data generated by this app generally contains information about the user's physical activity, heart rate measurement and sleep patterns. It would be easier to apply the IPR criteria to data under the Microsoft criteria, which replaced the new product condition with the technical progress condition (also see: Dacar, 2023, p. 1503, 1505, *et. al*).

5. Findings

The results of the above analysis allow us to answer the research question: “*How can a company gain access to the data required for automated decision-making in the absence of a contractual agreement?*” First, there are two ways, in the absence of a contractual agreement, to access the relevant sets of data, ex-ante and ex-post regulation. Access based on ex-ante (access) regulation can only be granted if it is provided for in an existing ex-ante regulatory act. Currently, there are five such legal acts at EU level, the Type Approval Regulation, the Open Data Directive, the Electricity Directive, the Digital Markets Act, and the Data Act. I believe that the data that can be accessed on the basis of the Type Approval Regulation cannot be used for automated decision-making in the vast majority of cases, as access on the basis of the aforementioned Regulation is limited to sets of data necessary for the repair and maintenance of vehicles. However, the situation is different for the Open Data Directive, the Electricity Directive and the Digital Markets Act. These acts can be used to gain access to a wide range of data that can be used by an unlimited number of subjects to perform an unlimited number of commercial activities, including but not limited to automated decision-making. If access to the required data cannot be acquired on the basis of an ex-ante access regime, the doctrine could still be applied for this purpose, but only if said set of data was an essential input for the commercial activity in the downstream market and if the controlling company has a dominant position in the upstream market. No single set of criteria for the application of the doctrine has emerged in the case

law of the Court and the Commission, as the applicable conditions depend on the nature of the allegedly essential facility in question. In my view, it is questionable whether the Bronner criteria should be applied to data, as those criteria are traditionally limited to tangible facilities and services in brick-and-mortar sectors and markets. It is also questionable whether IPR criteria should be applied to data, as data is not necessarily protected by IPR's. Thus, although a set of data could theoretically constitute an essential facility, the practical application of the doctrine to sets of data could prove as extremely problematic. To summarize, if a company requires access to a particular set of data (in the absence of a contractual agreement), it would be best to base its data access request on one of the provisions of the existing ex-ante regulatory instruments that mandate data access. A few years ago, this would have been difficult. However, in recent years there has been an increase of ex-ante regulatory instruments granting access to certain categories of data, making such data access claims a viable option.

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