

BIG DATA AND PRIVACY IN DIGITAL MARKET: - A FUTURE ROADMAP FOR INDIAN ANTITRUST AUTHORITY

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ABSTRACT

Data is considered to be most essential to digital businesses. It is one of the key factors behind the success of online intermediaries and search engines. It has increasingly influenced tech giants into collecting & processing valuable data in pursuit of obtaining commercial advantages. However, this has invited the attention of the anti-trust authorities to examine whether such use of data provides tech giants an unfair competitive advantage.¹ Additionally, such business practices have also posed serious concerns of data privacy for individuals. Various European Union cases have analysed the pros and cons of data collection and processing in digital markets. Therefore, it is high time for the Competition Commission of India to intervene in the Indian digital market to resolve competition concerns associated with big data. In this respect, the article first seeks to define digital market and

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¹Competition Authorities of France and Germany, 'Competition Law and Data', <<http://www.autoritedelaconurrence.fr/doc/reportcompetitionlawanddatafinal.pdf>> accessed 15 February, 2022.

understand how big data is used by digital giants. Second, it undertakes the task of identifying efficiencies and anti-competitive effects associated with big data. Third, it provides an overview of the regulatory approach adopted by the CCI and other relevant competition authorities. Fourth, it highlights the challenges with respect to the protection of privacy and regulation of big data under the Indian antitrust regime. Lastly, the author points out various valuable and viable solutions which can help in effectively combating the emerging competition concerns attached to big data.

Key Words: - *Big Data, Competition Commission of India, Indian Digital Market, European Union, Digital Giants, Data-Privacy, Anti-Competitive Effects.*

I. INTRODUCTION

With the rapid growth of technology, individuals are internet-enabled to purchase or sell goods/services or access information with a single click. The unprecedented growth in the digital industry has significantly contributed to the economy of the country. This data-driven world has contributed to the growth of several entities such as Facebook, Google, Amazon, Apple, etc. into data giants that use such personal data to fulfil their commercial interests and to put themselves in an advantageous position as compared to their competitors. Giant corporations and tech start-ups collect a variety of data in volume and process it by computing software to generate a unique set of results that

they can exploit for their financial motives.² The collection and processing of large volumes of a variety of data at high velocity by advanced computing software to produce unique data set which is having commercial value is called big data.³ New technologies and big data analytics have transformed the way data is processed and used. The collection, processing, and use of personal data squarely fall within the ambit of the data protection regime but various antitrust authorities across the globe have also kept an eye on the use of big data by large corporations. These authorities are of the firm view that data is an important parameter in assessing the market power of an entity and in determining whether the dominant entity has abused its position of dominance.⁴

II. DIGITAL MARKET AND BIG DATA

The term ‘Data’ cannot be defined in a straightforward and precise manner. Generally, data is interpreted as referring to any kind of information, fact, or statistics. Currently, the concept of ‘Big Data’ has invited the attention of Globe. It is a combination of 4 Vs – Velocity, Volume, Veracity, and Variety.⁵ It connotes to the huge amount of diversified data that is analysed and processed through a sophisticated method at high speeds to get a unique and specified outcome that can

²CAM Competition Team, ‘Big Data: Emerging Concerns under Competition Law’ (CAM, 10 May 2018) <<https://competition.cyrilamarchandblogs.com/2018/05/big-data-emerging-concerns-competition-law/>> accessed 15 February 2022.

³Ibid.

⁴Simran Dhir and Anuja Agrawal, ‘Data Protection And Competition Law: Developments And The Way Forward’ (*Mondaq*, 24 August 2021) <<https://www.mondaq.com/india/antitrust-eu-competition-/1104738/data-protection-and-competition-law-developments-and-the-way-forward?login=true&debug-domain=.mondaq.com>> accessed 06 February 2023.

⁵Hu, Han et al., ‘Toward Scalable Systems for Big Data Analytics: A Technology Tutorial’ (2014) 2 IEEE Access.

be used commercially.⁶ One of the fundamentals of a marketing strategy is the collection, processing, and analysis of data to identify current market trends and consumer preferences. This technique has played an important role in the growth of traditional markets. Further, the technological growth induced by digitalization has widened the scope of collecting and analysing a large amount of data that has led to a significant growth of the digital economy. Various reports have provided that there is an interconnection between big data and online service providers.⁷ These companies collect information regarding an individual in two ways – first, they collect it from their websites, apps, or other owned resources, and second, they purchase it from third parties such as social media platforms and search engines. The latter is also keyed as ‘third-party data’.⁸ Thereafter, they cross-connect all this information and create a unique identity of an individual through advanced processing for targeted advertising and improving efficiency.⁹ Big data also includes public information such as financial, geographical, and technical information. Various reports indicate that e-commerce giants such as Amazon, Walmart, and other tech giants such as Google, Facebook, and Apple are using big data analytics/mining to persuade consumers to purchase products/services.¹⁰ Competition law scholars have expressed concern

⁶Marixenia Davilla, ‘Is Big Data a Different Kind of Animal? The Treatment of Big Data Under the EU Competition Rules’ (2017) 8 *Journal of European Competition Law & Practice* 6.

⁷Dot Econ and Analysis Mason, ‘The Commercial Use of Consumer Data’, (June 2015)

<www.gov.uk/government/uploads/system/uploads/attachment_data/file/435777/The_Commercial_Use_of_Consumer_Data_-_DotEcon_and_Analysys_Mason.pdf> accessed 18 February 2022.

⁸Jay Modrall, ‘Antitrust Risks and Big Data’ (2017) SSRN papers <https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3059598> accessed 22 February 2022.

⁹John, Tami Kim, and Kate Barasz, ‘Ads That Don’t Overstep’ *Harvard Business Review* (January 2018) <<https://hbr.org/2018/01/ads-that-dont-overstep>> accessed 22 February 2022.

¹⁰Ritesh Pathak, ‘How Apple uses AI and Big Data’, *The Analytics Steps* (21 January 2021) <<https://www.analyticssteps.com/blogs/how-apple-uses-ai-and-big-data>>

that control of big data and algorithms can potentially distort competition.¹¹ Against this backdrop, the EU initiated a series of investigations into possible anti-competitive conducts of Google, Amazon, Apple, and Facebook that are dealt later in this article. The European Commission in various cases has found that big data paves way for businesses to offer a diverse range of services to their clientele, assuring both innovation and efficiency in digital markets. However, having access to a big volume of data can also result in market dominance, which in turn can lead to anti-competitive agreements.¹²

III. COMPETITION CONCERNS VIS-À-VIS BIG DATA

Prominent competition concerns attached to the use of big data are –

1. Refusal to Access Data:– The primary concern of antitrust authorities is that big data analytics and mining may prevent the entry of small and new entrants into the market. Big data analytics allows large corporations to efficiently analyse the patterns and preferences of their users and subsequently target them with tailored advertising.¹³ Hence, such tailored advertisement by using Big Data will put the entity at an advantageous position as compared to its competitors in a market where data is a competition parameter. Further, big data

accessed 22 February 2022; Walmart Staff, '5 Ways Walmart Uses Big Data to Help Customers' <<https://corporate.walmart.com/newsroom/innovation/20170807/5-ways-walmart-uses-big-data-to-help-customers>> accessed 22 February 2022.

¹¹Jay Modrall, Antitrust risks and Big Data Norton Rose Fulbright (June 2017) <<https://www.nortonrosefulbright.com/en-in/knowledge/publications/64c13505/antitrust-risks-and-big-data>> accessed 22 February 2022.

¹²Campbell Whyte 'Competition Law's Challenges in Regulating Big Data' (*KSLR Commercial and Financial Law Blog*, 11 September 2020) <<https://blogs.kcl.ac.uk/kslrcommerciallawblog/2020/09/11/competition-laws-challenges-in-regulating-big-data-campbell-whyte/>> accessed 06 February 2023.

¹³Georgios Petropoulos, 'Search Engines, Big Data and Network Effects', The Bruegel (22 November 2016) <<http://bruegel.org/2016/11/search-enginesbig-data-and-network-effects/>> accessed 22 February 2022.

companies are put at an advantageous position because the small and new entrants in the market do not have sheer amount of data and sophisticated technology to process the same. Hence, they are not be able to effectively target their consumers and accordingly give effective compete to big data companies in the market. Hence, it can be deduced that big data can become an entry barrier for small and new entrants. The European Court of Justice has viewed that a data-rich dominant entity cannot be compelled to provide to its competitors access to their data. Nevertheless, only in some exceptional circumstances they can be forced to give access to their data.¹⁴ The refusal to provide access to data can become anti-competitive only when the ‘data’ is an essential facility and is indispensable for undertaking the activity or service desired by other competitors.¹⁵ For indispensability, the data in question is required to be unique and no other alternative means must be available to obtain or develop that kind of data.¹⁶ Some scholars argue that data is often non-exclusive and cannot be easily monopolized, hence easily accessible to all competitors. However, the author believes that it is not the collection of data that creates an entry barrier; rather, it is the ability to extract useful information swiftly and expediently from a large volume and variety of data that provides a competitive advantage. Since the new and small entrants often do not have advanced technologies to collect and analyse the large variety of data and do not have the financial strength to purchase big data, it becomes impossible for them to develop or obtain such unique data and, thereby, they are put at a disadvantageous position.

¹⁴OECD, ‘Information Exchanges Between Competitors under Competition Law’ (*Organisation for Economic Co-operation and Development*, 2010) <<https://www.oecd.org/competition/cartels/48379006.pdf>> accessed 24 February 2022.

¹⁵Case C-311/84, *Centre belged’études de marché - Télémarketing (CBEM) SA v Compagnie luxembourgeoise de télédiffusion SA*, Information publicité Benelux SA.

¹⁶Case C-418/01, *IMS Health GmbH & Co. OHG v NDC Health GmbH & Co. KG*, EU:C:2004:257.

In the *Microsoft Corporation case*,¹⁷ Microsoft refused to give Sun Microsystems access to the required information and technology to enable its operating systems to interoperate with Microsoft's Windows PC operating system. The General Court, by lowering thresholds set for establishing the indispensability, held that the possibility of eliminating competition also amounts to a refusal to deal.¹⁸ Hence, a data-rich dominant entity's refusal to give essential and indispensable information to new entrants would render them incapable of operating on an 'equal footing' with a 'data-rich entity' and, therefore, will likely eliminate competition in the market.¹⁹ Thus, the unavailability of big data to these new and small entrants can create entry barriers for new entrants.²⁰ Further, Section 4(2)(c) of Competition Act clearly states that a dominant entity will be held to be abusing its dominant position if it indulges in practices that are in denial of market access and leads to foreclosure of market.²¹ Hence, it can be deduced from above discussion that refusal to access data by big data entities where it is considered as indispensable for conducting business in market will foreclose the competition in the market and therefore, such big data entities can be held liable for abusing their dominant position in the market under Section 4(2)(c) of the Competition Act.

2. Discriminatory Access to Data: -Discriminatory access to data can be prominently observed in the e-commerce market.²² Recently, the

¹⁷Commission Decision of 24 March 2004, Case COMP/C-3/37.792 Microsoft, <https://ec.europa.eu/competition/antitrust/cases/dec_docs/37792/37792_4177_1.pdf>.

¹⁸*Microsoft Corp. v Commission* (2007) T-201/04 <<https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:62004TJ0201&from=EN>>.

¹⁹Aaqib Javeed, 'Big Data and Emerging Competition Concerns' (*SSRN Papers*, 14 July 2021) <<https://ssrn.com/abstract=3884350>> accessed 01 March 2022.

²⁰Nathan Newman, 'Search, Antitrust and the Economics of the Control of User Data' (2014) 31 *Yale Journal on Regulation*.

²¹The Competition Act 2002 (12 of 2002), s 4(2)(c).

²²Bruno Lasserre and Andreas Mundt, 'Competition law and Big Data: The Enforcers' View' (*Bundeskartellamt*, 2017) <<https://www.bundeskartellamt.de/SharedDocs/Publikation/EN/Fachartikel/Compet>

European Commission (EC) has also issued a statement of objection to Amazon for using information discriminately collected from its sellers to expand its' activities in the downstream market.²³

Due to Amazon's large consumer base, it has a significant amount of data which it processes and analyses for fulfilling its commercial interests of making desired products which fulfil needs of the consumers and helps it in effectively targeting the consumers. The e-commerce market is a data driven market and accessibility to the most recent and relevant data is crucial to sustain. Hence, if only the affiliates of Amazon will have access to recent and relevant data than they can easily make the relevant product which will reduce their cost and will increase their profitability in the market. By making relevant and cost-effective products, these affiliates can easily target their consumers. Whereas, on the other hand, competitors that are operating in downstream market and are not affiliate of Amazon, will not have access to such relevant and recent data. Accordingly, they may not be able to make cost-effective and relevant products for consumers. Thereby, these competitors may not be able to effectively compete with Amazon through its affiliates in the downstream market. Thus, it can be deduced that giving access of big data by Amazon to its affiliate operating in downstream market will put its competitors operating in a downstream market at a disadvantageous position and have a potential foreclosure effect in the downstream market. Moreover, the European Commission observed that the data possessed by Amazon is unique and cannot be purchased through third parties. Further, the development of such a database is not economically viable because a competitor will first be required to gather similar amount of data that Amazon possess and then it will be required to process it

ition_Law_and_Big_Data_The_enforcers_view.pdf?__blob=publicationFile&v=2> accessed 02 March 2022.

²³European Commission, 'Press Release' (*The European Commission*, 10 November 2020) <https://ec.europa.eu/commission/presscorner/detail/en/ip_20_2077> accessed 02 March 2022.

through sophisticated computing software. In this whole process, a significant investment is required to be made by the competitor which will ultimately raise the cost of products/services offered by competitor. Hence, it will not be able to effectively compete with Amazon in the downstream market. Further, Section 4(2)(b) of the Competition Act prohibits a dominant entity from imposing discriminatory conditions in purchase or sale of good or services.²⁴

Therefore, based on the above reasoning and legislative provisions, it can be clearly said that discriminatory access to data by big data entities will infringe Section 4(2)(b) and 4(2)(c) of the Competition Act.3.

Cross-usages of Databases: –A data-rich entity’s use of big data collected from one market to develop or increase its market power in another market can have a potential foreclosure impact.²⁵ Section 4(2)(e) of the Competition Act of India provides that if an entity dominant in one relevant market uses its dominant position to enter into another relevant market, then it may amount to an abuse of dominance.²⁶ The data rich entities indulge in tying or bundling practices to leverage their market power in one market to enter into another market.²⁷ Tying or bundling generally refers to a situation wherein a seller makes the purchase conditional on the purchase of another irrelevant product by the buyer.²⁸ The Competition and Markets Authority (Hereinafter “CMA”) has analysed a situation

²⁴The Competition Act 2002 (12 of 2002), s 4(2)(b).

²⁵Diarmuid Ryan and Tom S. Pick, ‘French Competition Authority opinion on database cross-selling’ (*The Lexology*, 30 June 2010) <<https://www.lexology.com/library/detail.aspx?g=ef5609e3-5729-4620-8f6f-bd1b748a1a30>> accessed 02 March 2022.

²⁶The Competition Act 2002 (12 of 2002), s 4(2)(e).

²⁷David S. Evans and Michael Salinger, ‘Why Do Firms Bundle and Tie? Evidence from Competitive Markets and Implications for Tying Law’ 22 (1) *Yale Journal on Regulation*.

²⁸Daniel Mandrescu, ‘Tying and bundling by online platforms – Distinguishing between lawful expansion strategies and anti-competitive practices’ (2021) 40 *Computer Law & Security Review* <<https://linkinghub.elsevier.com/retrieve/pii/S0267364920301047>> accessed 02 March 2022.

wherein data-rich dominant entity leverage their market power gained from huge databases to enter into the market of analytical services by tying its databases with its analytical services.²⁹ Tying might have some efficiencies, but it can also prevent entry of other analytical service providers into the market.³⁰ Therefore, by tying data related products with other products or services, data rich entities can abuse their dominant position under Section 4(2)(e) of the Act.

IV. PRIVACY CONCERNS VIS-À-VIS BIG DATA

The anti-competitive concerns associated with the use of big data have posed serious questions about the protection of user data. In the digital market, entities are heavily dependent on user data to provide qualitative and valuable services and, in furtherance of this goal, the privacy of an individual is often compromised.³¹ Currently, around the globe, there are no such clear policies establishing a system to subject the collection of user data to the antitrust regime. Violation of privacy may not be irrelevant to competition authorities. Recently, studies and investigations conducted by various antitrust authorities have reflected that competition authorities are keen to understand how unfair privacy terms of big data giants can become anti-competitive and abusive.³² Recently, Germany's Federal Court of Justice, while upholding the

²⁹Competition and Markets Authority (CMA), 'The Commercial Use of Consumer Data: Report on the CMA's Call for Information' (2015).

<https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/435817/The_commercial_use_of_consumer_data.pdf>accessed 05 March 2022.

³⁰Ibid.

³¹Allen P. Grunes and Maurice E. Stucke, 'No Mistake About It: The Important Role of Antitrust in the Era of Big Data' (*The Antitrust Source*, April 2015) The University of Tennessee College of Law <<http://ssrn.com/abstract=2600051>> accessed 06 March 2022.

³²Jay Modrall, 'Antitrust risks and Big Data' (2017) <<https://www.nortonrosefulbright.com/en-in/knowledge/publications/64c13505/antitrust-risks-and-big-data>> accessed 06 March 2022.

Federal Cartel Office's decision against Facebook, confirmed that Facebook cannot collect and process user information collected from its affiliated social media platforms, i.e., WhatsApp and Instagram, and third-party websites and applications that run Facebook APIs, without the user's meaningful consent.³³ It observed that such terms and conditions violating the General Data Protection Regulation (Hereinafter "GDPR") can be abusive under the competition regime if adopted due to the firm's dominant position in the market.

The approach by the German court is quite distinct from the one adopted by the European Commission in the *Microsoft/LinkedIn Case*³⁴ and Google/DoubleClick merger case.³⁵ Differences in the approach adopted by the German Federal Court of Justice and the European Commission areas follows –

On one hand, the German Court's decision indicates that one of the important factors in assessing competition in these data-driven markets is accessibility to large databases.³⁶ Facebook, by adopting terms and services contrary to GDPR, created a large database which established "lock-in" effect in the market. The phenomena of "lock-in" effect refers to inability of consumers to switch from one supplier to another one in response to changes in efficiency.³⁷ Further, since Facebook's

³³Bundeskartellamt, 'Bundeskartellamt Prohibits Facebook from Combining User Data from Different Sources, 2019' <https://www.bundeskartellamt.de/SharedDocs/Entscheidung/EN/Entscheidungen/Misbrauchaufsicht/2019/B6-22-16.pdf?__blob=publicationFile&v=5> accessed 06 March 2022.

³⁴Microsoft/LinkedIn (n 18).

³⁵European Commission, 'Google/Double Click Case' (11 March 2008) Case N. Comp./M. 4731, 242, <http://ec.europa.eu/competition/mergers/cases/decisions/m4731_20080311_20682_en.pdf> accessed 07 March 2022.

³⁶European Commission, 'Facebook/WhatsApp Case' (03 October 2014) Case M.7217, 87, 102 <https://ec.europa.eu/competition/mergers/cases/decisions/m7217_20141003_20310_3962132_EN.pdf> accessed 07 March 2022.

³⁷Joseph Farrell and Paul D. Klemperer, 'Chapter 31 Coordination and Lock-In: Competition with Switching Costs and Network Effects' (2006) 3 Handbook of

competitors did not have access to such a large amount of data that Facebook had and a lock-in effect was created by large databases, consumers were unable to switch to competitors of Facebook as they were not in a capacity to provide services as effective and relevant as provided by Facebook. Hence, there was no effective competition in the market. Therefore, it can be clearly concluded that the lack of accessibility to such data distorted competition in the market and, thereby, reduced choices for consumers. In this backdrop, the German Court's decision provides a demonstration of how breach of data privacy laws can be subject to scrutiny of competition authorities, if such breach violates the competition law. In this case, the Court has not side-lined the aspect of privacy, rather, it has duly analysed how breach of privacy can lead to abuse of dominance. Thus, the highlighting factor of this judgment was the harmonization of the GDPR with Competition law, to assess the anti-competitive and abusive behaviour of the enterprise. This makes the judgment different from other data-related cases. Lastly, it can also be inferred that a data privacy breach by a data-rich dominant entity is more likely to attract antitrust actions.

Simultaneously, the European Commission in the Facebook/WhatsApp merger case³⁸ has noted that privacy concerns emerging from the vast amount of data possessed by a tech giant would not fall within the scope of EU competition law, and instead, it would be the subject of EU data protection law (GDPR).³⁹ Further, the Commission in the Google/DoubleClick case ignored the impact of the merger of DoubleClick with Google on users' data.⁴⁰ It noted that the

Industrial Organization
<<https://linkinghub.elsevier.com/retrieve/pii/S1573448X06030317>> accessed 07 February 2023.

³⁸European Commission (n 36).

³⁹*Ibid.*

⁴⁰European Commission, 'Google/Double Click Case' (11 March 2008) Case N. Comp./M. 4731, 242,
<http://ec.europa.eu/competition/mergers/cases/decisions/m4731_20080311_20682_en.pdf> accessed 07 March 2022.

combination of data collected by Google in the general internet search market and by DoubleClick in the Ad-service market would not distort competition on two grounds; *firstly*, contractual terms of DoubleClick would restrict it from sharing the data, and, *secondly*, even if the terms of use are changed, such sharing of data by DoubleClick would not reduce effective competition in the market because similar kind of data can be acquired through data brokers. The approach adopted in this decision clearly shows that the Commission has only touched upon whether such a merger will have any effect on competition in the market. It side-lined the possibility of potential degradation of data privacy.⁴¹ Similarly, the Commission unconditionally allowed the merger of Microsoft with Yahoo on the ground that it has pro-competitive effects on the market.⁴² The Commission agreed with the contentions of Microsoft that such a merger will allow it to have access to a large variety of data which would enable it to effectively compete against Google. A large database will be accruing benefits to the consumers by providing them with more personalized search results. However, this merger case also, fails to analyse the effects on data privacy and user autonomy over data which could be hampered by such a merger.⁴³ The author is of the opinion that such an approach warrants a re-examination. According to the author, the competition authorities must look into privacy concerns while determining the anti-competitive effects of such transactions and adopt harm and benefit-based approach. Unfair privacy terms of a dominant firm can lead to abuse of dominance and therefore, competition authorities are required to take action against unfair privacy terms to maintain competition in the market. Thus, data protection should be considered an important factor in competition assessment.

⁴¹European Commission (n 40).

⁴²European Commission, 'Microsoft/Yahoo Search Case' (18 February 2010) COMP/M. 5727, 140
<https://ec.europa.eu/competition/mergers/cases/decisions/M5727_20100218_20310_261202_EN.pdf> accessed 10 March 2022.

⁴³Ibid.

V. PRO-COMPETITIVE EFFECTS OF BIG DATA

Mergers of data-rich entities can have pro-competitive effects on competition. The combination of data possessed by these firms will enable them to provide innovative and qualitative services to consumers.

1. Innovative and High-Quality Services: -Concentration or combination of a large variety of data can significantly improve the quality and relevance of services of a data-driven entity. These pro-competitive effects are prominent in search engines, social media platforms and over-the-top platforms. They use deep learning, data analytics, and algorithms to improve their recommendation software.⁴⁴ YouTube, Amazon Prime, Netflix, etc. use consumer behaviours and past preferences to recommend movies and videos.⁴⁵ Similarly, e-commerce platforms use consumers' past purchases, and browsing histories to recommend products that a customer might be interested in.⁴⁶ Big data analytics help search engines to provide relevant results. These search engines analyse consumers' "click-query data" to deliver high-quality results.⁴⁷ The improvement in services leads to more users, which enables companies to collect more data that can be used for improving services. This is referred to as "economies of scale" enabled by data.⁴⁸ Companies operating in multi-sided platform

⁴⁴Michael A. Salinger and Robert J. Levinson, 'Economics and the FTC's Google Investigation' (2015) 46 Rev. Industrial Org. 25, 47.

⁴⁵J. Prüfer and C. Schottmüller, 'Competing with big data' (2020) Journal of Industrial Economics <https://jensprufer.files.wordpress.com/2020/08/competing-with-big-data_final.pdf> accessed 12 March 2022.

⁴⁶Mark Milian, 'Retailers Use Big Data to Turn You Into a Big Spender' (*Bloomberg*, 4 June 2014) <<http://www.bloomberg.com/news/2014-06-03/retailers-use-big-data-to-turn-you-into-a-big-spender.html>> accessed 13 March 2022.

⁴⁷Christopher Townley, Eric Morrison and Karen Yeung, 'Big Data and Personalised Price Discrimination in EU Competition Law' King's College London Dickson Poon School of Law, Paper No. 2017-38.

⁴⁸Nils-Peter Schepp and Achim Wambach, 'On Big Data and Its Relevance for Market Power Assessment' (2016) 7 Journal of European Competition Law & Practice 120–124.

markets use big data generated in one market to improve their services in another platform/market and this is referred to as the ‘Domino-effect’.⁴⁹ For instance, food service aggregators or online marketplaces (like Amazon) analyse data collected on their apps and websites. Sellers and retailers operating in the downstream market are given access to such data, allowing them to improve their services and thereby generate additional revenue and increase the scale of their businesses in different markets.

2. Targeted Advertising: –Big data giants either use the input produced from big data analytics for their commercial interest or sell it to advertisers for targeted advertising.⁵⁰ General internet search engines analyse the web histories of consumers, the keywords they type, the websites they click on, and frequency of visits to a website and create a specialized form of data which they sold to advertisers for effective advertising which not only increases the sale of advertisers but also provides monetary benefits to these large corporations who use different techniques to analyse big data.⁵¹ These incentives motivate them to develop new and more efficient analytical technologies. Thus, big data analysis also leads to an increase in innovation. The monetization of the data in the form of targeted advertising increases competition in the market. Due to big data, manufacturers are aware of consumer’s preferences, needs, and market trends which enable them to make the desired products, which ultimately increases their sales as well as leads to an improvement in their efficiency.⁵² It also leads to the accrual of benefits for consumers because due to high competition,

⁴⁹Jan Krämer and Daniel Schnurr, ‘Big Data and Digital Markets Contestability: Theory Of Harm And Data Access Remedies’ (2021) *Journal of Competition Law & Economics*.

⁵⁰A.V. Lerner, ‘The Role of ‘Big Data’ in Online Platform Competition’ (2014) SSRN Papers <https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2482780> accessed 14 March 2022.

⁵¹*Ibid.*

⁵²Muhammad Anshari et al. ‘Customer relationship management and big data enabled: Personalization & customization of services’ (2018) <<https://doi.org/10.1016/j.aci.2018.05.004>> accessed 14 March 2022.

consumers will have more choices and will have control over the market. The high competition will also lead to competitive pricing, further improving competition in the market.

VI. ASSESSMENT OF MARKET POWER AND BIG DATA

The Competition Act of India, 2002 (hereinafter “the Act”) lays down that a firm having the ability to operate independently of competitive forces or having the ability to influence competitors, consumers, or the market in its favour enjoys a dominant position in the market.⁵³ Similar standards have been set out by the European Commission.⁵⁴ The German Competition Act explicitly names ‘access to data relevant for competition’ as one of the factors to consider while assessing market power.⁵⁵ To constitute data as a factor for determining dominance, there must be evidence that the data is non-replicable and non-substitutable.⁵⁶

Firstly, non-replicable data means data collected by an entity cannot be replicated or collected by other competitors.⁵⁷ Hence, in a market where data is a competition parameter, access to non-replicable data by an entity will give it a competitive advantage over its competitor in the market.⁵⁸ Generally, it is difficult to prove that the data collected by an entity is non-replicable because data is available everywhere.⁵⁹ In some merger cases, the Commission found that combined data of the merged

⁵³The Competition Act 2002 (12 of 2002), s 4 explanation (a).

⁵⁴OECD (n 14).

⁵⁵The German Act against Restraints of Competition (GWB) 2021 <<https://www.d-kart.de/wp-content/uploads/2021/01/GWB-2021-01-14-engl.pdf>> accessed 14 March 2022.

⁵⁶Anja Lambrecht and Catherine E. Tucker, ‘Can Big Data Protect a Firm from Competition?’ (2017) 1 CPI Antitrust Chronicle 10.

⁵⁷Jay Modrall, ‘Big Data and Merger Control in the EU’ (2018) 9(9) Journal of European Competition Law & Practice.

⁵⁸Ben Holles de Peyer, ‘Eu Merger Control And Big Data’ (2018) 13(4) Journal of Competition Law & Economics 767–790.

⁵⁹Jay Modrall (n 57).

entity is not in scarcity and, therefore, there is no impediment to the competition.⁶⁰ In the Facebook/WhatsApp merger case,⁶¹ the Commission was of the view that the data collected from WhatsApp by Facebook for improving its advertising services is replicable and, therefore, would not give a competitive advantage to its competitors.⁶² Hence, to determine the replicability of data, a case-by-case approach is needed.

Secondly, non-substitutable data implies that there are no alternatives available to the results derived from the processing of big data.⁶³ It needs to be considered that whether the insights derived through deep learning and AI that help in identifying consumer preferences, needs, and market trends are available to other competitors. Moreover, it also needs to be taken into consideration that whether the results derived through deep learning and AI can be acquired by competitors from third parties in the market. The affirmative response would imply that insights derived from big data analysis are substitutable, otherwise it will be proven that no alternatives are available and thereby, a competitive concern will emerge in the market.

Additionally, the relevance of the data, network effects created by data, economies of scale, and switching costs for consumers should also be taken into consideration for determining the dominant position of a data-rich entity.⁶⁴ Additionally, it is pertinent to note that the relevance of data depends on the provisions of services an entity is offering. One

⁶⁰Marc Bourreau, Alexandre de Streel and Inge Graef, 'Big Data and Competition Policy: Market Power, Personalised Pricing and Advertising' (2017) SSRN Papers <https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2920301> accessed 16 March 2022.

⁶¹European Commission, 'Facebook/WhatsApp Case' (03 October 2014) Case M.7217, 87, 102 <https://ec.europa.eu/competition/mergers/cases/decisions/m7217_20141003_20310_3962132_EN.pdf> accessed 07 March 2022.

⁶²Ibid.

⁶³Jay Modrall (n 57).

⁶⁴Roberto Augusto Castellanos Pfeiffer, 'Digital Economy, Big Data and Competition Law' (2019) 3(1) Market and Competition Law Review.

set of data relevant for a particular service may not be relevant for another. Thus, while establishing dominance, the kinds of services for which a particular type of data is used need to be considered. Thus, a case-by-case basis analysis is required for determining the dominance of a data-rich entity.

VII. CRITICAL ANALYSIS OF PROTECTION OF PRIVACY AND REGULATION OF BIG DATA UNDER INDIAN ANTITRUST ACT

Section 19(4) of the Act has laid down various parameters for establishing dominance.⁶⁵ However, the Act does not explicitly consider the control over big data as a factor while determining the dominant position of an entity in the relevant market. Section 19(4)(m) of the Act stipulates that the Commission can give due regard to “*any other factor which the Commission may consider relevant for the inquiry*”. The wording of the Act is quite inclusive and a wider interpretation of the Act can include access to big data analytics as a factor in identifying whether an enterprise enjoys a dominant position or not under Section 4 of the Act. Hence, the exhaustive scope of the said section increases the scope of inquiry by the Commission. Further, such wide interpretation of Section 4 of the Act will facilitate the Commission in establishing the dominance of data-rich entities in the Indian market.

In the case of *Shri Vinod Kumar Gupta v WhatsApp Inc.*,⁶⁶ it was alleged that the new privacy policy of WhatsApp is in contravention of the provisions of Section 4 of the Competition Act and the Information Technology Act, 2000. The CCI then held that the allegations of breach of the IT Act, 2000 do not fall within the purview of examination under

⁶⁵The Competition Act 2002 (12 of 2002), s 19.

⁶⁶*Shri Vinod Kumar Gupta v WhatsApp Inc.* Case No. 99 of 2016 (CCI).

the provisions of the Competition Act. However, the author is of the opinion that such reasoning warrants a re-examination. The updated privacy policy provides that users who do not want to share their information with Facebook can permanently delete their account. However, such policy will create a ‘take it or leave it’ situation for users which coupled with strong network effects can amount to an abuse of dominance.

Also, the author is of the opinion that a messaging platform will be valuable if more and more users join it. A large number of users build a strong network effect. WhatsApp is the most widely used app for instant messaging in India.⁶⁷ Therefore, if a WhatsApp user wants to switch to another messaging app, then he will have to convince majority of his contacts to also switch to another messaging platform due to the lack of interoperability between different messaging networks, which in practicality does not seem to be viable. Hence, the dominant position of WhatsApp coupled with a strong network effect has created lock-in effects for its users and limits its substitutability. Therefore, the ‘opt-out’ provision provided by WhatsApp, which is installed on 96% of devices, having a billion monthly active users is unjustified as users who ‘opt-out’ are not left with a substitute that will allow them to communicate with their contacts.⁶⁸ Thus, the only viable solution for users to message is to adopt the services of WhatsApp. Hence, the users who do not wish to share their details are also indirectly forced to give their consent to share their data with Facebook. The Hon’ble Supreme Court in *Central Inland Water Transport Corporation Ltd. & Anr. v Brojo Nath Ganguly & Anr.*,⁶⁹ has held that the consent of the user to a contract must always be meaningful. Thus, applying the said ‘use-choice’ test to ‘opt-out’ provisions, it can be said

⁶⁷*In Re: Updated Terms of Service and Privacy Policy for WhatsApp Users Suo Moto* Case No. 01 of 2021, (CCI).

⁶⁸*Ibid.*

⁶⁹*Central Inland Water Transport Corporation Ltd. & Anr. v Brojo Nath Ganguly & Anr* AIR 1986 1571.

that the consent of users to share their data with Facebook was not meaningful and, therefore, violates the privacy of an individual.

The CCI in a *Suo moto* case against WhatsApp⁷⁰ has taken a paradigm shift from the approach adopted in *Vinod Gupta case*.⁷¹ In this *Suo moto* order, it directed an investigation against WhatsApp for its updated 2021 privacy policy that is alleged to be in violation of Section 4 of the Act. The approach adopted in this case highlights that if the unreasonable, unfair, and excessive collection of data and its subsequent use is causing or likely to cause competitive advantage to firms, and is having or likely to have exploitative or exclusionary effects, then such breach of privacy would attract provisions of the Act. Reduction in data protection and imposition of the unfair privacy policy will reduce competition in the market as competitors also compete on non-price parameters such as quality which includes data privacy.⁷² This approach is quite similar to that adopted in the Facebook Case by German Court.⁷³ Hence, it can be said that the *Suo Moto* case has removed some ambiguities regarding the scope of the Act vis-à-vis privacy protection.

This judgment has also provided glimpses of how big data can give rise to competitive concerns. The Commission adopted a Rule of Reason framework by analysing both pro-competitive as well as anti-competitive effects of high data concentration. It can be inferred from the decision that the benefits of data sharing viz. improved targeted

⁷⁰Privacy Policy for WhatsApp Users (n 67).

⁷¹*Shri Vinod Kumar Gupta v WhatsApp Inc.*, Case No. 99 of 2016 (CCI).

⁷²Geoffrey A. Manne and R. Ben Sperry, 'The Law and Economics of Data and Privacy in the Antitrust Analysis' (2014) SSRN Papers <<https://papers.ssrn.com/sol3/papers.cfm?abstractid=2418779>> accessed 19 March 2022.

⁷³KVR 69/19 - Resolution of June 23, 2020, 'The Federal Court of Justice provisionally confirms the allegation of abuse of a dominant market position by Facebook'

<<https://www.bundesgerichtshof.de/SharedDocs/Pressemitteilungen/DE/2020/2020080.html>> accessed 06 February 2023.

advertising can be outweighed by the anti-competitive concerns raised by unfair privacy policies. The Commission highlighted that cross-linking of data collected through different platforms can raise competitive concerns. For instance, in the ad-service market, the collection of a large variety of data across various services by Facebook will give it a competitive advantage over its competitors who may be not be able to collect such a variety of data. Additionally, it can enable a data-rich dominant entity to strengthen its dominant position and leverage its position in one relevant market to effect another relevant market. Thus, the CCI viewed that such unfair collection of big data can be and is required to be investigated under the Act. Therefore, it can be inferred that the said judgment has set a precedent in the Indian competition jurisprudence that unfair access and use of big data by a data-rich dominant entity can be regulated by the Indian Competition Act.

VIII. A WAY FORWARD

This paper has examined the impact of big data analytics in the digital market. It sought to identify anti-competitive effects including privacy concerns as well as pro-competitive effects of big data analytics. It is undisputed that the role of big data in the digital market in India is increasing rapidly, thus, it is important for the CCI to take relevant steps to effectively regulate it under the competition regime. In this backdrop, it is suggested that, *firstly*, it should analyse the potential anti-competitive and pro-competitive effects of big data mergers on a case-by-case basis, to determine whether the merger must be allowed.⁷⁴

Secondly, while assessing the transaction under competition law, it should not standalone to address the privacy issue. Competition law should only analyse competition concerns arising from the breach of

⁷⁴Ben Holles de Peyer, 'Eu Merger Control and Big Data' (2018) 13(4) Journal of Competition Law & Economics.

privacy. It should limit its scope only to the competition regime and standalone privacy issues should be decided by the data protection authority.⁷⁵ Such refrainment will ensure that competition authorities do not override their jurisdiction while conducting inquiries. Further, the commission should decide on privacy issues when it is interconnected with competition concerns and when it is considered as a non-price competing parameter in a relevant market and its degradation could raise serious competitive concerns such as foreclosure of competition in the market, etc.⁷⁶ Thus, the crux of addressing privacy issues under a competition regime is to establish that privacy is deemed to be or has been negatively affected as a parameter of competition.⁷⁷

Thirdly, currently, India does not have a comprehensive law for regulating data privacy of an individual. Therefore, the Indian government should enforce a robust data protection regime that can effectively control data collection and processing by digital entities.

Lastly, the Indian competition law requires some modification to keep pace with the changing dynamics of the market. Currently, the Competition Act, 2002 prescribes a turnover or assets-based approach for scrutinizing mergers. However, this approach is inefficient in examining transactions in the digital economy. At present, the Indian antitrust regime does not recognize data as an asset and therefore, merger of a target company having assets or turnover less than the prescribed threshold but possessing an enormous amount of data would

⁷⁵European Commission, 'The future of EU merger control' (1 September 2020) <https://ec.europa.eu/commission/commissioners/2019-2024/vestager/announcements/future-eu-merger-control_en> accessed 22 March 2022.

⁷⁶Autorité de la Concurrence and Bundeskartellamt, 'Competition Law and Data' (Joint Position Paper, 10 May 2016) <<http://www.autoritedelaconcurrence.fr/doc/reportcompetitionlawanddatafinal>> accessed 24 March 2022.

⁷⁷James C. Cooper, 'Privacy and Antitrust: Underpants Gnomes, the First Amendment, and Subjectivity' (2013) 20 Geo. Mason L. Rev.

be scrutinised by competition authorities. Therefore, the author suggests that there is a dire need to adopt a different approach to control merger of big data entities in the digital market. One such method can be incorporation of the ‘size of transaction’ test. This approach has been quite successful in various mature jurisdictions.⁷⁸ As per this test, a transaction valued above a certain threshold limit/value will be mandated to be notified to the CCI. This test may be successful in controlling mergers with potential anti-competitive concerns because generally, the deal size of big data companies remains significantly high due to the volume of data they possess.⁷⁹ Therefore, the author is of the opinion that the ‘size/value of transaction’ test can be adopted for scrutinizing mergers of big data companies in the digital market under the antitrust regime.

In conclusion, the author is of the belief that the digitalisation of the economy has made big data regulation a hot-debatable topic. Thus, antitrust authorities cannot overlook this issue. Hence, it is the need of the hour to implement a holistic and comprehensive antitrust law, to maintain free trade and competition in the digital market and to overcome competition concerns arising from breach of privacy.

⁷⁸Saksham Malik, ‘Indian Merger Control Thresholds: Effects of Recent Amendments on Digital Markets’ (*The Kluwer Competition Law Blog*, 10 January 2022) <<http://competitionlawblog.kluwercompetitionlaw.com/2022/01/10/indian-merger-control-thresholds-effects-of-recent-amendments-on-digital-markets/>> accessed 28 March 2022.

⁷⁹‘Competition law: CCI chief D K Sikri seeks changes in uniform threshold norms for M&As’ *The Economics Times* (11 May 2018) <<https://economictimes.indiatimes.com/news/economy/policy/competition-law-cci-chief-d-k-sikri-seeks-changes-in-uniform-threshold-norms-for-mas/articleshow/64125187.cms?from=mdr>> accessed 31 March 2022.