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# Big Data: Competition Concerns in a Digital Economy

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## ABSTRACT

*In the competition law, the ownership and use of large amounts of data acquired online from customers (big data) is a particularly hot topic. One crucial question is whether businesses' access to and use of big data can grant them market power and a competitive advantage over their competitors. In India, innovation and technology-driven businesses like e-commerce, ride-hailing apps, online wallets, and others have been rapidly increasing and experiencing a steady increase in M&A activity, exposing them to potential competition law risks. Data-driven mergers must be scrutinised more closely in today's world when access to customer data may make or break a market player. Data concentration in the hands of a single market player may be devastating for the competitiveness in the relevant market. Jurists across the world have diverse viewpoints on how to successfully solve this problem, and some competition commissions have taken a variety of approaches to handle the challenges provided by the dynamic digital market. There is a need to examine all the varied viewpoints and activities in order to determine what is best for India's completion policy. This paper attempts to analyse the development of big data in the digital market, and how can big data gain a competitive advantage, subsequently with a study about the lacunas in the present merger criteria.*

## I. INTRODUCTION

Consumer data holds a prominent role in today's digital economy. When it comes to online transactions with or on big companies like Apple, Facebook, Amazon, and others, we cannot overlook the reality that data has become far more essential than ever before. Big Data has evolved into a valuable resource and is now regarded as the currency of the digital market. However, having access to a big of datasets can result in market power and cause anti-competitive pressure. Therefore, big data poses a significant potential risk in terms of competition law.

Companies struggle to get into today's fiercely competitive market and gain significant market share. Consumer data has been at the core of every business strategy, and it helps to

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explain why the major players in the dynamic market have so much market power. The transactions that attempt to acquire, combine, and/or monetise significant volumes of economically useful data acquired from different sources and formats are known as data-driven mergers.<sup>2</sup> These data-driven mergers can substantially stifle the competition. This can be prevented by exposing such mergers to competition authorities. This article casts light on some of the major Antitrust concerns and criteria that may need to be reviewed when analysing the relation between market power, competition law, and big data.

## II. BIG DATA

The exponential development of the digital economy had empowered the emergence of business models based on the collecting and processing of “Big Data”.<sup>3</sup> The term “Big Data” is often vague and lacks clarity. There is no comprehensive definition that combines all its aspects. Big Data refers to data that is so large, fast, or intricate that it is not possible to process it using traditional methods. Big data is characterised by four V’s- the volume of data; the velocity at which data is collected, used, and disseminated; the variety of information aggregated; and the value of the data.<sup>4</sup> In simpler words, Big Data is the collecting of data, both online and offline, which is processed using personalised algorithms into information that shows trends, people's preferences, and other factors and indicators which assists organisations and analysts in achieving better and more informed decisions.

According to the Personal Data Protection Bill, 2019, modelled on European Union General Data Protection Regulation (EU GDPR), data is defined in its widest sense to encompass representation of information, facts, ideas, view, etc. According to the German Monopolies Commission Report<sup>5</sup>, data is a significant competitive element and hence a power component in a multi-sided digital market.

In India, the Competition Commission of India (hereinafter called “CCI”) has not considered data as a criterion for determining the dominant position in India; nevertheless, it is high time for us to acknowledge the importance of big data in assessing market dominance. The Competition Law Review Committee, which was established in India in 2019, suggested

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<sup>2</sup> Andressa Lin Fidelis and Zeynep Ortac, “Data driven mergers: a call for further investigation of dynamic effects into competition analysis”, *Semantic Scholar*, June 12, 2021, <https://pdfs.semanticscholar.org/0ce4/5469241cf59b9ecfcfe145e7c0447d29aff2.pdf>.

<sup>3</sup> OECD, *Big Data: Bringing Competition Policy to the Digital Era*, November 30, 2016, <http://www.oecd.org/competition/big-data-bringing-competition-policy-to-the-digital-era.html>.

<sup>4</sup> D. Daniel Sokol and Roisin E. Comerford, “Does Antitrust Have a Role to Play in Regulation Big Data?” in Roger D. Blair and D. Daniel Sokol (eds.), *Cambridge Handbook of Antitrust, Intellectual Property and High Tech*, 6 (Cambridge University Press, 2016).

<sup>5</sup> Special Report No. 68: Competition policy: The challenge of digital markets, Monopolkommission, June 15, 2021, [https://www.monopolkommission.de/images/PDF/SG/s68\\_fulltext\\_eng.pdf](https://www.monopolkommission.de/images/PDF/SG/s68_fulltext_eng.pdf).

that Section 19 of the Competition Act, 2002 (hereinafter called "the Act") be expanded to include "data control" as a consideration in determining dominant position under Section 4 of the Act. Moreover, Section 19(4)(m) of the Act is exhaustive in nature which states "any other factor which the Commission may consider relevant for the inquiry". In the DLF case<sup>6</sup>, the CCI said explicitly that Section 19 shall be given a broad interpretation to cover any aspect which the commission deems relevant for the investigation. Therefore, data control shall be specifically included as a factor in determining dominance under Section 19(4) of the Act.

### **III. ABUSE OF DOMINANCE**

In markets where Big Data is a crucial element or input for company success, there is a risk that the massive collection of personal data and substantial use of data analytics would increase market power, lock in users, and raise entry barriers.<sup>7</sup> Data exploitation in business has the potential to provide value to a wide range of activities, from global manufacturing and service value chains to more effective labour utilisation and customised client interactions.<sup>8</sup>

Controlling a large amount of data of different types can be a significant source of productivity gains and product innovation. Therefore, when Big Data is concentrated in the hands of a few major companies, it may provide them with a significant competitive advantage with which newcomers may struggle to compete. While it is not illegal to acquire and control large amounts of data, using Big Data to raise entry costs and obtain or retain market power might be a breach of competition law that mandates the intervention of competition authorities.

In the context of big data and abuse of dominance, the challenge is determining market power and, as a result, the potential for abuse of dominance. The mere fact that a corporation has access to significant volumes of data does not imply that it has a dominating position in the market. Important criteria to be taken into consideration when determining the existence of dominance include:

- Do your opponents have access to the same data?
- Is there any data that may replace the data collected by the company?
- Is the company capable of analysing and monetising the data it collects?

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<sup>6</sup> *Belaire Owner's Association v DLF Limited*, Order Dated August 12, 2011; 2011 Comp LR 0239 (CCI).

<sup>7</sup> OECD, *Big Data: Bringing Competition Policy to the Digital Era*, November 30, 2016, [https://one.oecd.org/document/DAF/COMP\(2016\)14/en/pdf](https://one.oecd.org/document/DAF/COMP(2016)14/en/pdf).

<sup>8</sup> OECD, *Data Driven Innovation for Growth and Well Being*, October 06, 2015, [https://www.oecd-ilibrary.org/science-and-technology/data-driven-innovation\\_9789264229358-en](https://www.oecd-ilibrary.org/science-and-technology/data-driven-innovation_9789264229358-en).

- Is the data in the company's possession raw data or fully processed data?

The current trend in competition analysis tends to be an emphasis on the volume of data, with limited consideration paid to the factors stated above. These considerations may lead to the conclusion that, in some cases, even having access to a significant amount of data may not confer market dominance on a corporation.

In *Ashish Ahuja v. Snapdeal & Anr.*<sup>9</sup>, the CCI in the context of marketplaces and the e-commerce industry affirmed that the customer prefers to consider discounts and shopping experiences in both online and offline markets before making a final choice to purchase a product. A rise in price in one sector may cause the consumer to migrate to the other.

In *Samir Agarwal v. ANI Technologies Pvt Ltd*<sup>10</sup>, the CCI dealt with the conditions relating to the cab aggregators concept where Uber India was the opposing party. The CCI stated that fare estimate is done using an algorithm based on a large amount of big data. These big data sets contain the rider's personal information, traffic conditions, demand-supply conditions, and so on. As a result of these big data sets, the algorithmically determined price for each rider differs.

Exclusionary and predatory data-driven behaviour may be used to restrict competitors' timely access to vital data, prohibit others from sharing data, restrict data portability, or exclude competitors who threaten an incumbent's data-related competitive advantage. For instance, exclusive agreements with third-party data providers can help achieve strategic goals. They may also monopolize the market by making it very difficult for their consumers to utilise or embrace their competitors' platforms. In a similar spirit, the use of self-learning pricing and profit-maximizing algorithms may facilitate horizontal agreements such as digital price-fixing cartels. Data analytics can also be used to track compliance with horizontal and vertical agreements like cartels and seller resale price maintenance.

In terms of market definition and abuse categories, it appears that the limits are being stretched. The most probable kind of abuse of dominance is when access to a specific dataset is required to enable competition in a downstream market; but since most datasets can be reproduced, an abuse along these lines would need extremely precise facts and would be exceptional.

#### **IV. DATA DRIVEN MERGERS AND ACQUISITIONS**

Mergers in the technology industry raise the perennial question of whether a company

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<sup>9</sup> Case No 17 of 2014 (CCI).

<sup>10</sup> Case No 37 of 2018 (CCI).

acquiring exclusive access to vast troves of big data can effectively foreclose or leverage competition. In a competitive market, having access to data sets may be quite valuable, such as when data collection allows for better-focused advertising (behavioural targeting or micro-targeting). While testifying before the United States Congress, Mark Zuckerberg claimed that big data can potentially forecast election outcomes.<sup>11</sup>

Being able to harness Big Data may result in significant and positive benefits for a business, which can benefit customers, employees, and society overall. Indeed, companies can improve the quality of their products and develop new services by using Big Data for innovative and creative purposes, a process known as data-driven innovation (DDI).

Recent merger cases regarding the transfer of control over big data determined that these mergers would not develop competition concerns since the various market players have access to a sufficient number of other data sources. The use of claims about the availability of other large datasets implies that these datasets are replaceable. Unfortunately, this assumption has not been validated, and the possible ramifications in merger control scenarios have not been investigated. These scenarios neither identify a separate market for big data nor analyse the substitutability of big datasets. Unfortunately, this assumption has not been validated, and the possible ramifications in merger control scenarios have not been investigated. These scenarios neither identify a separate market for big data nor analyse the substitutability of big datasets.

The Federal Trade Commission (FTC) investigated a number of mergers involving big datasets, including Google/DoubleClick<sup>12</sup>, Microsoft/YahooSearch<sup>13</sup>, Microsoft/LinkedIn<sup>14</sup>, Facebook/WhatsApp<sup>15</sup>, Telefónica UK/Vodafone UK/Everything Everywhere<sup>16</sup>. These cases were mainly associated with vertical M&A. However, none of these merger evaluations conducted a formal investigation of the proximity of substitution between several big datasets.

Big data attains value when it is analysed and transformed into insights that are relevant to its purpose and application. Subsequently, the closeness of substitution between two large datasets must be determined by evaluating to what extent the users see these insights as near

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<sup>11</sup> Micro targeting of voters can swing entire elections: Bartlett, who discovered Congress poster in Cambridge, April 09, 2018, <https://economictimes.indiatimes.com/news/politics-and-nation/micro-targeting-of-voters-can-swing-entire-elections-bartlett-who-tweeted-congress-ca-poster-pic/articleshow/63659215.cms?from=mdr>.

<sup>12</sup> Google/DoubleClick, Case No COMP/M.4731, decided on March 11, 2018.

<sup>13</sup> Microsoft/YahooSearch Business, Case No COMP/M.5727, decided on February 18, 2010.

<sup>14</sup> Microsoft/LinkedIn, Case M. 8124, decided on December 6, 2016.

<sup>15</sup> Facebook/WhatsApp, Case No COMP/M.7217, decided on October 3, 2014.

<sup>16</sup> Telefonica UK/ Vodafone UK/ Everything Everywhere /JV, Case No COMP/M.6314, decided on September 4, 2012.

substitutes.

In the Microsoft/LinkedIn merger<sup>17</sup>, the European Commission (hereinafter called “the EC”) had observed that although privacy concerns were covered by data protection laws, they could be considered a non-price competition issue in merger control assessments if customers considered them to be a material factor in the quality of services provided.

In Apple/Shazam<sup>18</sup>, the EC examined the data related concerns and held that the Shazam app was not unique in nature, and users could still access and use databases like Shazam's. Therefore, the case set a precedent that data quality and originality are important factors in determining anti-competitiveness.

While considering the potential of the merged entity having access to Facebook and WhatsApp's user data<sup>19</sup>, the EC determined that the merged entity lacked the technological ability and motive to integrate the two companies' datasets. However, soon after the merger, WhatsApp amended its privacy policy. The EU then levied a fine of 110 million EUR against Facebook for giving incorrect information.<sup>20</sup>

It is pertinent to note that privacy is now being promoted as a non-price competition. This was acknowledged in the Facebook/WhatsApp merger and the Microsoft/LinkedIn merger decision by the EC. This perspective is also being adopted in India, as seen by the CCI's latest report on the Telecom sector<sup>21</sup>, which mentions privacy as a “non-price competition”. Hence, market dominance based on data accumulation can lead to a complete disregard for privacy as a non-price competition when there is no competition in the market, and this again highlights the importance of competition analysis in the context of privacy concerns.

The jurisprudence on data-driven mergers has progressed significantly from relying on the assumption that data is always substitutable to acknowledging the value and effect of big data. The competition commissions in many jurisdictions have begun to examine the impact of data-driven mergers on competition in relevant markets by examining the existence of similar data across competitors, the effect of merged data, and the evolution of entry barriers for new players. Legislators in the United States have introduced “Better Deal” legislation to

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<sup>17</sup> *Supra* note 14.

<sup>18</sup> Apple/Shazam, Case M.8788, decided on 6-9-2018.

<sup>19</sup> *Supra* note 15.

<sup>20</sup> European Commission, Mergers: Commission fines Facebook €110 million for providing misleading information about WhatsApp takeover, European Commission, June 11, 2021, [https://ec.europa.eu/commission/presscorner/detail/en/IP\\_17\\_1369](https://ec.europa.eu/commission/presscorner/detail/en/IP_17_1369).

<sup>21</sup> Market Study on the Telecom Sector in India, Competition Commission of India, January 22, 2021, [https://www.cci.gov.in/sites/default/files/whats\\_newdocument/Market-Study-on-the-Telecom-Sector-In-India.pdf](https://www.cci.gov.in/sites/default/files/whats_newdocument/Market-Study-on-the-Telecom-Sector-In-India.pdf).

alter the merger review criteria in the United States.<sup>22</sup> This bill stipulates to shift the burden of proof to the parties to prove that a merger will not be anti-competitive in cases of large-scale mergers and mergers that cause a major rise in market concentration, as well as to reduce the burden of proof on the organisations to meddle in mergers with anti-competitive potential.

Big Data is undeniably an asset in today's markets, and one of the primary grounds of investments, mergers, and acquisitions. The destiny lies in data valuation programmes, which provides the structure for businesses to monetise, analyse, and manage information as an actual asset or through the utility of infonomics.<sup>23</sup>

## **V. ANTI-COMPETITIVE AGREEMENT INVOLVING BIG DATA**

Agreements that are likely to have a significant detrimental impact on the market is prohibited by Section 3 of the Competition Act, 2002. For promoting merchants online, e-commerce platforms make use of algorithms based on big data.

Section 3 of the Act is based on any type of agreement, whether contractual, non-contractual, and oral agreements. The CCI analyses the presence of vertical or horizontal agreements between companies to determine the potential of an appreciable adverse effect on competition (AAEC). Enterprises that are not associated horizontally and vertically and have access to big data might, however, indulge in anti-competitive conduct by causing AAEC in the market.

An agreement for exclusive licence or access to a critical data collection is perhaps the most likely kind of anti-competitive arrangement involving Big Data. Exclusive licences to other IP rights can limit competition, and it is easier to see how exclusive licences to data may do the same, especially if the data collection is difficult to replicate.

Data and privacy could be the topic of hard-line, cartel-like behaviour on the more serious end of the scale. Companies compete on a variety of factors, including pricing, quality, and, increasingly, the strength of their data protection. Companies like WhatsApp, for example, openly promise their customers end-to-end encryption when it comes to mobile texting apps. Therefore, it is likely that competitors may agree to restrict or limit the scope of their privacy offerings, decreasing their internal costs and, in parallel the level of competitiveness in the market.

An agreement to price discrimination based on data acquired or given is another potential

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<sup>22</sup> A Better Deal: Cracking Down on Corporate Monopolies, Democrats Senate, June 11, 2021, <https://www.democrats.senate.gov/imo/media/doc/2017/07/A-Better-Deal-on-Competition-and-Costs-1.pdf>.

<sup>23</sup> Gartner Inc., Turn Your Big Data into a Valued Corporate Asset, Forbes, November 13, 2017.



data-related anti-competitive agreement. An online distributor might sign into an agreement with a manufacturer to sell items at a variable price based on how much customers are ready to pay for certain items, as determined by data collected about their purchasing habits or location based on their IP address.

In CTS Eventim/ Four Artists<sup>24</sup>, the planned merger between Germany's largest ticketing system provider and a company that organises and promotes concerts for national and international performers was blocked by the German Commission owing to anti-competitive consequences resulting from access to data which is unavailable to its competitors.

## **VI. CONCLUSION**

Big data, when analysed with sufficient processing capacity and a powerful algorithm, can be definitely used to make large sums of profits and has the potential to create significant antitrust issues. Further, with big data-driven mergers on the increase, it's time for the country's competition rules to be reviewed, and the country's competition regulator to be prepared to deal with big data-driven mergers.

Data, market penetration, and competition regulations form a trilateral that is overlapping, and only a comprehensive authority with the potential of clubbing all three aspects can survive in the age of Big Data. The CCI must have the instruments it needs to analyse potential anti-competitive impacts of business reorganisations. The CCI's present notification standards, which are based on turnover requirements, are insufficient to examine significant mergers involving firms whose assets are based on consumer data. Thus, given the importance of Big Data, it would be appropriate to amend the legislation and entrust the CCI with such authority to eliminate this incapacity.

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<sup>24</sup> CTS Eventim/Four Artists, Case No B6-35/17, decided on November 23, 2017.