

# Big Data Mergers: Bridging the Gap for an Effective Merger Control Framework

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**Abstract:** The emergence of multi-sided platforms, connected devices and Internet of Things (IoT) has turned us into a valuable information asset, whereby data about our tastes and preferences as a consumer can be 'commoditised'. Even though 'data' is the key to competition, and thereby ensures competitiveness across markets – as diverse from retail to healthcare, from taxi rides to air travel, thanks to the uberisation of the economy – this valuable reservoir of information is controlled by a handful of Information Technology (IT) firms. Remarkably noteworthy is the fact that a significant proportion of the growth of these IT companies is not organic; instead, most of their valuable innovations have been acquired inorganically through acquisitions! Against this dynamic backdrop, this paper addresses the following research questions. First, what are the potential suitable tests for the notification of a transaction, and what factors must be taken into consideration for the selection of a particular test over others? Second, how can competition authorities innovate as regards the 'theory of harm'? In other words, what should be the design and construct of a theory that can effectively capture the novel concerns in big data mergers? Here, the discussion is not just limited to 'privacy' as a dimension of competition, but also other areas of concern – such as non-horizontal effects in big data mergers. Finally, the paper very briefly discusses key factors to be taken into consideration for designing effective remedies.

**Keywords:** Big Data Mergers, Privacy, Share of Supply Test, Turnover test, Doctrine of Local Nexus, Theory of Harm, Merger Remedies, Apple/Shazam, Facebook/WhatsApp, Facebook/Instagram

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## 1. Introduction

The emergence of multi-sided platforms, connected devices and Internet of Things (IoT) has turned us into a valuable information asset, whereby data about our tastes and preferences as a consumer can be ‘commoditised’. ‘Data’ has always been a valuable input in understanding consumer behaviour, and for targeted advertising.<sup>1</sup> It has traditionally offered large retail stores a strong competitive advantage and bargaining power over their upstream suppliers, and consumers downstream. What makes the current debate exceptional is how following technological disruptions such as digitalisation and the rise of the platform economy, the rapid decrease in the cost of storing large volumes of data (particularly on the cloud), and advanced algorithms available online, ‘data’ today has become ‘essential’ to offer meaningful competition in even the most traditional brick and mortar markets. Even though ‘data’ is the key to competition, and thereby ensures competitiveness across markets – as diverse from retail to healthcare, from taxi rides to air travel, thanks to the *uberisation* of the economy – this valuable reservoir of information is controlled by a handful of Information Technology (IT) firms. Remarkably noteworthy is the fact that a significant proportion of the growth of these IT companies is not organic; instead, most of their valuable innovations have been acquired inorganically through acquisitions! Consider for instance the case of Google, organised since 2015 as *Alphabet Inc.* Known for disrupting the digital space by introducing disruptive services such as – the ‘cost per click’ (CPC) online advertising model, online video sharing platform and now digital health and digital homes – Google has been able to enter these markets by acquiring some 100+ promising start-ups. Google’s success in digital advertising is attributed to its targeted CPC model, wherein the advertiser needs to pay only once the user has ‘actively’ clicked on the advertisement – hence, the name ‘CPC’. This has been possible only following Google’s acquisition of Double Click.

It took almost a decade and following some notable transactions such as Google/Double Click, Google/Sanofi/Joint Venture, Facebook/Instagram, Microsoft/LinkedIn and many others<sup>2</sup>, that the regulators are getting progressively cognizant of the *gap* in the merger control regulation as it stands today. The emergence of Multi-Sided Platforms (MSPs)<sup>3</sup> has effectively put to question whether the current competition policy framework, and merger control in particular, are suitable to address the



nuances of the platform economy. Against this dynamic backdrop, this paper – part of an ongoing comparative and inter-disciplinary research project dealing with Merger Control in the converged telecoms sector<sup>4</sup> – addresses the following research questions. First, what are the potential suitable tests for the notification of a transaction, and what factors must be taken into consideration for the selection of a particular test over others (Section 2)? Second, how can competition authorities innovate as regards the ‘theory of harm’? In other words, what should be the design and construct of a theory that can effectively capture the novel concerns in big data mergers (Section 3)? Here, I limit myself not only to ‘privacy’ as a dimension of competition, I also look at the other areas of concern – such as non-horizontal effects in big data mergers. Section 4 very briefly discusses key factors to be taken into consideration for the design of effective remedies. Section 5 concludes with a framework for further research. These questions are extremely germane to the current debate on big data mergers and *gap* in the merger control framework of the world’s leading competition authorities, including India. In the European Union (EU), for instance, even though the EU managed to evaluate some of these transactions following a referral-up from its Member States (*infra* Section 2), the gap in the EU Merger Control Regulation 134/2004 continues to exist to date. In the Indian context, considering that there exists ‘only’ one competition authority, the Competition Commission of India (CCI), the question merits all the more urgent attention. Notwithstanding the critical mass that these big data mergers offer to the GAFAM in the big data-led economy, scarce ‘academic’ attention has been paid to big data mergers (*infra* Section 2). This is deplorable on account of the fact, that following a merger it is all the more difficult to ‘unscramble the egg’ that is undo a merger. Further, a suitable merger control framework not only needs to explore the tools available in the current merger control toolbox, it also needs to go a step further, and explore new theories of harm and remedies (Sections 2 and 3). It is this *gap* in the current policy framework that this paper seeks to redress.

## 2. Jurisdiction and Notification Thresholds: Time for Re-think?

Section 5 and Section 6 of the Indian Competition Act, 2002 are the relevant provisions as regards the regulation of combinations. As per the provisions of Section 5 of the Competition Act, 2002, a merger is notifiable when the

relevant threshold – in terms of the value of the assets and the turnover – as prescribed, is met. The value of these assets are determined based on their book value, as indicated in the audited account books for the ‘financial year immediately preceding the financial year in which the date of proposed merger falls’. To calculate this value – both tangibles, as well as intangibles, such as the value of the brands, goodwill and intellectual property rights – are taken into account. To be subject to merger control review – either the value of the assets of **the parties to the acquisition**, shall be more than one thousand crore rupees or the turnover shall be more than three thousand crore rupees (in India) or in the alternate, the value of the assets must exceed five hundred million US dollars or turnover should exceed fifteen hundred million US dollars (in or outside India or in the aggregate). Alternatively, **at the group level**, when the joint value of the assets exceeds four thousand crore rupees or turnover exceeds twelve thousand crore rupees (in India) or the value of the assets exceed two billion US dollars or turnover exceeds six billion US dollars (in or outside India or in the aggregate).

In the big data-led economy, where the firms can ‘monetise’ the markets only after the platforms have tipped to one dominant player, and the customer gets locked<sup>5</sup> into the platform – means that many of these high value transactions that need to be closely monitored by the CCI, are neither notified nor reviewed by it. The irony of all this is that considering the significance of data and its associated four Vs (value, volume, velocity and veracity), success in Indian markets is key to the success of any platform-based communications app.<sup>6</sup> The above-referred test fails this litmus test – the current merger control fails, where it probably needs to be most effective in the big data-driven economy. The Facebook/Whatsapp merger is evidently most illustrative of this *gap*.

Shortly after Facebook announced its intentions to acquire WhatsApp for US\$ 19 billion, it was argued that even though the tests under Section 5 of the Competition Act, 2002 were not met, the country’s fair trade regulator ‘could [and should]’ nonetheless scrutinise the deal as the proposed transaction had ‘*substantial local nexus*’ considering that WhatsApp had over 36 million active users, compared to its nearest competitors Line and Hike that had at the time a user base of 16 and 15 million users, respectively (Bose, 2014). The argument raised by Bose (2014) as regards ‘sufficient local

nexus', it may be useful to add, is in alignment with the well-established 'effects-based approach' in international law. As per the approach, if a merger has a substantial connection with the jurisdiction, then the concerned competition authority can review it as per the doctrine of 'local nexus' (Schöning and Ritz, 2018). There also exists a very relevant merger decision of the European Commission that was substantially upheld by the General Court (formerly the Court of First Instance). Gencor, a South African group and Lonrho, a British company were two international conglomerates that were amongst other fields, active in mining and minerals. The proposed concentration was a full-function joint venture that led to the two companies acquiring joint control of the undertaking 'Implats'.<sup>7</sup> As the European Commission's (EC) assessment indicated that the merger would lead to a duopoly – jointly dominated by the merged entity and 'Amplats' – the EC decided to prohibit the said merger.<sup>8</sup> The parties appealed the decision before the General Court (formerly the Court of First Instance). The key procedural contention of the parties was that considering that the merging parties were located outside the Union (at the time, the European Community), the European Commission had erroneously exercised its jurisdiction to prohibit the merger. Rejecting the parties' arguments, the Court as regards the issue of jurisdiction stated as follows:

Article 1 [of the 1989 EU Merger Control Regulation] does not require that, in order for a concentration to be regarded as having a Community dimension, the undertakings in question must be established in the Community or that the production activities covered by the concentration must be carried out within Community territory.<sup>9</sup>

As regards the compatibility of the contested prohibition decision with the principles of public international law, the Court added:

Application of the [EU Merger] Regulation is justified under public international law when it is foreseeable that a proposed concentration will have *an immediate and substantial effect* in the Community.<sup>10</sup>

In that regard, the concentration would, according to the contested decision, have led to the *creation of a dominant duopoly* on the part of Amplats and Implats/LPD in the platinum and rhodium markets, as a result of which *effective competition would have been significantly impeded in the common market* within the meaning of Article 2(3) of the Regulation.<sup>11</sup>

The CCI in the Facebook/WhatsApp merger, however, exercised restraint as the thresholds prescribed in Section 5 of the Competition Act, 2002 were not met, and the Commission is yet to break the ice in terms of reviewing a big data merger (Khan and Chand, 2018). The CCI's restrained approach can be explained on the ground that the current thresholds restrict the CCI's ability to review these high tech and high value mergers. In other words, the *current gap* in the Indian merger control as regards the notification of mergers limits the ability of the CCI to review these high value transactions.

From the perspective of big data mergers, evidence indicates that irrespective of whether it is a horizontal, vertical or even conglomerate merger (which otherwise are considered to be benign, and in fact efficiency-enhancing) merit equal scrutiny. This is on account of the fact that in the platform economy, non-horizontal mergers offer the merged entity an opportunity to envelope and enter into the neighbouring markets and leverage its position of dominance from one market to another.<sup>12</sup> This phenomenon is usually not seen in the brick and mortar world (consider the great cross-Atlantic divide in the GE/Honeywell merger for instance). In the digital space, this, however, is a frequently occurring phenomenon, and therefore, for the purposes of this paper, it is argued that big data mergers – irrespective of whether they are horizontal or non-horizontal – merit equal scrutiny. Case analysis of the Google/Double Click, Google/ITA, Microsoft/LinkedIn and Microsoft/Real Player acquisitions, discussed in Sections 3 and 4 *infra*, unambiguously elucidate this assertion.

Considering the very special nature of the platform economies – network effects, economies of scale and learning effects, discussed *infra* – mergers that adversely impact the process of competition, may have an enduring impact that can neither be remedied by the self-correcting nature of the markets nor through ex-post competition law enforcement. To march towards an effective merger control framework, therefore, the first right step is to ensure that these high value transactions, that currently go un-notified, be made reviewable before the relevant competition authority. In case the review fails to clearly outline the impact of the merger, the competition authority may then decide for either a stricter or more lenient merger enforcement. Such an approach is also vital considering that

following *digitalisation* and the *uberisation* of the economy, an increasing number of otherwise highly valuable mergers in India fail to meet the turnover based requirements of the Competition Act, 2002.

In the European Union, the European Commission until recently confronted a similar challenge. The European Union Merger Regulation (EUMR) 139/2004 recommends a turnover-based test for the review of mergers. This has led to a call for the reform of the EU Merger Control. In 2015, the German *Monopolkommission*, an independent body that advises the German government and public authorities on competition and regulatory issues, undertook a detailed study on competition law enforcement in the digital markets. As regards merger control in the digital markets, the *Monopolkommission* recommended key changes to the notification regime (Monopolkommission, 2015). Following these recommendations, first Germany and subsequently Austria amended their rules for the notification of mergers.<sup>13</sup> According to the new test, introduced by the 9<sup>th</sup> Amendment of the Act against Restraints of Competition (ARC), in case the value of the transaction exceeds 400 Million Euros (€), the *Bundeskartellamt* (BKA), the German Federal Cartel Office, may review the proposed transaction.<sup>14</sup> Shortly thereafter, Austria too amended its Cartel and Competition laws to introduce a similar notification threshold. In Austria, the threshold is set at €300 million (Reinart, 2017), unlike the German competition law wherein the threshold for notification is €400 million.

Before going into the merits of the amended tests introduced by the German and the Austrian authorities, it may be useful to add that it is not for the first time that a competition authority has taken into account the ‘value of the transaction’ as the relevant criteria for notification. In the US, following the Hart-Scott-Rodino (HSR) Antitrust Improvements Act of 1976, merging parties are since 1976, required to notify the Federal Trade Commission (FTC) and the Department of Justice (DoJ) in case, amongst others, the value of the deal exceeds an annually adjusted threshold.<sup>15</sup>

In addition to the ‘value of the transaction’ test, there exists another very interesting ‘share of supply’ test. In the UK, for example, the 2002 Enterprises Act, in addition to the ‘turnover-based test’ recommends the ‘share of supply’ test. According to the latter, in case the merging parties fail

to meet the 'annual turnover-based threshold' (currently at £70 million), the Competition and Markets Authority (CMA, formally the OFT, the Office of Fair Trading) may nonetheless review the proposed transaction in case the merging parties capture over 25 per cent of the relevant market.<sup>16</sup> Utilising the provisions of this 'share of supply' test, the then OFT (now the CMA) reviewed two notable big data mergers. In Facebook/Instagram, even though both Facebook and Instagram at the time of the merger, were freely downloadable apps in the UK, and thus, did not generate any substantial revenues, the OFT (now the CMA) could nonetheless review the merger as Facebook's market share at the time of the proposed transaction was well-above the 25 per cent threshold, and the acquisition of Instagram was expected to further strengthen this position of Facebook in the relevant geographic market of the UK for virtual social networking services.

In the European Union, recurring calls for a reform of the EU Merger Control notwithstanding, the EC is yet to introduce any changes to the current turnover-based test – that in its current form is substantially similar to the provisions of the Indian Competition Act, 2002. The question that remains unanswered is then how did the EC manage to review many of these transactions – most notably, the 2018 unconditionally cleared Apple/Shazam merger or the 2016 Facebook/WhatsApp merger?

Both Facebook/WhatsApp and Apple/Shazam had failed to meet the turnover based thresholds of Articles 1(2) and 1(3) of the 2004 EUMR.<sup>17</sup> In the EU, if a transaction is capable of being reviewed by three or more Member States, then the notifying parties, may by 'means of a reasoned submission' within the meaning of Article 4(5) of the Merger Regulation request the European Commission to review the merger.<sup>18</sup> In case the Member States express no disagreement with this referral, the proposed concentration can be considered to have a 'Union dimension' and be reviewed by the Commission. In Facebook/WhatsApp, thanks to this provision, the Commission could review the proposed transaction.

In the year 2018, Apple proposed to acquire Shazam for about US\$ 400 million (about €363 million). Considering Shazam's limited worldwide turnover, even though the EU Merger Control thresholds were not met, the transaction was, however, following the 2017 amendments to the German and Austrian laws, caught by the 'value of the transaction' test. Herein, also lies a subtlety. Considering the €400 million threshold in the German ARC,

the transaction was *not* notifiable to the German competition authority BKA. As the Austrian threshold was lower and set at €300 million, the proposed transaction was notified to the Bundeswettbewerbsbehörde (BWB), the Austrian Federal Competition Authority. Pursuant to the provisions of Article 22(1) of the EUMR, the Austrian BWB in turn 'referred up' the Apple/Shazam merger to the European Commission. As the national competition authorities (NCAs) of the other Member States joined the Austrian FCA in this referral request, the Commission acquired jurisdiction to examine the proposed concentration.<sup>19</sup>

The Facebook/WhatsApp and Apple/Shazam transactions decorously illustrate the nuances of how the EU merger control operates procedurally. This flexibility to 'refer up' and 'refer back' is very peculiar to EU competition law, and is unavailable across other jurisdictions. Benefitting from this co-operation between the European Commission and the NCAs, the Commission has, for the time being, declined to amend the current threshold tests or introduce any significant reforms to the EU Merger Control. In the aggregate, considering the flexibilities available, such as 'references' from the NCAs to the Commission, and *vice versa*, the European Commission enjoys the flexibility to 'wait and watch', and if required, based on the experiences, implement changes to the EUMR framework.

In the Indian context, however, this flexibility is absent, and with the CCI as the country's only competition authority, that ensures that 'the "*Common Man*" or the "*Aam Aadmi*" has access to the broadest range of goods and services at the most competitive prices', it is crucial, that as a first step, it *gets* to review these mergers. The question of ensuring this jurisdiction implies first, a selection of the most appropriate test for the notification of the transaction; and second, the selection of a suitable threshold that shall prompt the requirement for notification. In other words, should the test be the 'share of supply' or the 'value of the transaction' test? Second, if, for instance, the test eventually incorporated is the 'share of supply' test, then what should be the threshold – 25 per cent as in the case of the UK Enterprises Act, 2002 or some other, whether a higher or a lower, threshold?

If, in the alternative, the new additional test adopted is the 'value of the transaction' test, then what should be a suitable value – an annually adjusted value as in case of the US HSR Act or €400 million as in case of

Germany or €300 million as is the case in Austria, or some other lower or higher threshold?

These are questions of vital significance considering that there exist substantial demographic and purchasing power parity (PPP) differences between India, and other jurisdictions, where these proposed tests are currently in force. Consider, for instance, if the CCI were to adopt the 'share of supply' test. The UK with a homogenous population and the same national language used across the country can effectively implement the share of supply test with a 25 per cent threshold. In case of India, however, with a national population of 1.3 billion and 23 official languages, the CCI in case of a telecoms/media merger, for instance, will certainly come across distinct sub-markets.<sup>20</sup> For an effective and meaningful reform of the current test for the determination of jurisdiction, and the notification thresholds, the subtleties of the country need to be taken into consideration. These are some procedural aspects that impact the choice of the relevant test. In addition, there is an additional policy consideration that must be taken into account. The ICT and the pharmaceuticals sectors are the two key innovation-driven industries that are vital to promoting both competition and innovation. Considering the peculiarities of these two sectors – in case of the ICT sector, this being profitability flowing, only after the network effects tip the market towards a given platform or a product, and in the pharmaceuticals meaning that small firms may get acquired early on (typically during phase III of the trials) when they enjoy little or no turnover – choice of an appropriate test for notification is of vital significance. The value of the transaction, usually determined by the parties based on the expected future cash flows, therefore, is a first good indicator of how these transactions are expected to impact the profitability of the acquiring firms.

### **3. Theories of Harm: The Road (Less Travelled) to Innovation**

Notification is only the tip of the iceberg. This current 'gap' in merger control is evident not *only* in determining the jurisdiction and the choice of a suitable filing threshold; it is also evident in the challenges associated with the correct identification of the resulting harm. The traditional theories of harm – such as unilateral effects, foreclosure effects, etc.,<sup>21</sup> – that well capture the potential harm in ICT mergers, are ineffective in addressing the real concerns in big data mergers. To appreciate the reason



for the failure of the current theories of harm one must be cognizant of the peculiarities of the digital economy. Considering that the additional cost of producing an additional digital copy, such as that of an e-book or software is negligible, Lemley (2015) uses the expression 'zero-price economy' and 'zero marginal cost society' to describe this digital economy. In the zero-price economy, evaluating harm based on the classic principles of neo-classical economics may lead to erroneous results.<sup>22</sup> This may be attributed to the fact that the services offered often have zero price in terms of monetary value, even though it may have other significant costs incurred by the consumer, such as the valuable information shared by him/her as regards his/her tastes and preferences. In other words, even though the consumer pays no monetary consideration for the services offered by these digital platforms, and therefore, the price may not be the relevant parameter of competing in these markets. Consider this with the very simple example of communication apps. To call one's friends and family using a fixed line, or mobile phone has monetary costs, which based on the distance, whether local or international, may be substantial. But with the available digital communication apps, today it costs virtually next to nothing to call someone, irrespective of whether they are near or afar. Notwithstanding such a high utility for the consumer, why do these Apps increasingly prefer to offer their services devoid of any monetary costs? Even more intriguing is why these promising startups (such as WhatsApp) get acquired by the established GAFAM for such insane sums? The European Commission (EC) assessed these concerns in Facebook's US\$ 19 billion acquisition of WhatsApp, as the merger offered Facebook access to WhatsApp's valuable user data. As part of the various theories of harm, the EC also assessed the possibility of whether Facebook could combine the two data sets – that is the user data from its social networking site, Facebook, and the data from WhatsApp.<sup>23</sup> Facebook suggested that considering its diverse technical architecture, which was tied to its users' Facebook id, and WhatsApp, which was tied to its users' mobile phone number, it was 'technically impossible' to integrate the two services, and therefore, the parties were not in a position to integrate the two user groups into 'one common network'.<sup>24</sup> Adding that if any post-merger data-related concerns were to arise, the relevant provisions of the 2016 EU General Data Protection Regulation (GDPR) could address those concerns, the EC unconditionally cleared the merger.

Post-merger investigations by the EC, however, indicated that the foregoing information provided by Facebook was incorrect, considering that even at the time of the review, Facebook was technically very close to finding a common basis (in technical terms 'Phone ID matching solutions') to integrate the users' Facebook and WhatsApp accounts.<sup>25</sup> Following these findings, Facebook was fined €55 million for providing misleading information to the EC.<sup>26</sup>

The competition authorities discomfort with Facebook's acquisition of WhatsApp and Instagram do not stop here. Following a year-long probe, the US FTC has gone even a step further than the European Commission, and for the first time is planning to unscramble a digital egg – in other words, file an antitrust lawsuit calling for the divestiture of WhatsApp and Instagram from the digital giant.<sup>27</sup>

In the Google/Double Click, the merger offered Google the possibility to combine the 'deep information' gathered through Double Click that, in turn, could be combined with the 'broad and general information' about the consumer's web surfing habits.<sup>28</sup> When the merger was first proposed in 2007, some of the Commissioners, such as the then Commissioner Harbour at the US Federal Trade Commission (FTC) anticipated the possibility that Google may potentially 'commercially use' this 'deep information', and therefore, in a dissenting opinion argued that the merger be conditionally cleared.<sup>29</sup> However, as the other Commissioners saw no harm to competition, Google/Double Click received the US FTC's unconditional clearance.<sup>30</sup> On the other side of the Atlantic, the EC too unconditionally cleared the merger, as it observed that any data and privacy-related issues were to be taken care of by the then Data Protection Directive (since replaced by the more stringent and mandatory 2016 EU GDPR).<sup>31</sup>

In another study, I identify that the distinct industry-specific challenges posed by the Information Communications Technology (ICT) markets, and the telecommunications sector – can be, with suitable adaptations, effectively met by the flexibilities offered by the current EU merger control framework.<sup>32</sup> However, considering the peculiarities of the platform economy – such as the 'economics of zero', network effects, economies of scale and scope and platform envelopment<sup>33</sup> – the current merger control framework certainly merits a critical re-think. Availability of *valuable*

*news and knowledge*, and other services to the consumers for ‘free’ for the *invaluable information* that the consumers offer about themselves in return merits contemplation (Furman, 2019). In order to effectively capture these big data mergers, ‘privacy’ and ‘data’ should be more central to antitrust analysis (Swire, 2007). Swire (2007) argues that privacy be considered a dimension of competition. In the more recent Microsoft/LinkedIn merger, the European Commission was of the opinion that the merger could lead to the reduction of consumer welfare in the market for Professional Services Networks (PSNs). Competing providers of PSN, such as Xing, that offered enhanced privacy options were expected to be marginalised following post-merger foreclosure strategies by the merged entity.<sup>34</sup> The remedies, as the following section discusses, addressed these foreclosure concerns.

Network effects can be direct (as in case of telephone networks) or indirect (as was the case in the classic Microsoft Windows abuse of dominance case). Indirect network effects, have been over time identified to lead to another very unique phenomenon in platform markets, referred to as ‘market envelopment’.<sup>35</sup> First defined in the context of Microsoft Media Player’s ‘envelopment’ of the then dominant music player, ‘Real’ (Eisenmann et al., 2010; Parker et al., 2016); this theory has recently gained significant traction in the debate on the reform of competition policy.<sup>36</sup> Market Envelopment means that it is extremely profitable for firms to leverage their dominance from one market to another neighbouring market, and thereby develop an ‘ecosystem’ of services, such that the consumer never leaves the platform.<sup>37</sup> Considering these distinctive features of the platform economy, non-horizontal mergers, that have generally been considered benign and actually efficiency-enhancing, can in effect substantially harm the process of competition and innovation.<sup>38</sup> To effectively counter these effects, authorities need to develop newer and more novel theories of harm that take into account the distinct nature of the digital economy (Crémer et al., 2019). A key contribution of such a reform policy will be the possibility to capture and assess non-horizontal mergers. Considering the complexity and exceptionally long time taken in case of follow on abuse of dominance cases (Budzinski and Stöhr, 2018), merger control may be a more useful instrument to ensure competitive digital markets. Moreover, once the platforms have tipped to dominance, and the competitors have been eliminated, there is limited, if any, possibility to resuscitate contestability in the tipped markets. Considering this complex dynamics

of the digital economy, the Furman Report (2019, p.54) called for the setting-up of a Digital Markets Unit (DMU), that amongst others could identify, and focus on companies with a 'strategic market status', that is identify and regulate companies that enjoy a position of significant market power 'over a gateway or bottleneck', and thus, 'control others' market access. In addition to regulated monitoring of these firms, the Report also called for an obligatory reporting by these firms.

#### **4. Re-thinking Remedies**

This section offers a brief overview of an effective remedial design for digital mergers. In other words, considering the very special nature of the platform economies, such as network effects, QWERTY-nomics and customer lock-in, the discussion evaluates what can be a good remedial design – that preserves merger-specific efficiencies, while successfully circumventing any potential anti-competitive effects of the proposed transaction?

QWERTY-nomics refers to the set of factors – such as learning effects, economies of scale and customer lock-in – that establish a given product or platform as the dominant standard. QWERTY-nomics comes from the QWERTY keyboards that we see on our laptops and computers (previously typewriters). The key alternative keyboard is the DSK (the Dvorak Simplified Keyboard), more familiar to the Apple Mac users (Arthur, 1983). Even though the DVORAK keyboard in many a contests proved to be more efficient and superior to the QWERTY keyboards, however, once a certain critical number of users tipped towards the latter, QWERTY keyboards emerged as the *de-facto* standard.<sup>39</sup> Switching to other standards would require learning and adapting to the new device, and hence, following these learning effects, one observes that customers get locked-in to these devices. This industry-specific feature, therefore, is the first important consideration to keep in mind for an effective design of remedies.

Second, it is generally agreed that non-structural remedies are highly effective in the ICT sector in general and the platform economy in particular.<sup>40</sup> Non-structural remedies, here mean the remedies that effect the behaviour of an enterprise, as distinguished from the structural remedies, that alter the structure of an enterprise. Delineation of remedies as structural and non-structural is more appropriate instead of the alternate classification as structural and behavioural.<sup>41</sup> It has been observed that

non-structural remedies – such as non-discriminatory access, licensing and firewall remedies are also the more frequently employed remedies in ICT and telecommunications mergers.<sup>42</sup> Parties' access commitments to the US Department of Justice (DoJ) in the Google/ITA are insightful in this regard. In 2010, Google proposed to acquire ITA, the world's leading provider of airfare pricing and shopping system (P&S system).<sup>43</sup> To address the DoJ's 'vertical' competition concerns, the parties offered a set of non-structural commitments, that included – licensing of QPX and InstaSearch, two key software solutions – to potential licensees on 'fair, reasonable and non-discriminatory' (FRANDly) terms.<sup>44</sup>

Another very interesting decision as regards the design of remedies is the European Commission's conditional clearance of Microsoft's acquisition of LinkedIn. Even though the Commission's analysis is very insightful as regards the impact of the big data on markets as dispersed from search to professional networking (Hatton et al., 2018), the remedies addressed the European Commission's conglomerate concerns (and not any big data-related concerns).<sup>45</sup> More particularly, the merger was expected to lead to foreclosure of competing PSNs, as Microsoft's existing monopoly in the productivity software offered it the possibility to integrate LinkedIn features into Office. To address these concerns, the parties offered 'Integration Commitments', according to which other PSNs could access, without any discriminatory terms and conditions, Office's Add-in Programme and the associated Application Programming Interface (API).<sup>46</sup> This decision not only highlights how conglomerate mergers, usually considered to be benign, may in the digital world lead to anti-competitive concerns. The design of remedies, in addition, signals the value of access remedies, in ensuring that, whereas on the one hand, the merged entity continues to enjoy the economies of scale and scope, the key to success in platform economies, then on the other, new entrants, with access to the key resources and facilities, that constitute significant barriers to market entry, can effectively enter the relevant markets and compete on the merits.

It may be useful to add here that the foregoing merger decisions offer a useful benchmark for design of remedies in big data mergers. To date, however, no competition authority, to the best of the knowledge of the author, required remedies on account of big data-related concerns in merger control.

## 5. Summary

For the design of an effective merger control framework, it is absolutely essential that the competition authority at least gets to review big data mergers in order to understand their true impact on competition and innovation in the relevant market.

This paper makes the following evidence-based recommendations to improve the current merger control framework in India. The first recommendation is to amend the current tests for the determination of jurisdiction, and the notification thresholds. Moreover, considering the demographic peculiarities of the Indian markets, any amendment to these tests, must in addition, also present the flexibility to duly account for the distinct sub-markets (or the regional markets) with all their linguistic and cultural diversity across the country (Section 2 *supra*). This is particularly germane while assessing mergers in the converged telecoms sector.<sup>47</sup>

It is true that both type I (false positive) and type II (false negatives) have significant externalities on the process of competition and innovation in an economy. With the significant Chicago school influence, the general tendency has been to err towards type II (false negatives) rather than type I (false positives) (Devlin and Jacobs, 2010). The approach is principally grounded in the belief that the effect of a 'pro-competitive behaviour', if erroneously prohibited, will be irreversible, whereas the effect of an anti-competitive conduct, if allowed, will be transient on account of the 'self-correcting nature' of the markets.<sup>48</sup> As the experience of hindsight reveals, this may not necessarily be true in the digital world. The UK CMA's unconditional clearance of the *Facebook/Instagram* merger, in retrospect identified as a 'naïve decision' by its Chief Executive Andrea Coscelli, is a case in point (Ibitoye and Ebersole, 2018). This word of caution brings my recommendation to address the second and third *gap* in the current merger control framework. We have come a long way from the Chicago to the post-Chicago world, where in game theoretical models have significantly contributed to our understanding of strategic behaviour in the digital economy.<sup>49</sup> What can be those potential theories of harm, that can first, take the peculiar strategic behaviour of the firms into account? And second, how can privacy be identified as a dimension of competition? As regards these questions – this paper recommends the need to systematically assess

and address the strategy of ‘platform envelopment’, a commonly identified behaviour in the digital markets. In other words, this paper recommends that non-economic parameters of competition such as privacy be taken into account.

Fourth, as regards the design of remedies, the decisions referred to, particularly the Google/ITA merger, offer a useful first indicator of designing effective remedies for big data mergers.

A notable limitation, and perhaps a recommendation for further research that this paper offers is an empirical assessment of the value of data. This is particularly important, considering that India is the world’s second most populated country, and for any online service provider to succeed on a global level, success in the Indian markets is a *sine qua non*. It is the value of data that fuels the engine of these big data mergers. To understand the subtleties of these mergers, the value of this data needs an economic assessment, a quantification.

## Endnotes

- <sup>1</sup> For an interesting account of how a leading US-retail store data-mined customer information to accurately predict the pregnancy of a teenage girl, see Hill (2012).
- <sup>2</sup> On account of the word limit, only key highlights of the European Commission’s decisions in these cases are discussed here. For a detailed case study analysis of these and other big data mergers, see Tyagi (2019a).
- <sup>3</sup> For the sake of simplicity, and considering the word limit, the expression platform economy has been generally and interchangeably used to refer to various kinds of multi-sided platforms. A well-rounded discussion will necessarily call for deliberating on the fine distinctions between different kinds of transaction-based and non-transaction-based platforms. See Filistrucchi et al. (2013).
- <sup>4</sup> The expression ‘converged telecoms sector’ refers to the various sectors of the economy that have been disrupted following convergence, digitisation and digitalisation of the economy. With such an encompassing definition, it refers not only to the convergence of fixed/mobile and content, but also to the platform economy. Considering the word limit, in this paper, however, the discussion concentrates only on the platform economy, and the acquisitions by GAFAM (Google, Amazon, Facebook, Apple and Microsoft), currently under the radar of the competition authorities worldwide. For a comparative study and the research insights on the converged telecoms sector see Tyagi (2019a). For inter-disciplinary insights using inputs from competition policy and business strategy, see Tyagi (2019b).
- <sup>5</sup> Customer lock-in may happen on account of a number of factors, most notable amongst them being switching costs and learning effects. Switching Costs refers to the costs

incurred in terms of switching from one service provider to another. These may be fixed costs such as the investments made in terms of purchasing new hardware or software or learning effects that is the time required to learn how to use and adapt to a new interface.

<sup>6</sup> Even for Facebook, India is one of its biggest and most crucial markets. Threatened from the success of TikTok in India, Facebook launched its Tik Tok clone in India. The Indian market, therefore, is not only crucial to the success of the social networking giant; it also is a place to test new products and services. Manish Singh, Facebook tests TikTok-style video format on its main app in India, *Tech Crunch* (14 August 2020)

<sup>7</sup> Case No IV/M.619 Gencor/Lonrho, paras 4-12.

<sup>8</sup> *Ibid.*, para 219.

<sup>9</sup> Case T-102/96 *Gencor Ltd v Commission of the European Communities*, Judgement of the Court of First Instance (Fifth Chamber, extended composition) [1999] ECR II-753, para 79.

<sup>10</sup> *Ibid.*, para 90.

<sup>11</sup> *Ibid.*, para 91. Emphasis added.

<sup>12</sup> See Tyagi (2019a), pp. 31 ff.

<sup>13</sup> For a detailed discussion on jurisdiction and filing thresholds, see Tyagi (2019a), 277-280.

<sup>14</sup> Bundesministerium für Wirtschaft und Energie (2019a), available only in German. For an English summary of the changes, see Freshfields Bruckhaus Deringer (2017).

<sup>15</sup> The value is adjusted annually. The original prescribed value was US\$ 200 million, with the current adjusted threshold for the year 2018-19 being US\$ 337.6 million. See, Federal Trade Commission (2018).

<sup>16</sup> UK Enterprises Act, 2002, Sec. 23.

<sup>17</sup> Council Regulation (EC) No 139/2004 of 20 January 2004 on the control of concentrations between undertakings [2004] OJ L24/01, Article 1(2) and 1(3).

<sup>18</sup> *Ibid.*

<sup>19</sup> *Apple/Shazam* (Case M.8788) [2018] OJ C417/04, paras 6-9.

<sup>20</sup> See, for example, the Competition Commission of India Combination Registration No. C-2012/03/47 (28 May 2012) in Reliance Industries Limited/Independent Media Trust <<https://www.cci.gov.in/sites/default/files/faq/C-2012-03-47.pdf>> accessed 6 December 2019. In the said decision, however, the complexity of sub-markets was not discussed. The discussion was confined to contestability of the markets and the ease of starting new channels. The CCI at para 29 observed, 'It is apparent from the above that new television channels can be started with ease in India with sufficient scope for innovation and competition, both in terms of technology and content.' Further, even though the relevance of targeted national and regional viewership was referred to in



para 28, it was not elaborated, considering the CCI's observations as regards the ease of starting new channels (para 29). It may be interesting to compare this approach of the CCI with the European Commission's distinct approach as regards regional markets with different *lingua franca*. See, for example, the European Commission's decisions in the Dutch Liberty Global/Ziggo and its preliminary observations in the Telia/Bonnier Broadcasting merger, discussed in Tyagi (2019c).

- 21 For a discussion on unilateral effects and other non-horizontal theories of harm in the ICT sector, see Tyagi (2019a), 47 seq.
- 22 See Tyagi (2019a), p. 265 seq.
- 23 Facebook/WhatsApp (Case No COMP/M.7217) [2014] OJ/C 4174, paras 180-190.
- 24 *Ibid.*, paras 116-142.
- 25 Commission Decision of 17.05.2017 imposing fines under Article 14(1) of Council Regulation (EC) No. 139/2004 for the supply of an undertaking of incorrect or misleading information (Case No. 8228 – Facebook/WhatsApp), paras 61 seq.
- 26 *Ibid.*, paras 107-108.
- 27 See Kendall, McKinnon and Tracy (2020) and Tracy (2020). It should come as no surprise that by the time this paper gets published, the digital eggs may be on their way to get unscrambled!
- 28 Preliminary Opinion of the European Data Protection Supervisor, 'Privacy and competitiveness in the age of big data: The interplay between data protection, competition law and consumer protection in the Digital Economy' (March 2014), 29-30 <[https://secure.edps.europa.eu/EDPSWEB/webdav/shared/Documents/Consultation/Opinions/2014/14-03-26\\_competition\\_law\\_big\\_data\\_EN.pdf](https://secure.edps.europa.eu/EDPSWEB/webdav/shared/Documents/Consultation/Opinions/2014/14-03-26_competition_law_big_data_EN.pdf)> accessed 6 December 2019.
- 29 Dissenting Statement of Commissioner Pamela Jones Harbour, Google/DoubleClick, FTC File No. 071-0170 (Dec. 20, 2007) <[https://www.ftc.gov/sites/default/files/documents/public\\_statements/statement-matter-google/doubleclick/071220harbour\\_0.pdf](https://www.ftc.gov/sites/default/files/documents/public_statements/statement-matter-google/doubleclick/071220harbour_0.pdf)> accessed 6 December 2019.
- 30 Press Release, Federal Trade Commission, Federal Trade Commission Closes Google/DoubleClick Investigation (Dec. 20, 2007), <<https://www.ftc.gov/news-events/press-releases/2007/12/federal-trade-commission-closes-googledoubleclick-investigation>> accessed 6 December 2019.
- 31 *Google/DoubleClick* (Case COMP/M.4731) [2008] OJ C184/10.
- 32 Tyagi (2020). For a discussion on market envelopment, and non-horizontal harm in particular, see Tyagi (2019a), 37-38.
- 33 *Ibid.* For a detailed and systematic discussion on these factors, see Tyagi (2019a), 31 seq. See also the references therein.
- 34 Microsoft/LinkedIn (Case M.8124) [2016] OJ/C 388/04, paras 339-352.
- 35 See Tyagi (2019a), 37 seq.

- <sup>36</sup> Bundesministerium für Wirtschaft und Energie (2019b), 17 seq. Kindly note that the report is available only in German.
- <sup>37</sup> *Ibid.*
- <sup>38</sup> *Ibid.*
- <sup>39</sup> Here the discussion is limited to de-facto standard setting, and the emerging QWERTY-nomics. Standard Setting may also be de jure, as, for example, standards being set by the Standard Setting Organisations (SSOs). An interesting interplay of standard setting and merger control can, for instance, be seen in the Google/Motorola merger. For a comparative discussion of the unconditional clearance decisions of the US and EU competition authorities (that took account of Google's commitment to the SSOs to offer FRANDly access to Motorola's patents) on the one hand and the conditional clearance decision of the then Chinese Ministry of Commerce that following Google's clear commitments to offer FRANDly access to Motorola's patents, offered conditional clearance, see Tyagi (2019a), 88 seq.
- <sup>40</sup> See Tyagi (2019a), 143 seq.
- <sup>41</sup> On a property rights-based reason, and the effectiveness of such a classification, see Tyagi (2019a), 161 seq.
- <sup>42</sup> *Ibid.*
- <sup>43</sup> United States v. Google Inc., Case No. 1:11-cv-00688, 2011 WL 1338047, Complaint 3 (D.D.C. Apr. 8, 2011), < <https://www.justice.gov/atr/case-document/file/497686/download>> accessed 5 December 2019.
- <sup>44</sup> *Ibid.*
- <sup>45</sup> Microsoft/LinkedIn (Case M.8124) [2016] OJ/C 388/04. For a detailed case study based analysis of the decision, see Tyagi (2019a), 290 seq.
- <sup>46</sup> *Ibid.*
- <sup>47</sup> See Tyagi (2019c).
- <sup>48</sup> Devlin and Jacobs (2010). See also the references therein.
- <sup>49</sup> See Tyagi (2019a).

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