

COMPETITION LAW IN THE DIGITAL WORLD

PART I: UNDERSTANDING THE FRONTIERS

I. Introduction

Since the cusp of the millennium, our society has been a witness to augmented technological innovations and advancements. Our ability to better procure and perceive the data surrounding us has allowed us to cross new horizons and get access to a better understanding of the world we live in. These developments have resulted in a reflection of almost all that we do, into virtual and online outlets. Take, for instance, a basic function such as communication. Rapid developments in our technologies have allowed large scale interactions between populations with the help of social media. To illustrate the significance of social media in communication, a report released by Facebook demonstrates how the “six degrees of separation”¹ have today been reduced to less than four.²

The vast increment in our technological capacities has given rise to an increasingly digitized economy, where consumers often come across seemingly free services over the internet, for instance web-search services, which may be provided by a platform. In such cases, more often than not, consumers find themselves providing their data as a consideration for the services availed from the platform rather than paying a direct monetary consideration in exchange for the services. These platforms, in turn, monetize this consumer data by providing it to advertisers that use it to target consumers with personalized and relevant advertisements. It is an efficient system, reducing costs, both for businesses as well as consumers. Businesses can get better returns on investment, both in terms of resources spent on developing products the

¹ The Six degrees of separation is a concept first proposed by, among others, the Hungarian author and playwright Frigyes Karinthy in 1929, in his compilation of short stories titled “Chains”. The basic idea is that all the people in the world are six or fewer steps away from each other, irrespective of physical distances or anonymities between the two ends, operating through a “friend of a friend” model.

² Three and a Half Degrees of Separation, Research Report by Facebook, Available @ <https://research.fb.com/three-and-a-half-degrees-of-separation/>. The exact distance between any two people on the planet has been deduced to be 3.57 persons as per Facebook. See also: <https://www.nytimes.com/2016/02/05/technology/six-degrees-of-separation-facebook-finds-a-smaller-number.html>

market wants and also in terms of advertising costs by reaching out to groups who are most likely to purchase those products. Correspondingly, it reduces a consumer's search costs, i.e., the cost the consumer would bear to look for the good or service that would best satisfy his/her want (for e.g., consider the fuel spent on reaching the markets and the time spent on looking for the desired product).

However, the manner in which operation of these markets has manifested itself in this 'Digital World' may raise potential legal concerns. Competition authorities across jurisdictions are becoming more and more cognizant of the evolution and rise of new business models which are more or less centred around the collection and processing of data in general, and consumer data in particular. Specific characteristics of the market, (such as disproportionately high returns to scale, network effects and the barriers to entry that may be erected as a result thereof) which have been discussed below and in subsequent trends, suggest that there is an increased likelihood of positions of entrenched market power, compared to traditional industries.³

Competition law essentially evaluates a firm's conduct / behaviour in the market. For the Digital world, this branch of law cannot afford to be reactive. Proactive measures must be taken in terms of effective market studies to understand and address alleged behavioural concerns.

Given this fact, it is important to appreciate that while on the one hand, markets in the Digital Economy are rapidly evolving and pose new challenges, on the other hand, competition law is tasked with scrutinizing the conduct of participants in the market and as a result is reactive. Even for an ex ante analysis (merger control), the

Owing to the inherent differences in the ways in which markets function, authorities must constantly re-evaluate enforcement strategies within the text of the law to keep pace with the needs and challenges of the market

authorities need to be aware of the market practices and also the future evolution of such practice to effectively address such ex ante concerns. It is, therefore, imperative that

³ Case COMP/C-3/37.792 Microsoft, decided on 24.03.2004, at Para 470.

competition regulation keeps pace with new challenges that markets in the Digital Economy pose and not wait for the market to 'stabilize'. It has been an accepted position that competition regulatory authorities cannot debar themselves from examining the position of an undertaking in an evolving and growing market pending its final consolidation, since this may mean an *ex post acceptance of any abuses committed*.⁴ As courts in other jurisdictions have observed, to subordinate the application of competition rules to a complete stabilisation of the market would be to deprive the competition authorities of the power to act in time before the abuses established have exerted their full effect and the positions unduly acquired have thus been finally consolidated.⁵

However, before delving into the application and dynamics of competition law in this area, it is imperative to understand the background and certain essential features of this new world order. Therefore, through this part of the trend on the subject, we first try to show why increased interaction between competition law and the digital economy is going to be an inevitable trend in light of fundamental changes in the global business landscape and how increasing internet penetration across the globe, as well as India, has pushed India in the position of one of the fastest growing e-commerce markets. We then highlight some of the defining features of the digital economy. This lays the background for our next series of trends, where we shall observe how competition law operates in these new-age markets by taking insights from the cases already decided by CCI as well as challenges that the competition regulator is likely to address in the not-so-distant future from the experiences of other jurisdictions.

II. Digital Economy – Establishing a Trend

The increment in Information and Communication Technologies (ICT) has been a primary driver of evolution for the Digital Economy which has led to a fundamental shift in the global business landscape. This can be demonstrated by way of the following tables. In 2009, the list of top 10 companies by market capitalization was dominated by companies in sectors such as oil and gas and telecommunications, with only one company operating in the information technology industry (Microsoft).

⁴ COMP/38.233 - Wanadoo Interactive, decided on 16.07.2003, at Para 217.

⁵ Ibid, at Para 301.

Table 1 – Top 10 Global Companies, 31st March 2009*(in terms of Market Capitalization in US\$ Billions)*

Rank	Company	Industry	Market Cap.
1.	Exxon Mobil	Oil and gas	337
2.	Petro China	Oil and gas	287
3.	Walmart	Consumer Services	204
4.	Industrial and Commercial Bank of China	Financials	188
5.	China Mobile	Telecommunications	175
6.	Microsoft	Technology	163
7.	AT & T	Telecommunications	149
8.	Johnson & Johnson	Healthcare	145
9.	Royal Dutch Shell	Oil and gas	139
10.	Proctor & Gamble	Consumer Goods	138

Source - PricewaterhouseCoopers, 2018, *Global Top 100 Companies by Market Capitalization: 31 March 2018 Update* (London).

However, there has been a fundamental shift which has been generated in less than a decade, where 7 of the top 10 companies in the world in 2018 operate in the Digital Economy.⁶

Table 2 – Top 10 Global Companies, 31st March 2018*(in terms of Market Capitalization in US\$ Billions)*

Rank	Company	Industry	Market Cap.
1.	Apple	Technology	851
2.	Alphabet (Google)	Technology	719
3.	Microsoft	Technology	703
4.	Amazon	Consumer Services	701
5.	Tencent Holdings	Technology	496

⁶ Competition issues in the digital economy, United Nations Conference on Trade and Development TD/B/C.I/CLP/54, 01.05.2019 Available at:

https://unctad.org/meetings/en/SessionalDocuments/ciclpd54_en.pdf

6.	Berkshire Hathaway	Financials	492
7.	Alibaba	Consumer Services	470
8.	Facebook	Technology	464
9.	J.P. Morgan Chase	Financials	375
10.	Johnson & Johnson	Healthcare	344

Source - PricewaterhouseCoopers, 2018, *Global Top 100 Companies by Market Capitalization: 31 March 2018 Update (London)*.

In order to capitalize on this growing trend, India has set for itself the commendable yet ambitious target of ensuring high speed internet penetration in the remotest parts of the country as part of the Digital India programme. With a young population, relatively increasing disposable income and the second largest telecommunication industry in the world, India is seen as one of the largest growing markets for businesses emerging in the digital economy generally, and e-commerce specifically. With this growth, it is imperative for the Competition Commission of India to use advocacy measures to understand the evolution of the market and ensure that behavioural checks are in place for the various markets that operate within the Digital Economy.

As part of the 'Digital India' vision, the government has recently allocated INR 60 billion towards the 'Bharatnet' project to create telecom infrastructure required for providing broadband connectivity to all the Gram Panchayats in the country and facilitate non-discriminatory access to service providers, for provisioning of broadband services in rural areas.⁷ The efforts towards increasing internet penetration in India seem to be paying off, as according to some estimates, internet penetration rate in India has increased to nearly around 50 percent in 2020, from just around 4 percent in 2007. If these estimates were to be considered, it would mean that approximately half of a population of close to 1.37 billion people have access to the internet in 2020. This ranks the country second in the world in terms of active internet users.

⁷ Union Budget for FY 2020-21, Department of Telecommunications, Demand No. 13 "Compensation to Service Providers for creation and augmentation of telecom infrastructure" under Bharatnet Project

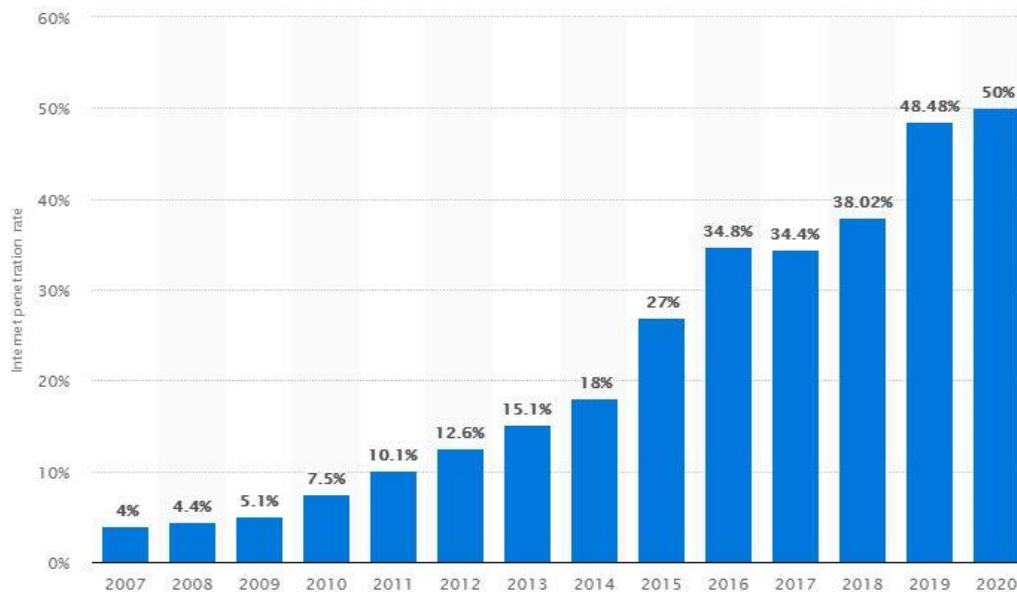
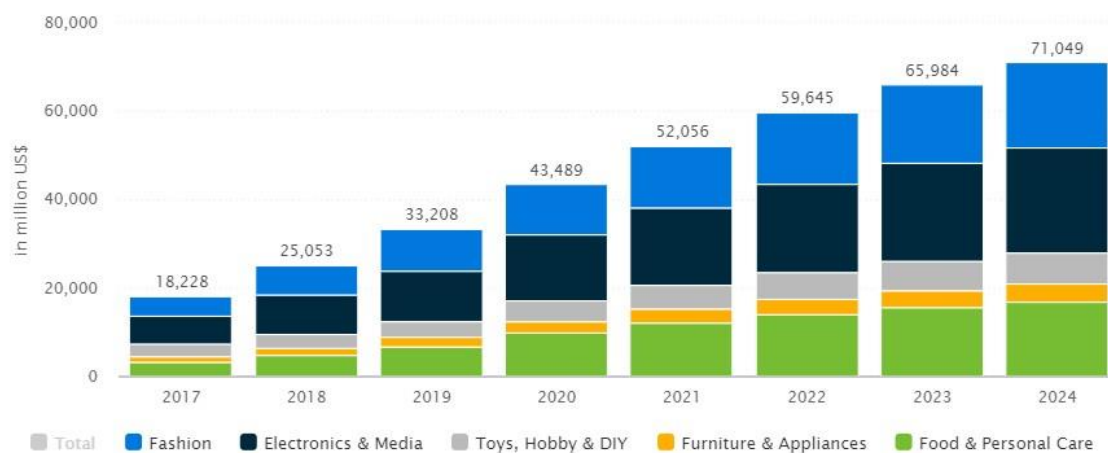


Figure 1: Internet Penetration Rate in India

Along with the rise in internet penetration, reports also estimate that between 2018 and 2023, the Indian e-commerce market would increase at a compound annual growth rate (CAGR) of around 41%, from INR 2,375.43 billion in 2017.⁸ This growing number of Internet users and a comparative increase in purchasing power are the primary drivers of growth of the e-commerce market in India, which some revenue estimates project to reach close to US\$ 43,489 million in 2020.⁹



Source: Statista (Forecast adjusted for expected impact of COVID-19), June 2020

Figure 2: Growth in Revenue through E-commerce for Different Categories of Goods & Services

⁸ E-commerce Market in India (2018-2023), Published by Kenneth Research on 29 May 2019. Available at: <https://www.kennethresearch.com/report-details/e-commerce-market/10085113>

⁹ eCommerce report 2020, Statista Digital Market Outlook published in May 2020. Available at: <https://www.statista.com/study/42335/e-commerce-report/>

Last, but by no means least, the onset of Covid-19 and a long drawn lockdown across the country has forced a dramatic transformation upon traditional modes of commerce for almost all goods and services. With entire populations having to adapt to the “new normal” of social distancing, working from home and staying away from public spaces

It is worth noting that the CCI has already initiated some investigations in the e-commerce sector and has also conducted a market study for e-commerce in India. Enforcement trends and strategies adopted with insights gained from such studies would be interesting to observe

such as malls and marketplaces, it is likely that e-commerce will find itself in an unusual but favourable position where the burden of moulding conservative consumer preferences and outlook in favour of “shopping from home” is significantly reduced due to social distancing

precautions adopted by people to meet the emergent public health challenge. Most pre-Covid estimates of growth of e-commerce in India are therefore bound to be driven towards an upward trajectory, being attributable to a forced change in lifestyle brought by the pandemic..

III. Laying out the Basics – Some General Features of the ‘Digital Economy’

a. A Domain of Significant Interest for Multiple Jurisdictions –

Transactions over the digital economy are a global phenomenon. To understand the digital economy, several jurisdictions are coming up with market / sectoral studies under their respective legislations to understand the impact of this sector and best enforcement or regulatory strategies in their markets. Some of the noted that may be listed as a way of a representative sample are ‘Competition Policy for the digital era’¹⁰ by European Commission in EU, ‘Digital platforms inquiry’¹¹ by Australian Competition

¹⁰ Jacques Cremer et. All, Competition Policy for the Digital era, Available at: <https://ec.europa.eu/competition/publications/reports/kd0419345enn.pdf>

¹¹ Digital Platforms Inquiry, Final Report, June 2019, Available at: <https://www.accc.gov.au/system/files/Digital%20platforms%20inquiry%20-%20final%20report.pdf>

and Consumer Commission, ‘Market study on E-commerce in India’¹² by the Competition Commission of India, market study for the ‘Online Travel Booking Sector in Singapore’¹³ initiated by Competition and Consumer Commission of Singapore and ‘Market study of digital platforms’¹⁴ by Swedish Competition Authority and ‘Vertical Restraints Project’¹⁵ of the Unilateral Conduct Working Group (UCWG) of the International Competition Network (ICN). The latest in this representative sample of market studies is the final report on the market study of ‘Online Platforms and Digital Advertising’¹⁶ by the Competition and Markets

The evolution of the Digital Economy is increasingly being seen, across jurisdictions, as an area where a deeper understanding is imperative to formulate strategies for future regulations and enforcement. Firms that provide access to the necessary infrastructure for interactions on a platform, and thus act as “gatekeepers” while also acting in a dual capacity as a competitor on the platform raise issues of conflicting interests that require to be evaluated.

Authority of the United Kingdom, which was released only two days back, i.e., 01.07.2020. It is worth keeping in mind that this is in no way an exhaustive list of all market studies / sectoral studies initiated in new age markets, but is rather a sample of studies initiated or completed in various jurisdictions to highlight the fact that this is

¹²Market study of E-commerce in India- Key findings and Observations, Competition Commission of India, Available at: https://www.cci.gov.in/sites/default/files/whats_newdocument/Market-study-on-e-Commerce-in-India.pdf

¹³ Online Travel Booking Sector in Singapore- Findings and Recommendations, Available at: <https://www.cccs.gov.sg/-/media/custom/ccs/files/media-and-publications/publications/market-studies/cccs-market-study-report-online-travel-booking-30-sep-2019.pdf>

¹⁴ Market study of digital platforms, Konkurrensverket, Available at: <http://www.konkurrensverket.se/en/Competition/--ovrigt--/market-study-of-digital-platforms/>

¹⁵ Vertical Restraints Project of the Unilateral Conduct Working Group (UCWG) of the International Competition Network, Available At: <https://www.internationalcompetitionnetwork.org/wp-content/uploads/2019/05/UCWG-2019-Vertical-Restraints-Project.pdf>

¹⁶ Online platforms and digital advertising, Market study final report, Competition and Market Authority, 1 July 2020, Available at: https://assets.publishing.service.gov.uk/media/5efc57ed3a6f4023d242ed56/Final_report_1_July_2020_.pdf

increasingly being seen as an area where a deeper understanding is imperative to formulate strategies for future regulations and enforcement.

b. Extreme Returns to Scale

The digital economy presents a world of opportunity for many (such as small businesses) who can have access to a much wider consumer base / audience through the click of a button than would have been possible in any conventional sense. However, firms increasingly find themselves to be in a relationship with an “unavoidable trading partner” in these markets where the counterparty exercises

It therefore becomes important to appreciate that traditional notions of barriers to entry such as high sunk costs, etc. may not return desired results and analysis of barriers of entry therefore must include a more holistic understanding of the nature of this sector.

market power due to possessing such enormous data. This happens in situations such as, amongst others, in the case when firms must transact over the internet using an architecture or platform that is a defining feature of a particular market. In digital

markets, the cost of producing the information / service / value is much less than proportional to the number of customers served. This sets the stage for yet another feature of the digital economy – this is a sector where traditional operation of economies of scale are pushed to the very extreme.

To understand this fundamental feature of the digital world better, one may consider the example of developing a new software. Developing a new software, i.e., actually creating the intellectual property in the software is not cheap.¹⁷ A producer would certainly need the requisite talent as well as the capital that goes with it to create a new product. However, once the software has been produced, the cost of offering an additional consumer the option of downloading the software and using it is very small.

¹⁷ Why Is Software So Expensive?, Manish Mamnani, 26.07.2019 Available at: <https://www.gate6.com/why-is-software-so-expensive/>

This is to say that the marginal cost for the software serving an additional consumer would be very low in relation to the cost incurred while creating the first copy of the software.¹⁸ This feature of the digital economy, coupled with propensity for strong network externalities has led to the emergence of a marketing strategy of providing products for free, or the “zero-price” strategy.

c. Prevalence of the “Zero-Price” Strategy

The digital economy presents many services that may be offered free of charge. One of the many key insights offered by behavioural economics that is successfully deployed in the digital economy is that consumers reliably deviate from what would be considered as rational conduct. One such deviation from rational conduct is reflected in the theory of “loss aversion” – while deciding from his/her options, the prospect of incurring a loss weighs heavier on a consumer’s mind as compared to relatively equal gains.

There is also evidence of a sharp increase in demand when price is brought down to zero.¹⁹ This has famously been depicted by conducting an experiment to evaluate the effects of “zero prices” on a

Traditional notions of pricing with profit driven approaches have been replaced with new business models which focus on growth.

consumers’ choice of chocolate. As part of the experiment, participants were offered a choice between a cheaper, lower quality chocolate and a more expensive higher quality one. The prices of the chocolates were manipulated in a number of iterations, including pricing the lower quality chocolate at a zero-price in one of the iterations while the higher quality chocolate was positively priced (but still far lower than its market price). The experiment found that in most price differences there was an even split in consumer choice, the last iteration with a zero-priced option saw 90% of consumers opting for the zero-priced chocolate, The experiment therefore revealed

¹⁸ Michal S. Gal and Daniel L. Rubinfeld, The Hidden Costs of Free Goods: Implications for Antitrust Enforcement”, 2016 Antitrust Law Journal 521. Also see: Posner, R. “Antitrust in the New Economy”, CHICAGO JOHN M. OLIN LAW & ECONOMICS WORKING PAPER NO. 106 (2D SERIES), where Posner, while referring to the marginal cost of software states “it is only a slight overstatement to speak of the marginal cost as zero”.

¹⁹ Zero as a Special Price: The True Value of Free Products, 26 (6) MARKETING SCIENCE 742 (2007).

that where an option was free, consumers showed the capacity to over-react to the free option and demonstrated that a zero price not only decreased the cost of the product, but actually added some perceived value to it.

The effectiveness of this Zero-Price Effect has been attributed by some authors to “*the uncertainty surrounding the overall benefit associated with costly options and the contrasting certainty about overall benefits of free options.*”²⁰ Other authors have observed that “*free is not simply one point on the continuum of low cost alternatives. Discounts to zero may have a much larger effect on demand than they save the consumer in actual monetary terms and cannot be explained by a classic analysis of rational consumer behavior.*”²¹

Backed by such findings, firms in the digital economy have adopted many novel marketing strategies which may not have been as effective in the traditional economy such as the following –

- Introducing free products to leverage network externalities of a market (for instance, as a new entrant in the telecommunications industry, which is characterized by network externalities)
- Taking advantage of cross-network effects and by pricing services at a zero-price choosing to earn from other side of the market like advertising revenues instead (e.g. Newspapers, free social media, etc)
- "Freemium" models, where firms may offer a basic version of the product for free, and charge for premium versions / added features (e.g. Adobe Pro, Spotify, etc.)

d. Network effects

Another defining feature of the digital economy is its propensity for network effects. Network effects are characterized as the increased usefulness of a service to the users

²⁰ Francisco Guilherme Sousa Pereira Saraiva, Free Products and Their Impact on Consumer Behavior, (2011) (Published M.A dissertation, Porto University), available at: <https://pdfs.semanticscholar.org/3995/144f410309d627b4970a44359a2904a3d87f.pdf>

²¹ Michal S. Gal and Daniel L. Rubinfeld, The Hidden Costs of Free Goods: Implications for Antitrust Enforcement", 2016 Antitrust Law Journal 521, at 530

as the number of users using the service increases. This creates a positive feedback loop for services that are offered, wherein an increase in the number of users / input to a service improves the value of the service to other users and therefore further attracts new users. This can be understood from the representation given below:

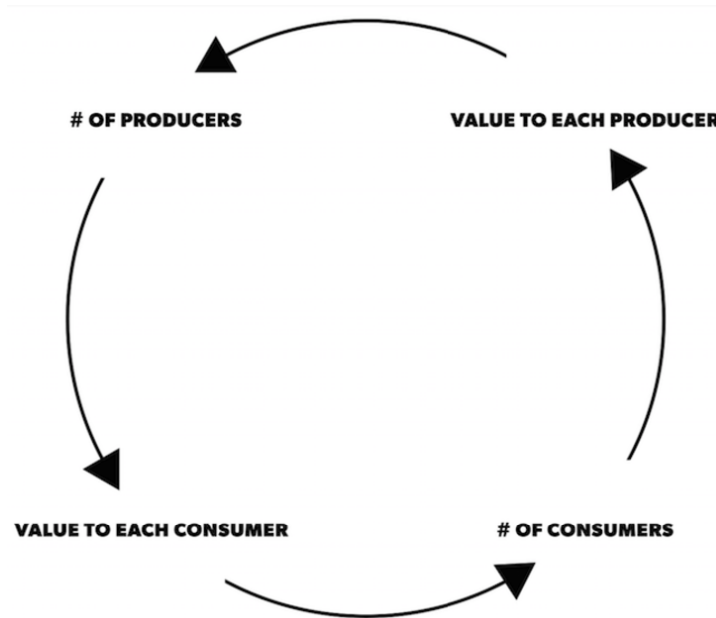


Image Source: What are Network Effects?²²

If we start from any of the points in the above circle, we see how the positive feedback loop comes into operation. For instance, the number of consumers contributes to the value derived by each producer in a platform. As the value derived by each producer increases, the number of producers finding the economic activity profitable also increases. Consequently, as more producers join the economic activity, the value to the consumer increases (for instance in the form of increasing choice in the market). This then further attracts more consumers, completing the loop. This is a self-reinforcing loop that can be seen in operation in case of platforms such as e-commerce platforms, wherein the number of consumers increase as the number of sellers providing different and more variety of goods

Network effects, once established, show a propensity to lock-in users on both sides of the market

²² Available at: <https://2xawx0gmudy471po527lboxcd-wpengine.netdna-ssl.com/wp-content/uploads/2016/02/platform-business-model-value-chain.png>

increase, which consequently choose the platform to sell products because of access to more consumers.

The digital economy has provided a stage on which “platforms” have come to acquire significant roles. These platforms often connect two separate set of users, where each side of the platform is both a consumer as well as a product which is being sold to the other side. A classic case of network effects is experienced in telecommunications industry. Operation of network effects in cases of platforms are observed in case of platform service providers for social networking services, wherein a person joins the network only if a sufficient number of people are already part of the user base. This quality of the platform, as we will see below, has the quality of creating barriers of entry for new entrants.

e. The Possibility of Tipping of Markets

As we saw above, two fundamental features of the digital economy have been observed from our experience with it so far: it is characterized by extreme returns to scale and is prone to network externalities. These characteristics point to that fact that

The propensity of the digital world has been winner takes it all, which makes it all the important that the competition authorities take a clarion call to active expeditiously and proactively to ensure that such entities with market power conduct in a fair manner in the market

competition as deemed desirable in the traditional sense, whereby multiple firms providing similar services compete on the basis of lower prices and innovation, may not be compatible with the ways in which the digital economy unfolds itself. It is therefore possible that competition in the Digital Economy may manifest in

the form of competition “for the market” rather than competition in the market.²³

There is yet another interesting feature of the Digital Economy. Since economies of scale and network externalities not only favour a concentrated market but also erect entry barriers, strong network externalities also present the distinct possibility of all consumers in the market deciding to opt for the product of a particular firm or for a particular technology, therefore leading to a “tipping” of the market in favour of that

²³ Competition Policy for the Digital Era, *supra* note 10.

firm and entrenching a monopolist position in the market.²⁴ Investments required to challenge a handful of incumbent firms which have managed to set up or sufficiently alter the “background architecture”²⁵ of a market in its favour may therefore prove to be prohibitively expensive.²⁶ Attaining critical mass of users can lead to firms assuming position of entrenched market power. In such markets, it becomes extremely difficult for new entrants (even if such firms does not face any dearth of capital) to dislodge the incumbent from its position. It is therefore imperative that firm activity is closely monitored by competition regulators to check how such firms obtain, what can be thought of as the escape velocity, to rapidly monetize disruptive innovations.

IV. The Value of Data - More than Just a Penny for Your Thoughts

As we saw above, big tech companies do not follow the conventional model of charging their customers to make a profit. Social networking platforms, e-commerce platforms and most of the google services are for free. The primary source of revenue for most of them is through advertisement. One of the ways by which consumers pay for the services is their data. Data is what these company require to provide better services, or more personalised service,

Even after having nil or very thin profit margin, such companies continue to function on same model and manage to get huge and multiple rounds of funding from sophisticated investors. The investor outlook has also undergone a drastic change with potential for network being primary concern for investment against profitability.

which ultimately hooks the user to such services. To understand the role of data in this whole transaction, it is pertinent to take note of certain basics of the data economy.

²⁴ Richard Whish, Competition Law, 7th Ed. At Pg 12

²⁵ This is to say that when a firm enters an existing market by way of either introducing a new product or making an innovation to an existing one, it possesses the possibility of creating a new market for itself. For example, MySpace was arguably the runaway social media success of its time, providing a platform for connecting people. However, by simply offering a service similar to that of MySpace with a tweak, i.e., giving its users the option to reveal one’s true identity, Facebook virtually created an entire market for itself.

²⁶ Case COMP/C-3/37.792 Microsoft, at Para 456

The EC Competition Policy for Digital Era identifies three main channels for collection of data.²⁷ First is 'volunteered data', which means data that the consumer wilfully provides to any enterprise. Second is the data that is 'observed', which is mainly behavioural data obtained by tracking user's activity in digital space. Further, it mentions four broad forms in which data used viz. a) non-anonymous use of individual data, b) anonymous use of individual data, c) aggregated data and d) contextual data.²⁸ Herein, it is important to note that apart from privacy concerns, collection and use of data is also a big competition law concern and we should be mindful of its implications since a large public interest is at stake.

Non-anonymised use of individual data is usually when a user gives consent to service provider for such use. It uses such data to provide personalise services to user. YouTube or other streaming service platform recommendations are common example where non-anonymised data of individuals are used. Anonymised use of personal data would be not primarily for the data subject, but for a different purpose and may be used to provide a better service to public at large. For example, product review would help the company to decide whether to continue it or not. Aggregate data has been referred as standardise that has been 'irreversibly aggregated', such a company profit and loss statement or sales data. Lastly, contextual data is what provides context to a person. Such data is important as it creates data into a useful information. Example of these may be data collected from Maps can be used to trace your work time and accordingly notify you on such time.

Data is the market power, often described now as the oil required for the engine of growth. Once an enterprise has enough number of users and their data, as well as capacity to convert such data into useful information, it is very difficult for a new enterprise to make entry in the market. Access to data for a long time may be used by a superior algorithm to improve their service and to attract even more users. For an example, users are unlikely to shift from Google towards any other search engine, despite enterprise like Microsoft are its competitor. Any attempt for the same would require a huge amount of resources.

²⁷ EC Competition policy, *supra* note 10.

²⁸ *Ibid.*

The platforms which attract consumers for free or the negligible fee, target consumer using their data. The model on which their business works is 'digital advertising'. The model, being different from traditional advertising model, targets consumers with personalised advertisement. This is the common business model for search engines and social networking sites. Google and Facebook are the largest companies working on this business model.²⁹ The core methodology by which these online platforms work can be defined through the concept of attention economy, which works simply on attracting limited human attention. The online platforms, of every kind, works on this concept to engage the number of hours an individual spends on such platform.³⁰ The CMA report explains this model through the chart below, where although the consumer does not pay money to the platform, but there exists transaction

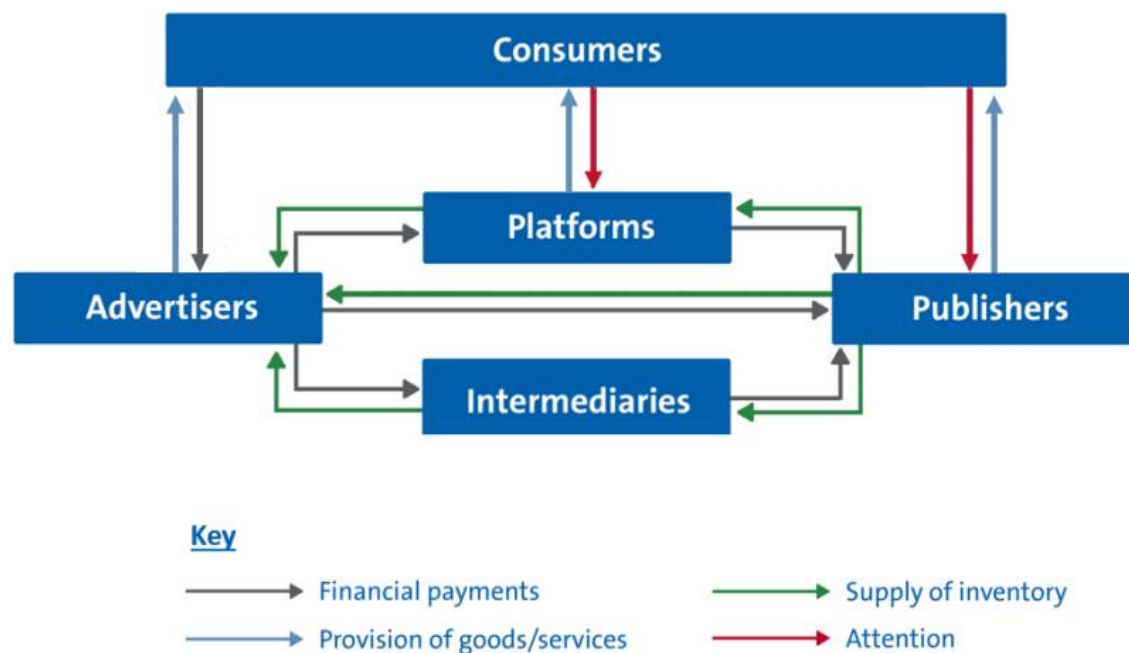


Figure 3 – Advertising funded business model for online platforms³¹

In order to demonstrate the insights that can be gained at a higher level from processing raw data at a low-level, one may see a relatively unsophisticated and common feature used by websites to track, amongst other things, user activity and

²⁹ Online platforms and digital advertising, CMA, *supra* note 16.

³⁰ The Attention Economy, Available at: <https://www.nngroup.com/articles/attention-economy/>

³¹ Online Platforms and Digital Advertising, CMA, *supra* note 16.

traffic. This is done by most websites using the method of Hyper-Text Transfer Protocol (HTTP) Logging. HTTP Logging is the detailed entry of records stored in a company’s file of all the data transactions taking place between the user and the website into a log. In this method of data collection, particular data may be procured via passive tracking of the user’s journey across the webpage, which can be logged and used to draw inferences and make valuable contributions to effective decision making by a firm. The table below³² demonstrates the contribution that HTTP Logging can make in gaining valuable insights:

Log file Component	Potential Marketing Application
IP address of the browser making the request; user machine name is not usually recorded	Detect at least the Internet Service Provider of the user
Country code and domain name	Determine which regions might best be targeted
Hour, minute, and second of the request, in addition to the date and day of the week	Determining the web habits of a user , for e.g., late night surfers, etc.
HTTP method of the request; (type of request).	Know how requests are most commonly made
Response status with the server; does the user return?	Improve the service of the web site
Number of bytes transferred in the transaction	Determine files are downloaded more often
Referring URL (from where has the user come?)	Determine which on-line ads are most effective
User name, if authorization is required	Identify and profile a user
Type of browser used by visitor	Ensure website runs with common browsers

³² “Direct Marketing on the Internet” A Research Report for: 15.963 – Electronic Commerce and Marketing, Massachusetts Institute of Technology Sloan School of Management, by Matsuda, Y. and others Available at: <http://web.mit.edu/ecom/www/Project98/G2/data.htm>

Web pages on the server visited	Determining potential interests of the customer
--	--

While appreciating the insights from the above table, one must keep in mind that HTTP Logging is only of the methods of data collection available to firms. There are certainly many methods of data collection,

 the technical differences and *Simple clicks generate vast swathes of data. Ever thought of how that particular phone you've been thinking of buying showed up on your Facebook feed?*

 nuances of which are outside the scope of the present article, that are more sophisticated and can actively track and profile a user's activity across websites.³³ Further, this method of data collection can also be automated.³⁴ Therefore, many of the firms that have a sufficient access to data from different sources can have the advantage of deriving information that is many orders of magnitude more insightful than what has been depicted in the table above.

V. Some Sample Instances of Firm Conduct in the Digital Economy

There are several possible ways of conducting itself in the market that open up for a firm having access to crucial data in the market. With a lot of data to process, an enterprise is given the opportunity to put itself in a perfect position to anticipate consumer needs and demand in more than one sector. Armed with this data, the firm can create its own product/ services which the data shows consumers may prefer.

Then there are instances where firms which act as platforms and connect two separate set of consumers may show a preference for products / services manufactured by the firm itself (for instance e-commerce platforms). In case of other platforms that simply provide a service of connecting two sets of users (such as social media or general search services), firms may choose to subsidize one side of the market to increase

³³ This is certainly the case for giants like Google and Facebook, wherein your profile can be used to log into multiple websites for the purpose of using certain features on these websites. Google and Facebook consequently gain insights into your interests and the sites you visit, which can be directly correlated with a user's profile.

³⁴ See, for instance, Internet Information Services offered by Microsoft. Available at: <https://docs.microsoft.com/en-us/iis/configuration/system.websserver/httplogging>

traffic and consequently the value for users on the other side of the market, choosing to earn from advertising revenues. It is a positive loop situation where considering the traffic on the other side, the advertisers will continue their engagement with platforms.

An enterprise is also presented with the opportunity to get access to more data by offering different services, which are highly complementary to the main service. AS a result, by operating such complementary services, firms have the option to create their own ecosystems which helps attract more users which derive value from the ecosystem.

Therefore, access to data opens a world of possible behaviours that firms may choose to adopt in the market. The possible competition implications of such conduct, such as creating entry barrier, lack of innovation, consumers paying higher prices etc, have generated an entire body of case-laws, market studies and research both in India as well as other jurisdictions which we explore in the next part.

VI. TEASER FOR OUR NEXT TREND

Digital Economy being a complex and diverse subject area. We have seen how the Digital Economy has fundamentally changed the business landscape for firms as well as consumers. We have seen certain fundamental characteristics of the Digital Economy, such as operation of scale economies and network effects, which tend to favour concentrated markets with few producers. These firms then increasingly come to acquire deep rooted market power positions in their respective markets and consequent conduct must be checked. We have also seen certain essential characteristics of data and how it is used by firms both as drivers of better decision-making and for providing better goods and services to consumers. We have, further, explored what are the various options and behaviours that firms may adopt in the market once armed with (the access to) such data. However, appreciating the nuances of a topic as diverse as this cannot be covered in any meaningful way in one trend. Therefore, with the background and context of the digital world in place, in the next series of publications, we focus on how competition law interacts with the digital economy by having recourse to cases decided by the Competition Commission of India as well as looking at possible issues that the Commission would have to deal

with in the near future by drawing insights from the findings and experiences of competition regulators in other jurisdictions.

For, further details, please contact Abir Roy (Co-Founder & Advocate, Sarvada Legal) at abir@sarvada.co.in; Ishaan Chakraborti at Ishaan.c@sarvada.co.in; or Vivek Pandey (Advocate, Sarvada Legal) at vivek,p@sarvada.co.in