Kluwer Competition Law Blog

Antitrust Concerns of Personalized Output

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The Competition Commission of India (CCI) has released Interim Observations for a market study being conducted by it to understand qualitative aspects of e-commerce in India.[1] It has outlined its scope to understand the market landscape, strategies and issues arising thereunder, without undertaking an examination of breach of competition law.[2] So far, it has divided the study across the markets for goods and services being provided through e-commerce platforms. Across such markets, a common and rarely discussed observation is one regarding search rankings. It comes across as a point of difference and contention amongst the hosted (sellers, retailers, distributors of goods and services) and the hosts (e-commerce platforms). The hosts claim that the platform rankings are driven by algorithms while the hosted contend that such algorithmic placement of their goods and services is detrimental because it is 'opaque', 'priced' or available for 'preferred sellers'. From the point of view of consumers, such cataloguing is a result of and conversely, results in personalized output as the algorithms take into account the user preferences, purchase history, customer background etc. The interplay of markets and algorithms has piqued the interest of various competition authorities[3], mulling over its impact through the proxy of consumer welfare, which in turn is measured in terms of price and output[4]. While various competition authorities have noted concerns related to anti-trust implications of personalized pricing, CCI has focussed on the concerns related to cataloguing, from the supplier side. The following post aims to step ahead of the mandate of the CCI market study and determine the treatment of such algorithmic cataloguing from the perspective of competition law and consequently, the consumer side.

Data and Dominant Position – Analysis under Section 4

In the context of e-commerce marketplaces, the CCI has held in various cases, such as In Re: Mohit Manglani,[5] Mr. Ashish Ahuja vs. Snapdeal.com and Another,[6]In Re: Deepak Verma,[7]In Re: Confederation of Real Estate Brokers' Association of India,[8] In Re: Jasper Infotech Private Limited (Snapdeal),[9] that *e-commerce platforms are alternate distribution channels and not separate relevant market*s. So far, it has held that the e-commerce platforms do not occupy a dominant position in the relevant market, as determined in the respective cases. Resultantly, allegations of predatory pricing and price discrimination, premised on abuse of dominant position under Section 4 of the Competition Act, 2002 (Act) have not been upheld.

The CCI has also noted technological changes and the impact of big data in various ways, resulting in dismissal of most complaints filed before it. Its assessment is important to understand the

treatment of personalized data in competition law analysis. Most major e-commerce players make use of Big Data, characterised by variety, volume and velocity.[10] It allows personalization such that each consumer and the end user may see a different interface, in contrast to the next person. The CCI recognises that the *characteristic of online platforms is their capability to match a very large number of users in a market in order to facilitate an exchange. The quantum of users attracted to the platform depends upon how efficient the platform is in matching users with their desired product/service. Online platforms do not only provide a (virtual) location for market exchanges, contrary to conventional (offline) markets they also actively collect information on suppliers' products and consumers' preferences and use matching algorithms to match these in an efficient way in order to reduce search costs.**[11]** The sellers would be interested in selling on the platforms when increasingly high number of buyers visit an online platform, thus characterising the online platforms with network effects.**[12]***

In case of a cab aggregators' model, the CCI acknowledged the use of data for its business model. It held that the *estimation of fare through App is done by the algorithm on the basis of large data sets, popularly referred to as 'big data'. Such algorithm seemingly takes into account personalised information of riders along with other factors e.g. time of the day, traffic situation, special conditions/events, festival, weekday/weekend which all determine the demand-supply situation etc. Resultantly, the algorithmically determined pricing for each rider and each trip tends to be different owing to the interplay of large data sets.*[13]

Algorithms as a covenant – Analysis under Section 3

In view of CCI's observations so far, the post focuses on the analysis of appreciable adverse effect on competition that may be caused by algorithmic cataloguing, as understood under Section 3 of the Act. The analysis shall be undertaken specifically under Section 3(1) read with Section 3 (4) to determine if contractual or non-contractual use of algorithms by the hosted and the hosts can have an exclusionary effect. This vertical restraint may impact horizontal competitors of the hosted viz. new entrants or small sellers.

Section 3 is premised on the presence of an agreement, in some form.[14] Notwithstanding, the oral or informal arrangements which may have been entered into between the market participants (and are enforceable), the contractual treatment of algorithms is difficult to pinpoint with complete accuracy. For one, research conducted for e-commerce portals globally suggests that sellers can choose to use algorithms for pricing and cataloguing[15], coupled with platforms.[16] Moreover, the contracts entered into between the seller and the platform are inaccessible due to confidentiality concerns. Even amongst the contracts reviewed, the terms are vague. For example, seller's covenants are understood in the following terms:

1. The Seller agrees and acknowledges that Company shall be free at all times to add, delete modify any functionalities of the Website, list of Sellers on Website etc.

On the other hand, a platform's obligations are understood as:

1. Subject to Seller's continued adherence to this Agreement, Company shall continue to display Seller's name on the Website but makes no guarantee that the Listing shall be available in any specific or uninterrupted manner for Consumer's viewing and use, or

2. We will list Your Products for sale on the Site in the applicable product categories which are supported for third party sellers generally on the Site on the applicable Selling on Launch Date, and conduct merchandising and promote Your Products as determined by us (including via the Associated Properties or any other functions, features, advertising, or programs on or in connection with the Site). We reserve the right to restrict at any time in our sole discretion the access to list in any or all categories on the Site. We may use mechanisms that rate, or allow shoppers to rate, Your Products and/or your performance as a seller on the Site and we may make these ratings and feedback publicly available. We will provide Order Information to you for each of Your Transactions. Notwithstanding any provision of this Agreement, we will have the right in our sole discretion to determine the content, appearance, design, functionality and all other aspects of the Site and the Selling on Service (including the right to re-design, modify, remove and alter the content, appearance, design, functionality, and other aspects of, and prevent or restrict access to any of the Site and the Selling on Service and any element, aspect, portion or feature thereof (including any listings), from time to time) and to delay or suspend listing of, or to refuse to list, or to de-list, or require you not to list any or all products on the Site in our sole discretion.[17]

From the above, it is safe to conclude that an interplay of seller and platform actions leads to provision of algorithms, the effect and use of which is contractually agreed to be in the discretion of the platform. This is the point of control of control of goods and services which can be challenged by Section 3 (4) or Section 3 (1), independently.[18]

An enquiry regarding vertical restraints in India is based on a rule of reason. It requires analysis of factors enumerated under Section 19 (3) to determine the impact of an anti-competitive agreement, covered under Section 3 (4), as an essential ingredient to hold it impermissible. The presence of the following factors strengthens the enquiry[19]:

a. creation of barriers to new entrants in the market;

b. driving existing competitors out of the market;

c. foreclosure of competition by hindering entry into the market;

Similarly, the absence of the following factors, strengthens the case:

d. accrual of benefits to consumers;

e. improvements in production or distribution of goods or provision of services; or

f. promotion of technical, scientific and economic development by means of production or distribution of goods or provision of services.

The assessment of these factors is based on the facts and circumstances of each case. Generally, a market can be foreclosed to competitors if the parties to the agreement hold substantial market power.[20] Thus, the powers of both the seller and the purchaser need to be assessed. In this regard, entry barriers are created when a firm seeking to enter an industry bears a cost that is not borne by firms already in the industry.[21]These could be in the form of higher advertising costs, or even the consequential need to invest in advertisements for new entrants.[22]

The problems in analysing impact of algorithms

The concerns related to advertising costs are evidenced in the case of Re: Matrimony.com[23] where the CCI weighed the concerns against consumer benefit and the need for innovation, although in the context of an enquiry under Section 4. The CCI laid down various judicial points of interest regarding the working of algorithms, in the context of advertisements and the attendant direct or indirect search bias practiced by the platform. This bias reflected anti-competitive concerns as it favoured the vertical partners of the platform. The enquiry was premised on an abuse of dominant position held by Google LLC in the online general web search services and online search advertising market in India. To determine the abuse of dominant position, in the form of discriminatory treatment meted out to various advertisers, an assessment of various algorithms and agreements entered into by Google LLC with the entire web ecosystem were analysed. The Investigation Report stated that *Google biases its search results because display of certain specialised search design is not strictly determined by relevance. It emerges that though determination of relevance and the generation of search results to a large extent is automatic, it runs on Algorithms which are computer processes and formulae, designed and owned by Google and changed almost on a daily basis. Google being in control of this algorithm which is pivotal to generate search results is thus in a position to intervene in the automated process at any point of time and impact the relevance and ranking of the results. Due to the information asymmetry, non-transparency and considering the fact that the algorithmic changes are not subject to external audit or monitoring, Google is always in a position to alter the algorithm and affect the search results discretely in a discriminatory manner. Against this background it is found that despite Google's algorithmic search framework being largely automated there exist enough scope in the process for manual intervention and manipulation of Results.*

As a consequence of the said search bias, equally efficient websites/specialised search service providers, due to reduced visibility, may not be able to acquire a sufficient volume of business (Minimum Efficiency Level) required to viably compete and survive against Google's own services and may thus be driven out of the market thereby foreclosing competition and reducing alternatives to consumers.

With respect to such algorithmic treatment of advertisements, the CCI held that, *through its search design, it has not only placed its commercial units right at a prominent position on Search Engine Results Page (SERP), it has also allocated disproportionate real estate thereof to those units resulting into either pushing down or pushing out of the verticals who were trying to gain market access.*

The CCI concluded that other websites and specialised service providers (horizontal competitors of its vertical partners) may not be able to acquire sufficient volume of business in view of diversion of traffic by Google LLC to its own partners through placement of its products or adverts, in this case.

The aforementioned analysis does not take into account the differences in results thrown up due to personalization, which should be taken into account for an analysis under Section 19 (3). Here, the 'market' as understood distinctly from a relevant market,[24] is the platform or host itself. The nature of a platform is such that it may assume the role of several participants as it hosts the sellers, provides fulfilment and delivery services to the sellers or may even act as a retailer or reseller of

goods and services. In such a scenario, the incumbent or new sellers may face horizontal competition from in-house brands of the platform or its vertical partners which may be based on algorithmic outcomes and not market forces.

The foreclosure of market or entry barriers need to be recorded for a seller in isolation, with exclusion of factors such as effects of personalization. As a seller on the platform, with different ratings, sales, prices etc., the algorithm may match such a seller to an optimum consumer while through objective criteria of relevance, it could have been placed elsewhere (higher or lower), in the absence of personalized matching. To capture such an effect of technology, algorithms and markets, new legal and economic tools may need to be devised. This is especially in view of the fact that algorithms and their effects are generally not publicly available.[25] The urgent need can be gauged from the fact that there is an equally compelling case against search bias, in respect of major search engines (based on empirical evidence).[26]

A perspective from traditional markets

Much like the CCI, scholarly literature has also largely dismissed the anti-trust concerns related to big data and its impact, more so due to individualised and personalized offerings.[27] If one compares targeted advertisements as a precursor to personalized offerings and output, theoretical work has indicated that such targeting can soften competition, as it leads to increased differentiation across sellers.[28] The arrangement can also be compared to slotting contracts and allowances. While such contracts may amount to a vertical arrangement,[29]its restraint on trade is subject to analysis being a form of non-price vertical contract[30]. Though it affects the output, the contract is largely effected using the token of payments and costs levied for the placement (and not algorithms). These payments entail complex contracts between manufacturers and downstream vendors because they commonly involve, not only the stocking of the manufacturer’s product, but the placement of that product (e.g., at eye-level on the retailer’s shelves, near the check-out line, or on an end-of-aisle rack), and the display of signage that promotes the product within the store.[31] Such contracts have been viewed as raising concerns in some cases and not so much in others, depending on the facts of each case.[32]

Conclusion

The facts and explanation highlighted above attempt to make a case for use of Section 3 of the Act to determine the competitive impact of algorithmic cataloguing of products on platforms. In the event an investigation is undertaken to determine the appreciable adverse effect on competition, there may be a considerable influence of personalized output on such markets. The determination of relevant factors for analysis of a vertical restraint such as foreclosure of the market or creation of entry barriers is further riddled with the difficulty arising due to personalization. The empirical study would need to take into account the effect of algorithms on seller rankings, in an environment of constant flux to see if such seller could have resulted in ouster of potential competition. The review of such conduct would not only cover an analysis of various contracts entered into by platforms but also extend to a study of the mechanics of algorithms.

It may be argued that ‘market’ has been narrowly defined to mean one platform and a seller can host on multiple platforms which would stimulate competition through distinct policies and

assurances of visibility. It is a credible assertion. However, in view of the confidentiality surrounding contracts entered into between the host and the hosted, the similarity in vagueness of contractual treatment of algorithms highlighted above and the secrecy around the technologies used, it can only be tested if a market analysis of the e-commerce landscape is undertaken, to understand the listing preferences of the hosted, the ease of listing and the difference in outcomes across platforms through such listings. It will be interesting to understand the answers to the these doubts once the CCI releases its final observations.

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[1] CCI Market Study on E-commerce in India, Interim Observations, August 30, 2019, <https://www.cci.gov.in/sites/default/files/whats_newdocument/Interimobservations_30August2019.pdf>

[2] *Id*, Focus of study

[3] Latest (economic) thinking on competitive impact of pricing algorithms – paper by UK's Competition and Markets Authority, <http://competitionlawblog.kluwercompetitionlaw.com/2018/10/17/latest-economic-thinking-competitive-impact-pricing-algorithms-paper-uks-competition-markets-authority/>; OECD Workshop Addresses Algorithms and Collusion Issues, <http://competitionlawblog.kluwercompetitionlaw.com/2017/07/17/oecd-workshop-addresses-algorithms-collusion-issues/

[4] Lianos, I. IIC (2019) 50: 643. https://doi.org/10.1007/s40319-019-00829-6

[5] Case No. 80 of 2014

[6] Case No. 17 of 2014

[7] Case No. 34 of 2016

[8] Case No. 23 of 2016

[9] Case No. 61 of 2014

[10] White Paper of the Committee of Experts on a Data Protection Framework for India, 18

[11] Case no. 61 of 2014

[12] Case no. 20 of 2018

[13] Case no. 37 of 2018

[14] Section 2 (b), Act

[15] An Empirical Analysis of Algorithmic Pricing on Amazon Marketplace, Le Chen, Alan Mislove, Christo Wilson, <https://mislove.org/publications/Amazon-WWW.pdf>, the research explains the impact of pricing algorithms on display, visibility and cataloguing.

[16]How marketers use algorithms to (try to) read your mind, The Conversation,

<http://theconversation.com/how-marketers-use-algorithms-to-try-to-read-your-mind-84682>, Amazon's Search Engine Ranking Algorithm: What Marketers Need to Know, <https://www.searchenginejournal.com/amazon-search-engine-ranking-algorithm-explained/265173/#close>

[17] The names of the platform owner has been redacted to maintain confidentiality

[18] Ramakant Kini v. Dr. L.H. Hiranandani Hospital, Powai, Mumbai, Case No. 39 of 2012

[19] Automobiles Dealers Association v. Global Automobiles Limited, Pooja Expo India Private Limited, Case no. 33 of 2011

[20] Id.

[21] Lina M. Khan, *Amazon's Antitrust Paradox*, 126 Yale L.J. (2016).

[22] Case no. 30 and 07 of 2012

[23] Case no. 30 and 07 of 2012

[24] CCI v. Coordination Committee of Artist and Technicians of West Bengal Film and Television Industry, CIVIL APPEAL NO. s). 6691/2014 SC order dated May 7, 2018, Competition Law Review Committee

[25] As contended by the DG in Google case.

[26]Defining and measuring search bias: Some Preliminary Evidence, Joshua D. Wright, 2011, <http://laweconcenter.org/images/articles/definingmeasuring.pdf>

[27] D. Daniel Sokol & Roisin Comerford,Antitrust and Regulating Big Data, 23 Geo. Mason L. Rev. 1129 (2016), fn 20 i.e. Andres V. Lerner, The Role of "Big Data" in Online Platform Competition 4–5 (2014), http://ssrn.com/abstract=2482780.

[28] CERRE report page 53, Big Data and Competition Policy: Market Power, personalized pricing and advertising, Project Report, February 16, 2017

[29] DP Mittal, Competition Law and Practice, Taxmann, 2011, 264

[30] Peter Bronsteen; Kenneth G. Elzinga; David E. Mills, Price Competition and Slotting Allowances, 50 Antitrust Bull. 267 (2005).

[31] Id.

[32] El Aquila Food Products v. Gruma Corp., 301 F.Supp. 2d 612 (S.D. Tex. 2003), American Booksellers Ass'n, Inc. v. Barnes & Noble, Inc., 135 F. Supp. 2d 1031 (N.D. Cal. 2001); Intimate Bookshop, Inc. v. Barnes & Noble, Inc., 88 F. Supp. 2d 133 (S.D.N.Y. 2000); FTC v. H.J. Heinz Co., 116 F. Supp. 2d 190 (D.C.C.2000), rev'd, 246 F.3d 708 (D.C. Cir. 2001); FTC v. McCormick (FTC Dkt. No. C-3939 (2000)

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