A Critical Analysis of Regulatory Approaches to Digital Markets in India and the European Union from a Law and Economics Perspective

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Abstract

The regulation of the dominant digital platforms has become a critical concern for policymakers worldwide. The EU has enacted the Digital Markets Act for regulating the dominant digital platforms 'ex-ante'. Inspired by the EU, India too has proposed a Digital Competition Bill for regulating its digital markets. However, the suitability of such a regulation for the developing Indian digital market is questionable given that its economic landscape is significantly different from that of the EU.

India's growing economy needs ample investment in its digital infrastructure and therefore it must try to create an environment conducive for innovation. This thesis attempts to look at the ex-ante regulation through the lens of 'Competition vs. Innovation' debate. It further analyzes the Digital Markets Act and the Digital Competition Bill critically and lists the drawbacks of ex-ante regulation of digital markets.

The thesis stresses on the fact that India must adopt a more nuanced approach in regulating its digital markets which not only acts as a check on the dominance of the digital platforms, but also fosters growth and innovation. The thesis concludes by proposing that India should aim at strengthening its already existing ex-post framework for regulating digital platforms as that would help it in creating a regulatory environment which encourages innovation and growth of its burgeoning startup ecosystem.

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Authorship Declaration

"I hereby declare and confirm that this thesis is entirely the result of my own work except where otherwise indicated. I acknowledge the supervision and guidance I have received from Professor Rupayan Pal. This thesis is not used as part of any other examination and has not yet been published."

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Table of Contents

1. Introduction

The digital revolution has completely transformed our societies and economies. This transformation has been led by powerful 'digital platforms', which has made them indispensable to our daily lives. However, the consolidation of market power of these platforms can have serious implications on competition in the digital markets. This makes the regulation of these dominant digital platforms a critical concern for policymakers worldwide. The EU's Digital Markets Act (hereinafter 'DMA') represents a pioneering effort to regulate dominant digital platforms 'ex-ante' i.e. it aims to prevent anti-competitive activities before they occur, in order to ensure fair competition in the market.

The relationship between competition and innovation is complex. By analyzing the theoretical perspectives of economists like Arrow, Schumpeter and Shapiro, as well as the empirical findings of Aghion et al. on it, this thesis comes to a conclusion that for a regulation to be ideal for governing digital platforms, it should maintain a balance between competition and innovation.

India too has proposed a Digital Competition Bill (hereinafter 'DCB') for regulating its digital markets. The DCB has been significantly inspired by the DMA. However, the suitability of a DMA-like regulation for the developing Indian digital market is questionable.

In this thesis, the experiences of EU after it implemented the DMA will be critically examined and the implications of adopting a similar regulation in India will also be assessed. Moreover, considering India's distinct features and requirements, the thesis emphasizes on the adoption of a more nuanced approach in regulating its digital

markets. Such an approach would not only curb the abuse of dominant position by the digital platforms, but also fosters growth and innovation.

2. Digital Platforms: A Regulatory Conundrum

2.1. The Rise of Digital Platforms

The advent of digital revolution has resulted in the permeation of digital platforms into our everyday lives. We are heavily dependent on the digital platforms for our day-to-day activities, so much so that imagining a life without them seems difficult. For instance, we use applications such as WhatsApp, Gmail etc. for communicating; apps like Amazon, Flipkart, etc. are useful for buying and selling various products; social media platforms like Facebook, Instagram, Twitter help us in keeping our social lives active digitally; and ride-hailing apps like Uber and Ola have made travelling easy.

These are just a few examples showing our reliance on the digital platforms. While these platforms make our lives more convenient, they also have widespread socio-economic impacts. The digital revolution has also reshaped the markets in such a way that the existing laws are often insufficient in dealing with the problems associated with these digital platforms. This has resulted in a growing demand for laws regulating the large and powerful digital platforms.

2.2. Market Failures and the Need for Regulation

Regulation can be described as the purposeful intervention by the State to steer economic activity towards desired outcomes, and is distinct from private law. Unlike private law's facilitative role, regulation embodies a directive function and makes use of the power of the State in order to control the behavior. This control is exercised for

achieving collective goals which the market forces might fail to address.[1] According to the *Public interest theory*, when there is a market failure and private law fails to address it, then in such a case government intervention can be used as a corrective mechanism.

Some examples of market failures which justify State intervention in the form of regulation are- *Imperfect competition* in the market such as monopolies, cartels; *information asymmetry*; when the goods are *public goods*; or when *externalities* are generated resulting in unpriced costs or benefits to third parties. [2]

Imperfect competition, being one of the market failures, can lead to inefficient resource allocation. In these markets, higher prices of goods and services often results in only partial market coverage by sellers. One of the public policies used to address such a market failure is antitrust laws. Antitrust laws deal with the problem of market failures by promoting competition and preventing monopolies.

Imperfect competition generally results in a market failure, but not always. In certain industries with high fixed costs and economies of scale, such as electricity or water, having a single supplier in the market can be more efficient than having multiple suppliers. This situation is often referred to as *natural monopoly.* In industries where a natural monopoly exists, the aim of the regulation is not to get rid of the monopoly, rather the aim is to ensure that the monopoly does not abuse its power and keeps the prices reasonable.

Hence, it can be said that imperfect competition is not always bad and therefore the while in certain cases the antitrust law aims at fostering competition for benefitting the society, in other cases it allows monopolies (like natural monopolies) but with proper regulation for ensuring efficiency and fair pricing.

[1] Anthony I. Ogus, Regulation: Legal Form and Economic Theory (2d ed. Hart Publishing 2004).
[2] Ogus, supra note 1, at 29-41.

2.3. The Case for Regulating Digital Platforms

2.3.1. Digital Platforms as Natural Monopolies

Our ever-increasing reliance on digital platforms for everyday activities has resulted in these platforms acquiring a dominant position. The power possessed by large platforms such Google, Apple, Facebook, Amazon and Microsoft, popularly known GAFAM, has raised significant concerns and calls for their regulation.[3] But given the size of these companies and the manner in which they function, they often resemble natural monopolies.[4] In digital markets, there exists both *supply-side economies of scale* as well as *demand side economies of scale* (also known as networks effect).

2.3.1.1. Supply-Side Economies of Scale

One of the factors which contributes to the digital platforms' monopoly-like position is the *supply-side economies of scale*, wherein they gain cost advantages with an increase in their production volume.[5] In other words, as a company becomes larger, it becomes more efficient in producing goods or services. So, in a supply-side economies of scale, the focus of a company is to optimize the production process and even though a significant upfront investment is necessary in order to build the digital platforms, once the infrastructure is established, the cost of serving additional users becomes negligible.[6] For instance, the initial development of a search engine like Google, involves significant investment, but once developed, adding an additional user involves practically no marginal cost. It is due to this reason that these platforms are able to spread their fixed costs over a growing user base, which in turn drives down the average cost per user. This results in an *increasing returns to scale*, because as the user base

[3] Simone Guidi, *Before the Gatekeeper Sits the Law. The Digital Markets Act's Regulation of Information Control*, 8 Eur. Papers 405, 405-10 (2023).
[4] Francesco Ducci, *Natural Monopolies in Digital Platform Markets* (Cambridge Univ. Press 2020).
[5] Id.
[6] Id.

expands, the average costs falls which makes it more efficient for a single large provider to provide the service as compared to multiple smaller players.[7]

2.3.1.2. Demand Side Economies of Scale

Another factor which gives the digital platforms the position of a natural monopoly is *demand side economies of scale*, which can also be referred to as *network effects*. These effects occur when a platform's value to each user increases as the number of users on the platform grows. For example, the primary role of social media platforms like Facebook, Instagram and Twitter is to connect you with your network. Therefore, these platforms become more valuable for everyone as more users join them. This further incentivizes more users to join the dominant platform, which further solidifies the market position of such platforms.

2.3.1.3. Data Accumulation

Apart from economies of scale, what further helps these digital monopolies to establish themselves as dominant market players is '*data accumulation*'. When users make use of these digital platforms, they leave behind a digital footprint which is then collected by the platforms and is used by them to analyze user behavior and preferences, etc. In other words, having more data allows these platforms to better personalize the user experience, which gives these platforms an edge over their competitors who do not possess such a valuable asset. Therefore, this data disparity creates a *barrier to entry* for the new players.

This confluence of factors – pronounced economies of scale, network externalities, and data accumulation – creates a perfect storm that fosters the emergence of natural monopolies in digital markets.

[7] Id.

2.3.2. Varying Degrees of Dominance: A Spectrum of Digital Monopolies

Even though digital markets breed monopolies, not all are created equal and there are varying degrees of dominance: While search engines like Google are a typical example of a digital monopoly, e-commerce platforms like Amazon Marketplace, Flipkart and ride-hailing platforms like Uber exhibit a different dynamic.

In case of Google, factors such as high initial fixed costs and negligible marginal costs of serving an additional user, together leading to an economies of scale; and benefits like positive network effects, data accumulation, etc. contributes to the dominance of such platforms. Not only that, it also creates a self-reinforcing cycle which strengthens the position of the dominant player. [8]

Whereas despite also benefitting from factors like network effects and economies of scale, E-commerce platforms like Amazon, Flipkart do not inevitably become monopolies. This is because after a critical mass of users has been reached, the benefits derived from network effects become less pronounced.[9] In addition to this, in these markets a significant heterogeneity in demand can be witnessed due to the diversity of products. As a result, in such markets we can witness several niche marketplaces catering to specific consumer preferences and thereby preventing any single platform from becoming absolutely dominant.[10]

Similarly, the main objective of ride-hailing platforms like Uber, is to match passengers with drivers and in doing that the platform benefits greatly from network effects. But these benefits start to diminish once a certain network size is achieved. Additionally, the dominance in such markets is also influenced by the local nature of demand. Multiple ride-hailing platforms can be found in large urban areas for catering

[8] Francesco Ducci, *Natural Monopolies in Digital Platform Markets* (Cambridge Univ. Press 2020).
[9] Id.
[10] Id.

to specific geographical regions. Furthermore, when compared to search engines, market entry for new competitors is more feasible in market for ride-hailing platforms due to less pronounced supply-side economies of scale. [11]

Hence, this diversity among digital platforms as regards degree of dominance gives rise to a spectrum of digital monopolies. This calls for a more nuanced approach for regulating these digital platforms taking into consideration their specific characteristics as well as their impact on competition and consumer welfare.

2.3.3. The Need for a Nuanced Regulatory Approach

Consequently, like traditional natural monopolies, digital markets might necessitate economic regulation to balance the efficiency gains of a single provider with the need to prevent allocative and productive inefficiencies. This regulation could involve measures like price caps, entry controls in specific circumstances, and anti-trust interventions to prevent the platform from leveraging its dominance in related markets.[12] But the regulation must not adopt a one-size-fit-all approach and instead must be more nuanced.

A contemporary example of a legislation governing digital markets is the European Union's DMA.[13] The DMA is a first-of-a-kind legislation which falls under the umbrella of economic regulation[14]. It aims at addressing the concerns related to undue market power of dominant online platforms.

The DMA has laid down certain obligations and rules for the dominant digital platforms, also known as gatekeepers, with the aim of making the digital landscape

[11] Id.
[12] Id.
[13] European Commission, Regulation (EU) 2022/686 of the European Parliament and of the Council of 8 June 2022 on markets in digital services and amending Directive 2000/31/EC (Dec. 15, 2022), OJ L 136, at 1.
[14] Anthony I. Ogus, REGULATION: Legal Form and Economic Theory (2d ed. Hart Publishing 2004), at 29-30.

more competitive. Having competition in the market would be instrumental in achieving the economic regulatory goals by lowering the prices for the consumers, providing them with a wide range of innovative services, and ensuring that small businesses in the digital ecosystems are given a fairer playing field to compete. Even though the primary objectives of DMA can be said to be 'economic', it might have a complementary social dimension[15] by indirectly improving consumer protection through fostering competition for user-friendly and privacy-centric services.

[15] Ogus, supra note 1, at 46-54.

3. The Digital Markets Act: Scope and Application

3.1. Scope of EU's Digital Markets Act

The DMA doesn't apply to the entire digital landscape. It focuses on specific areas where dominant players operate, aiming to create a fairer and more competitive digital environment. The conditions specified in Articles 2 and 3 of the DMA must be fulfilled in order to bring a coming within the purview of DMA. One of the essential conditions is that the service must be a Core Platform Service according to the pre-defined list given in DMA. The other essential condition is that the service provider must be designated as a 'Gatekeeper', i.e. it must be a dominant player within the digital market who wield significant influence.

3.1.1. Core Platform Services – Key Characteristics and Definition

According to the DMA being a Core Platform Services (hereinafter 'CPS') is an essential element for a digital service to come within the purview of DMA. While there is no comprehensive definition provided for CPS, an insight into the essential features of CPS can be found in Recital 2.

Firstly, an *extreme economies of scale* is demonstrated by these services which means that these services become more valuable and efficient with an expansion in their user base, thereby making it more challenging for the competitors to compete. Secondly, they benefit from *strong network effects*, which means that more users joining the platform increases its value, which in turn creates a self-reinforcing cycle of dominance. Thirdly, *vast amounts of user data* are amassed by the CPSs by analyzing which they can gain a significant edge over their competitors. This has the potential of leading to *user lock-in*, where users become heavily reliant on the platform due to the accumulated data and established connections, which makes it difficult or expensive to for the users

to switch to the alternatives. Finally, another feature of a CPS is the *absence of multi-homing*, which means that simultaneous utilization of platforms is difficult for the users and this results in further strengthening of the CPSs dominant position in the market. These characteristics listed in the DMA help us in recognizing CPSs and their potential to stifle competition within the digital landscape.

Instead of a single definition, the DMA opts for an exhaustive list of ten specific CPS categories outlined in Article 2(2). These categories include services such as "*online intermediation services, online search engines, online social networking services, video-sharing platform services*, etc."[16] to name a few.

For a digital service to fall under the DMA's scope, if it must belong to one of the ten CPS categories listed in Article 2(2) and at the same time it must also meet the specific definition provided for that CPS category in Article 2(5) to 2(13). However, the DMA is not automatically applicable if a digital service is a CPS. For the DMA to be applicable, it is also necessary that the company holds a 'gatekeeper' position which indicates towards their dominance in the market and their potential to stifle competition.

3.1.2. Designation as a Gatekeeper

3.1.2.1. Qualitative Criteria for Gatekeeper Status

A company is designated as a gatekeeper if it satisfies the threefold test prescribed by the DMA. First, the company must have a *substantial impact on the overall digital market* within the EU.[17] Second, the company must provide a CPS that acts as a *crucial gateway for businesses to reach end users*.[18] Third, the company must possess an

[16] Digital Markets Act, art. 2(2).
[17] Digital Markets Act, art. 3(1)(a).
[18] Digital Markets Act, art. 3(1)(b).

entrenched and durable market position, or has the potential of attaining this dominance in the near future.[19]

3.1.2.2. Quantitative Criteria for Gatekeeper Status

In addition to providing the qualitative framework for gatekeeper identification, the DMA also provides certain quantitative benchmarks for creating a *rebuttable presumption* of gatekeeper status. If the thresholds specified in Article 3(2) are fulfilled, then that suggests that the qualitative criteria are likely satisfied by the company. For instance, if the specified annual turnover threshold within the EU[20] is exceeded by a company; or if it possesses a high market capitalization[21] together with providing the same CPS in at least three EU member states, then this would give rise to a presumption of the company having a significant impact on the internal market (i.e. criterion 1).

Similarly, if the thresholds for 45 million monthly active end users and 10,000 yearly active business users within the EU is met for the last financial year and the preceding three years, then this creates a presumption that the company's CPS is an important gateway (i.e. criterion 2) and enjoys a durable position (i.e. criterion 3).

However, these thresholds are rebuttable. Companies exceeding the quantitative benchmarks can challenge the presumption by demonstrating why, in their specific case, the qualitative criteria aren't met. The DMA places the burden of proof on the company for such a rebuttal.

Hence, the process of designating a gatekeeper under the DMA involves a mix of qualitative and quantitative criteria. While the three-pronged qualitative criteria, i.e. *significant market impact, crucial gateway CPS,* and *durable market position*, provide a

[19] Id. art. 3(1)(c).
[20] €7.5 billion in each of the last three years.
[21] €75 billion in the last year.

comprehensive framework in the process of gatekeeper designation, the threshold based rebuttable presumptions further contributes in the clearer identification of potential gatekeepers within the digital market. The application of both these criteria in gatekeeper identification helps to ensure that only those companies are subjected to the provisions of the DMA which demonstrably possess significant market power.

3.1.2.3. When Qualitative Criteria Are Fulfilled but Not Quantitative

If the qualitative characteristics of a gatekeeper as outlined in Article 3(1) are displayed by a company, but the quantitative characteristics like specific turnover or user base requirements are not met, then in such a case the Commission can initiate a market investigation. Factors such as size of the company, its user base, networks effect, overall scale, are all taken into consideration in order to determine the true influence of the company within the digital market. [22]

3.1.2.4. When Quantitative Criteria Are Fulfilled but Not Qualitative

Companies exceeding the DMA's quantitative thresholds for turnover and user base are obligated to notify the Commission.[23] This notification doesn't require an admission of gatekeeper status, but it triggers the ability to challenge the presumption. It is the company's burden of proof to show why the criteria is inapplicable to its CPS by submitting a well-supported rebuttal. [24]

For evaluating the rebuttal, a significant discretion has been given to the Commission and if it deems the challenge as credible, then it may initiate a market investigation. This investigation delves deeper to assess if the company truly meets the qualitative criteria for gatekeeper designation under Article 3(1).

[22] Digital Markets Act, art. 3(8).
[23] Digital Markets Act, art. 3(3).
[24] Digital Markets Act, art. 3(5).

3.1.2.5. Conclusion

Gatekeeper designation is a targeted and dynamic process as only those CPSs which are deemed critical gateways for businesses to reach consumers are specified in the commission's decision.[25] By doing this, the commission ensures the DMA's regulations do not apply to a company's entire portfolio, but rather only to the designated services. Besides this the DMA allows for ongoing review. This is because if there is any new information or significant changes in a company's market position, then based of such information or changes, the commission can revise or revoke the designation.[26] In addition to this, mandatory reviews every three years ensure continued relevance and adaptability of the gatekeeper designations within the evolving digital landscape.[27]

Hence, it can be concluded that a robust framework has been established under the DMA for designating digital platforms as gatekeepers. The confluence of factors such as the quantitative thresholds, qualitative criteria, market investigations, and review mechanisms ensures that only those digital platforms which are the most dominant and possess significant market power are subjected to the regulations of the DMA.

[25] Digital Markets Act, art. 3(9).
[26] Digital Markets Act, art. 4(1).
[27] Digital Markets Act, art. 4(2).

3.2. Obligations of Gatekeepers

3.2.1. Personal Data Use for Advertising

The DMA restricts a gatekeeper's use of personal data for online advertising purposes. It prohibits the processing of the user data which the gatekeeper has obtained through their CPS for this specific purpose without valid user consent.[28] In addition to this, combining or cross-using of personal data obtained via the CPS with data from other sources is also prohibited under the DMA.[29]

3.2.2. Business Data Protection

The DMA also safeguards business data from being misused by the gatekeeper. While competing with business users, gatekeepers are not allowed to make use of data which is not publicly available and is generated or provided by businesses in the context of their use of the CPS. [30] As a result of this, a wide range of business data, including information about user activity (e.g., clicks, searches, views, etc.) and data provided by the business users themselves, is protected. [31]

3.2.3. Interoperability and Competition

The DMA requires the gatekeepers to allow hardware and software providers to develop products that interoperate with the functionalities accessed through the gatekeeper's operating system or virtual assistant, designated as CPS.[32] This promotes *interoperability* between gatekeeper platforms and other services.

Furthermore, gatekeepers are also mandated to make their designated number-independent interpersonal communications services interoperable with similar services

[28] Digital Markets Act, art. 5(2)(a).
[29] Digital Markets Act, art. 5(2)(b).
[30] Digital Markets Act, art. 6(2).
[31] Id.
[32] Digital Markets Act, art. 6(7).

offered by other providers in the EU.[33] As a result competition and user choice is fostered within the messaging service landscape.

3.2.4. Open Ecosystems and Third-Party Applications

The DMA promotes open ecosystems by making it mandatory for the gatekeeper to ensure openness to third-party applications. Gatekeepers are required to allow installation, use, and access to competing app stores and third-party applications on their operating systems, designated as CPS.[34] This allows users to have a choice of alternatives to the app store of the gatekeeper, thereby fostering competition. In addition to this, the gatekeepers cannot restrict user freedom of switching between or subscribing to different applications and services offered through their CPS.[35] Resultantly, user choice is ensured and lock-in effects which has the potential of harming competition are prevented.

3.2.5. Anti-Steering Practices

The DMA also prohibits gatekeepers from restricting the ability of the business users to promote their offers and enter into contracts with customers outside the gatekeeper's CPS. By doing that the DMA aims at combatting the anti-steering practices of the gatekeepers.[36] This fosters competition within the digital market by ensuring that the customers can be freely reached through other channels and offered different pricing or conditions by the businesses.

3.2.6. Prohibition of Parity Clauses

There is also a prohibition in the DMA on gatekeepers with respect to using parity clauses for restricting the pricing freedom of business users. In other words, products or

[33] Digital Markets Act, art. 7(1).
[34] Digital Markets Act, art. 6(4).
[35] Digital Markets Act, art. 6(6).
[36] Digital Markets Act, art. 5(c).

services can be offered by a business at different prices or for different conditions on the gatekeeper's platform as compared to their own website or other platforms. [37]

3.2.7. Combating Tying Practices

The DMA also fosters competition by combatting tying practices within the CPS. It does this by prohibiting the gatekeepers from forcing the businesses or users to use the gatekeeper's own identification system, web browser, or payment system when using the business user's services on the CPS. [38] In addition to this, the gatekeepers are also prohibited from forcing users to subscribe to or register with any other of gatekeeper's CPS as a condition for accessing their CPS they actually want to use.[39] This prevents any potential lock-in effects and compels gatekeepers to offer their CPS on a standalone basis. This helps in ensures user choice and competition in the digital marketplace.

3.2.8. User Control and Customization

The DMA mandates that the gatekeepers must enable the users to uninstall software applications on their operating systems and select their preferred search engines, web browsers, etc. from the options available.[40] In addition to this, the users must also be allowed to make changes to the default settings on their operating system, web browser, etc. that might steer them towards the products or services of the gatekeeper.[41] The aim of these provisions is to reduce the control exercised by the gatekeepers and grant more control to the users over their devices and online experience.

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[37] Digital Markets Act, art. 5(3).
[38] Digital Markets Act, art. 5(7).
[39] Digital Markets Act, art. 5(8).
[40] Digital Markets Act, art. 6(3).
[41] Id.

3.2.9. Data Access Rights

Another way in which the DMA gives users and businesses more control over their data is by enhancing their data access rights. The DMA mandates the gatekeepers to provide end users and their authorized representatives with effective data portability, including continuous and real-time access to data generated through user activity on the core platform service.[42]

Similarly, business users and their authorized representatives are also granted free, high-quality, continuous, and real-time access to data provided for or generated in the context of using the core platform service.[43] Furthermore, gatekeepers are required to provide online search engine providers with access to ranking, query, click, and view data on fair, reasonable, and non-discriminatory terms, promoting competition in search.[44] Moreover, the gatekeepers must also share with other search engines providers data like to ranking, query, click, and view data on fair, reasonable, and non-discriminatory terms. This will promote competition among search engines.

3.2.10. Prohibition of Self-Preferencing

Gatekeepers are prohibited from engaging in self-preferencing. The DMA does this by restricting the gatekeepers from treating their own services and products more favorably than similar third-party offerings in ranking, indexing, and crawling processes.[45] This prevents gatekeepers from giving a boost to their own services artificially at the expense of the rivals, which in turn ensure fair competition. Moreover,

[42] Digital Markets Act, art. 6(9).
[43] Digital Markets Act, art. 6(10).
[44] Digital Markets Act, art. 6(11).
[45] Digital Markets Act, art. 6(5).

the gatekeeper must also ensure that the conditions that it applies to these ranking processes are transparent, fair, and non-discriminatory.[46]

3.2.11. Transparency in Online Advertising

The DMA mandates that the advertisers and publishers are given detailed information by the gatekeepers about their advertising services, including information such as pricing, fees, and remuneration, and the metrics used for their calculation.[47] By doing this, the DMA aims at ensuring that transparency is maintained in online advertising and thereby a more level playing field is created within the digital advertising ecosystem.

3.3. Penalties for Non-Compliance by Gatekeepers

The EU's DMA enforces compliance through a tiered system of penalties. If there is a breach of the obligations listed in the DMA by the gatekeepers, then the European Commission (EC) has been empowered to levy fines on the gatekeepers who violate the DMA regulations.

For a first offense, The Commission has the power to impose fines of up to 10% of the gatekeeper's global turnover, when the offense is committed for the first time, provided the penalty is proportionate to the infringement.[48]

But when there are repeat offenses by the gatekeeper concerning the same CPS, within an eight-year window, then that would make it liable to fines reaching up to 20% of its global turnover. [49]

[46] Digital Markets Act, art. 6(5).
[47] Digital Markets Act, arts. 5(9), 5(10).
[48] Digital Markets Act, art. 30(1).
[49] Digital Markets Act, art. 30(2).

Subsequently, if within the same timeframe, the gatekeeper makes a third violation, a market investigation for assessing *systematic non-compliance* can be conducted by the Commission.[50] If the Commission finds such a non-compliance, then it is empowered to impose *any behavioral or structural remedies* which it deems necessary in order to ensure that the DMA provisions are adhered to by the gatekeepers.[51] Some of the behavioral or structural remedies in the event of *systematic non-compliance* could be: a ban on mergers and acquisitions activity, a divestiture of business units, or a potential break-up of the gatekeeper company.

For compelling the gatekeeper to comply with the DMA provisions, the Commission has also been empowered to impose daily fines of up to 5% of average daily worldwide turnover.[52]

The DMA thus has adopted a tiered approach for ensuring enforcement of its provisions by empowering the Commission to address anti-competitive behavior by gatekeepers. This approach incentivizes the gatekeepers to comply with the DMA provisions.

[50] Digital Markets Act, art. 18(1).
[51] Id.
[52] Digital Markets Act, art. 31.

4. Indian Digital Competition Bill, 2024

4.1. The Brussels Effect

As the world evolved, the meaning of 'power' has undergone profound transformation. Historically, a nation's influence was generally gauged by its military power. While the military power still continues to be critical component of a nation's power, it can no longer be the sole criteria to define a State as a powerful one. The globalization of the world has resulted in economic interdependence among nations, technological innovation and complex regulatory frameworks. This, in turn, has given rise to a new kind of power, that is 'Regulatory Power'.

The EU, though not a traditional military power, has significant regulatory power. By using this regulatory power, EU has the ability to unilaterally influence global standards and policies. Prof. Anu Bradford calls this power of the EU to have an impact on the rest of the world through its regulatory framework as '*The Brussels Effect*'.[53]

For instance, many Silicon Valley companies from the US with their operations across the world such as Google, Apple, Facebook, Microsoft follow the European GDPR as regard their privacy policies.[54] They do this not only when they are dealing with their data users or data subjects in Europe but across the world.

Similarly, India has proposed the DCB which draws heavily from the EU's DMA. While this stands as a testament to EU's regulatory power, there exist many concerns regarding the suitability of such a regulatory framework to the Indian economic landscape.

[53] Anu Bradford, *The Brussels Effect: How the European Union Rules the World* (Oxford Univ. Press 2020).
[54] Id.

4.2. Critical Analysis of India's Proposed Digital Competition Bill

Like the EU's DMA, the Indian DCB also proposes a two-pronged test for designating 'Systemically Significant Digital Enterprises' (hereinafter 'SSDEs').

The first prong relies on clear *quantitative thresholds*. An enterprise qualifies as an SSDE if it meets any of the following financial thresholds for three consecutive years[55]:

- Turnover in India exceeding INR 4,000 crore (approximately $5.1 billion)
- Global turnover exceeding USD 30 billion
- Gross merchandise value in India exceeding INR 16,000 crore (approximately $20.3 billion)
- Global market capitalization exceeding USD 75 billion

Additionally, the enterprise must meet at least one of the following user thresholds in India for the same three-year period[56]:

- At least 10 million end users
- At least 10,000 business users

The second prong empowers the Competition Commission of India (hereinafter 'CCI') to designate an *SSDE even if the quantitative thresholds are not met*. The CCI has been given this discretionary power which it can exercise if it believes the enterprise has a 'significant presence' in a specific core digital service market. The Bill outlines 16 qualitative factors the CCI can consider during this assessment, including factors like[57]:

- Volume of commerce;

[55] Digital Competition Bill, 2024, § 3(2)(a).
[56] Digital Competition Bill, § 3(2)(b).
[57] Digital Competition Bill, § 3(3).

- Size and resources of the enterprise;
- User base and economic power;
- Integration with different market segments;
- User dependence and barriers to entry;
- Network effects and data advantages; etc.

The Bill proposes a two-pronged approach with quantitative and qualitative thresholds. On one hand, the proposed quantitative thresholds provide clarity for businesses, on the other hand the qualitative criteria allow the CCI to capture emerging players with significant market influence that might not meet the financial or user base thresholds yet.

However, the qualitative assessment criteria specified in the Bill for designating an SSDE lacks clarity and are subjective. In addition to that, they also have a catch-all provision[58] for assessing the '*significant presence*' of an enterprise in a market, which also lead to significant ambiguity. The lack of clarity in the guidelines leads to uncertainty for businesses as regards the potential regulation. CCI's broad discretion also gives rise to concerns about its potential misuse and the risk of arbitrary designations by the CCI. Furthermore, this ambiguity could potentially cause a regulatory capture, where businesses with excessive influence could manipulate regulations to their advantage. The critics have further argued that unlike the EU and UK's frameworks, only large companies appear to be targeted by the Bill based on size alone, *without considering market power*.[59] As a result, even those companies which are

[58] Digital Competition Bill, § 3(3)(xvi): "*any other factor which the Commission may consider relevant for the assessment*."

[59] Joseph V. Coniglio & Lilla Nóra Kiss, *Comments to the Indian Ministry of Corporate Affairs Regarding Digital Competition Law*, Information Technology & Innovation Foundation (May 15, 2024),

not creating market failures could be regulated which might potentially hinder innovation and competition.

Similar to the provisions on data usage in EU's DMA[60], the Indian Bill also contains certain *restrictions on 'data usage'*[61] which targets situations where a firm uses user data to compete with its users (i.e. data misappropriation). This prohibition, for instance, would target vertically integrated platforms like Amazon, which could potentially leverage seller data for its own retail benefit. But at the same time, this aggregation of data across markets can result in an enhancement of user experience by correcting information gaps and tailoring product offerings to consumer needs.[62]Therefore, if blanket ban is imposed on such data-driven user experience improvements, then that could hinder innovation and limit companies' ability to offer relevant products and services which are actually desired by the consumers.

Mirroring DMA's provisions on '*Open Ecosystems and Third-Party Applications*'[63], the Bill also aims to promote competition by forcing large digital platforms to allow users to access and utilize applications developed by third parties on their core services.[64] However, the critics argue that openness to third-party applications might not always be pro-competitive and rather in some cases, it could actually stifle competition. It has been acknowledged by the U.S. Supreme Court that even though the main aim of antitrust law is to foster competition, if a monopolist is forced to share its infrastructure which is the source of its advantage, then that could disincentivize investment in such beneficial facilities.[65] In other words, it can be said that there is a

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https://itif.org/publications/2024/05/15/comments-to-the-indian-ministry-of-corporate-affairs-regarding-digital-competition-law/.

[60] Digital Markets Act, arts. 5(2)(a), 5(2)(b), 6(2).

[61] Digital Competition Bill, 2024, § 12.

[62] Coniglio & Kiss, supra note 59.

[63] Digital Markets Act, arts. 6(4), 6(6).

[64] Digital Competition Bill, 2024, § 13.

[65] Verizon Communications, Inc. v. Law Offices of Curtis V. Trinko, LLP, 540 US 398 (2003).

conflict between promoting competition and the 'essential facilities doctrine' whereby companies are forced to share their resources. Therefore, while giving such access to others might have certain benefits, they might not always outweigh the potential drawbacks such as stifling innovation and competition. Similarly in case of digital markets, refusal to deal with third-party applications, though often seen as anti-competitive, can incentivize innovation. Freed from integration burdens, platforms can focus resources on developing their core functionalities. Additionally, avoiding these complex and expensive integrations also allows platforms to potentially reinvest those saved resources into core functionalities, ultimately benefiting consumers.

For example, if it made mandatory for Meta to share its data with third-party applications, then such forceful sharing of data might disincentivize Meta to invest in data collection and analysis, which in turn has the potential to hinder its ability to improve its own platform. This might also disincentivize rivals as well from creating new platforms if they can simply benefit from Meta's data. As a result, all of this could ultimately reduce competition.[66]

The provisions of the DMA have made it mandatory for Apple to open up its ecosystem to other app stores. While this decision of opening up might be beneficial for the developers and the users, it can also result in significant risks to security and privacy. Not having the rigorous app review process of Apple in place might result in proliferation of malicious software, making the users prone to the risk of scam, malware and data breaches. [67]

[66] Coniglio & Kiss, supra note 59.
[67] Nabeel Ahmed, *Do Alternative App Stores Undermine Security in iPhones,* The Hindu (Mar. 22, 2024), https://www.thehindu.com/sci-tech/technology/do-alternative-app-stores-undermine-security-in-iphones/article67979679.ece.

Like the DMA[68], the Bill also prohibits *"anti-steering provisions,"* which restrict platforms from preventing business users from directing their customers to alternative services, including their own websites.[69] The prohibition is potentially similar to the EC's approach in their recent fine against Apple[70] for restricting developers from offering alternative subscription options within their apps. But Apple has termed the Commission's theory as overly simplistic as it fails to appreciate the broader competitive dynamics of the digital music market.

Countering the EC's ruling, Apple emphasizes the App Store's value beyond cost, citing security, ease of use, and service integration.[71] It argues that the removal of anti-steering and reduction in commission fees could result in stifling of innovation and would cause harm to the entire ecosystem – developers and consumers alike – by limiting Apple's ability to reinvest in App Store improvements.[72] Apple also uses the example of Netherlands where dismantling anti-steering resulted in a minimal reduction in the commission fee (i.e. from 30% to 27%), to downplay the impact of such an action.[73]

In essence, Apple has argued that if the broader market dynamics of anti-steering are not taken into consideration, then that might result in insignificant benefits for consumers, while burdening the developers with additional third-party transaction fees.[74] Even though the bill makes an exemption for "*restrictions that may be*

[68] Digital Markets Act, art. 5(4).
[69] Digital Competition Bill, 2024, § 14.
[70] European Commission, Commission Fines Apple Over €1.8 Billion Over Abusive App Store Rules for Music Streaming Providers, *Press Release* (Mar. 4, 2024), https://ec.europa.eu/commission/presscorner/detail/en/ip_24_1161.
[71] Apple Inc., *The App Store, Spotify, and Europe's Thriving Digital Music Market,* Apple Newsroom, Mar. 4, 2024, https://www.apple.com/newsroom/2019/03/addressing-spotifys-claims/ (accessed July 20, 2024).
[72] Id.
[73] Id.
[74] Id.

considered 'integral' to the provision of a Core Digital Service,"[75] it is vague and depends on how broadly it is interpreted. Furthermore, the bill overlooks potential consumer benefits of anti-steering provisions, even if they are not core platform functionalities.[76]

The Bill also treats *tying and bundling practices* as inherently illegal[77], but these practices can have pro-competitive benefits. Tying, bundling, and technological integration can prevent free-riding inefficiencies and offer consumers advantages like convenience, exposure to new products, and better value. Similarly, technological tying also takes place in digital markets and that often results in seamless user experience. For example, just by having a single account on Amazon Prime, a subscriber can have benefits of various services such as free one-day shipping, streaming services, and exclusive deals, since these are bundled with the Amazon Prime membership. This offers the subscribers better value and convenience, and also expose them to new products.

Even though tying has been held to be anti-competitive in cases like *US v. Microsoft*[78], a more nuanced approach needs to be adopted in order to avoid hindering beneficial practices that can ultimately improve consumer welfare. As shown by law and economics principles, innovation is stifled if a high burden of proof is placed on companies to justify tying practices.[79] It's difficult and expensive for companies, especially in digital markets with high upfront investments and uncertain returns, to demonstrate there are "no less anti-competitive alternatives."[80] The companies will be discouraged from exploring technologies with a better user experience and more value

[75] Digital Competition Bill, 2024, § 14.
[76] Coniglio & Kiss, supra note 59.
[77] Digital Competition Bill, 2024, § 15.
[78] United States v. Microsoft Corp., 253 F.3d 34 (D.C. Cir. 2001).
[79] Qian Wu & Niels J. Philipsen, *The Law and Economics of Tying in Digital Platforms: Comparing Tencent and Android*, 19 J. Competition L. & Econ. 103 (2023), https://doi.org/10.1093/joclec/nhac011.
[80] Id.

for consumers as a result of this focus on absolute necessity. Therefore, to ensure that innovation and consumer welfare are not hampered in the long run, a more nuanced approach to tying is needed rather than terming it as per se anti-competitive.[81]

The Bill's like the DMA also imposes a *ban on self-preferencing*[82] by digital platforms. This prohibition also gives rise to concerns about stifling innovation. Self-preferencing, where platforms prioritize their own services, is not always harmful and often leads to an improvement in user experience and platform competitiveness by integrating various offerings.

For instance, it can be said that Amazon's self-preferencing is a strategic business decision, often misconstrued as anti-competitive behavior. While critics allege Amazon prioritizes its products over third-party sellers to stifle competition, in reality there exists a symbiotic relationship where the success of the platform results in benefit for both the parties.[83] Amazon offers a diverse product range, including its own brands, on its platform which improves the overall experience of the customers, which in turn attracts more customers to the platform. This increase in traffic to the platform then indirectly benefits third-party sellers on the website. Additionally, Amazon's own-brand products often help in filling the market gaps, which provides such choices to the consumers that might not be available otherwise. Such actions, instead of harming competition, contribute to a thriving marketplace.

Despite growing concerns about self-preferencing, some economic research suggests it can have pro-competitive effects. For instance, self-preferencing by search

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[81] Id.

[82] Digital Competition Bill, 2024, § 11.

[83] Julie Carlson, *Don't Bite the Hand That Feeds You: Amazon's Self-Preferencing Paradox,* Information Technology & Innovation Foundation, (May 2, 2022), https://itif.org/publications/2022/05/02/dont-bite-hand-feeds-you-amazons-self-preferencing-paradox/.

engines for advertising may improve user experience by reducing ad clutter.[84] Self-preferencing by a platform can also lead to a lower commission fees for third-party sellers, which in turn could lower prices for the consumers, thereby attracting more sellers and consumers, thus creating a potential win-win scenario.[85] Therefore the potential pro-competitive benefits of self-preferencing algorithms must also be taken into consideration while considering the concerns about their anti-competitive effects.

[84] Alexandre de Cornière & Greg Taylor, *Integration and Search Engine Bias*, 45 RAND J. Econ. 576, 576–597 (2014).
[85] Yusuke Zennyo, *Platform Encroachment and Own-Content Bias*, 70 J. INDUS. ECON. 684, 684–710 (2022).

5. Competition, Innovation, and the Regulatory Dilemma in Digital Markets

5.1. Introduction

The primary concerns behind the implementation of the DMA by the European Commission were: Firstly, the concern regarding the market dominance of large digital platforms which prevent the entry of smaller competitors; Secondly, it is believed that the dominance of the large digital platforms gives them the power to control innovation, consumer choice and competition, which would result in reduction of social gains from innovation.[86]

While the Commission has introduced the DMA with the objective of fostering innovation, there is a strong possibility of legislations like DMA and DCB having the opposite effect i.e. it can instead stifle innovation for the reasons analyzed in the critique on the DCB.

In fact, scholars Evans and Schmalensee have argued that the traditional economic model of innovation as a 'patent race' is overly simplistic and misleading as it describes the new economy as a landscape of stable monopolies wherein sustained dominance is enjoyed by the firms which secure a patent.[87] But in reality, these high technology industries are far more dynamic.

Even though network effects play an instrumental role in solidifying the leadership position of a firm, we also must bear in mind that rapid technological advancement and constant competition are key characteristics of such industries.[88] Hence, the scholars believe that in these industries multiple, sequential races for market

[86] European Commission, *Inception Impact Assessment of the ex-ante regulatory instrument* (2020).
[87] Evans, David S. & Richard Schmalensee, *Some Economic Aspects of Antitrust Analysis in Dynamically Competitive Industries*, Innovation Policy and the Economy 1 (2002).
[88] Id.

leadership takes place instead of a single and decisive race for patent.[89] In other words, a company which has achieved a dominant position can be challenged by new entrants with disruptive technologies, overcoming the barriers of network effects, lock-in effects and switching costs. They call this phenomenon as '*leapfrogging*' wherein incumbents are displaced by the new entrants by offering better product which renders the incumbent's product obsolete.[90]

In essence, the high technology industries are dynamic and competitive, where innovation is a continuous process and market leadership is transitory. For example, videoconferencing platform Skype was a dominant player in the relevant market in the initial days. But despite its dominance, other players like WhatsApp, FaceTime and Zoom emerged as its competitors due to their innovative products.

The large digital platforms who have been classified as 'gatekeepers' by the ex-ante regulation of DMA can be both 'incumbents' and 'entrants.' While they are incumbents in their core markets, they are entrants in a new market. This classification becomes important because it is believed that the market position of a firm influences its innovation strategies - the incumbents often focus on 'incremental innovation', whereas the entrants pursue 'drastic innovation' which has the potential of disrupting the existing markets and creates opportunities for them to capture significant market share.[91] This duality in the market position held by the large firms also complicates the regulatory landscape, since a different treatment might be required for the same firm according to its market position.

[89] Id.
[90] Id.
[91] Acemoglu, Daron & Dan Cao, *Innovation by Entrants and Incumbents*, 157 J. Econ. Theory 255 (2015).

5.2. Arrow vs. Schumpeter: A Debate on Innovation

5.2.1. Schumpeter's Theory: Innovation through Creative Destruction

The traditional economic theory has always sought to achieve 'static efficiency'. In other words, it aims at achieving optimal allocation of resources. Whereas, Schumpeter's theory focuses on 'dynamic efficiency' which underscores the role of innovation and technological advancements in achieving long-term economic growth.[92] According to Schumpeter, while perfect competition can be an appropriate market structure for achieving static efficiency, it is not suitable for fostering innovation.[93] Instead, he believed that imperfect competition would be more suitable for promoting innovation. This is because in a market with imperfect competition i.e., where few large players dominate, there is an increased possibility of such firms capturing more value from their innovations by charging higher prices for it; and also sell more units of their innovation further maximizing their profits.[94] As a result, these firms are incentivized to invest more in research and development (R&D) which in turn fosters innovation.

According to Schumpeter, the size and resources available with the large firms allow them to engage in innovation. As a result, new products and processes continuously replace the old ones. He calls this process as '*Creative Destruction*'.[95] This innovation leads to improvements in goods and services which enhances consumer welfare and living standards. Therefore, it is believed that this process of creative destruction is more important than price competition for economic progress.[96]

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[92] Richard J. Gilbert, *Competition and Innovation Basics: Arrow versus Schumpeter*, in Innovation Matters: Competition Policy for the High-Technology Economy 41 (The MIT Press, 2020).
[93] Id.
[94] Id.
[95] Joseph A. Schumpeter, *Capitalism, Socialism and Democracy* (1st ed., Routledge 1976).
[96] Id.

5.2.2. Arrow's Theory: Innovation Incentives in Competitive Markets

Arrow, on the other hand, believes otherwise. He is of the opinion that markets with a single dominant seller i.e. monopolies, have disincentive to innovate as compared to firms in a perfectly competitive market.[97] This is because a new innovation has the potential to replace the existing product of the monopoly and the profits associated with it.[98] Therefore, a monopoly which is already earning profits from its existing technology would not risk disrupting its profitable operations and would thus be disincentivized to innovate. Arrow calls this the '*Replacement Effect*' for monopolies.[99]

While existing profits of a monopoly discourages it from innovating, firms in a competitive market do not have any existing profits which they risk losing due to an innovation. In fact, adoption of a new technology might even help such firms in a competitive market to gain a certain market share.

As discussed earlier, innovation can be drastic or incremental. According to Arrow, both in a drastic as well as an incremental innovation a competitive firm has a greater incentive to innovate. In a drastic innovation, where competition from the existing product is completely eliminated, same profit would be earned by both a monopoly as well as a competitive firm when there is an innovation. But since a competitive firm has no existing profit to lose, it is better incentivized to innovate. Similarly, in an incremental innovation, where competition from the existing product is not eliminated but rather the cost of production is reduced, competitive firms are more likely to innovate. This is because the competitive firms have a possibility to increase its sales due to a lower production cost as compared to the typically higher prices of the monopolies.

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[97] Gilbert, *Competition and Innovation Basics* at 92.
[98] Id.
[99] Id.

In other words, Arrow's theory suggests that innovation is incentivized more in competition than in a monopoly because there is absence of any guaranteed profits for firms in a competitive market, which makes innovation necessary for their survival.

5.2.3. Shapiro's Synthesis: Contestability and Appropriability

The theories of Arrow and Schumpeter on the relation between competition and innovation seem to be on the opposite ends of the spectrum. Shapiro has made an attempt to reconcile these two contrasting views by introducing the concepts of '*Contestability*' and '*Appropriability*'. [100] The term contestability is used to define how easily a new firm can enter a market in order to compete with the incumbent players. A market can be said to be highly contestable if a new firm can easily enter and challenge the established players. The term appropriability is used to describe the ability of a firm to get the benefits of its own innovation. When a firm is not faced with competition and can easily reap the benefits of its innovation, then it can be said to be a situation of high appropriability.

The 'replacement effect' from Arrow's theory, whereby a monopolist has less incentive to innovate for avoiding the risk of losing its existing profit, aligns with the concept of 'contestability' given by Shapiro. Firms which are a part of a competitive market are better incentivized to innovate as they have more to gain from innovation and less to lose in terms of present profits, when compared to a monopolist.

Similarly, the concept of 'Appropriability' given by Shapiro aligns with Schumpeter's theory which says that large firms are better incentivized to foster innovation as they have more resources for doing that. If these large firms are not allowed to reap the benefits of their innovations due to imitation or competition, then

[100] Carl Shapiro, *Competition and Innovation: Did Arrow Hit the Bull's Eye*? in The Rate and Direction of Inventive Activity Revisited 361, 361-410 (Josh Lerner & Scott Stern eds., 2012).

that would disincentive them to innovate. Thus, for incentivizing these large firms to continue innovating, it is essential that are allowed to make adequate profits from its own innovation.

Hence, Shapiro's theory of contestability and appropriability acts as a bridge between the theories of Arrow and Schumpeter. In essence, Shapiro's theory suggests that regulatory policies should aim at drawing a balance between both contestability and appropriability for ensuring that innovation thrives.

If a policy increases contestability but does not take into consideration appropriability, then there is a possibility that such a policy can stifle innovation. For example, if there is over-regulation of large platforms with the aim of promoting competition, then that would decrease their potential returns and in turn might result in reduced innovation. Conversely, if there is limited competition in the market and low contestability, then that might also stifle innovation. Hence, an effective policy which motivates both large as well as small firms to innovate would be one which takes into consideration the trade-offs between enhancing competition and ensuring that firms can appropriate the benefits of their innovations.

5.3. Competition-Innovation Nexus: Empirical Research and Theoretical Model

5.3.1. Empirical Research

When it comes to the study of relationship between 'Competition' and 'Innovation', a study by Aghion et al. which combines empirical research and theoretical modelling provides valuable insights. Their empirical research suggests that there exists an *'Inverted U-shape'* relationship between competition and innovation which means that with an initial increase in competition, there is an increase in

innovation as well. [101] However, after having reached a particular level, if the competition increases further then that leads to a decrease in innovation.[102]

In less competitive industries, even a small increase in competition would incentivize firms to innovate more because the objective of the firms is to gain an edge over their competitors by differentiating themselves.[103] However, when the competition increases further, then that results in a few firms emerging as the 'leaders' who are significantly ahead of their competitors and since they are already ahead, as a consequence they no longer have the incentive to innovate.[104] At the same time, the wide gap between the leader and the 'followers' disincentivizes the followers to innovate, and as a result, there is a reduction in the overall innovation.[105]

In this study, specific metrics were used for measuring competition and innovation for establishing a relation between them. '*Lerner index'*, which reflects the pricing power of firms, was used for measuring the level of *competition* within an industry – this means that when the value of Lerner index is low, then that is indicative of higher competition levels.[106] Similarly, '*Citation-weighted patent counts'* were used for assessing the level of *innovation* – which means that in order to consider the significance of patents, this method takes into account how frequently they are cited in subsequent patents.[107]

5.3.2. Theoretical Model

Aghion et al. has also developed a theoretical model which they use for explaining their empirical findings. In the theoretical model, innovation can be categorized into

[101] Aghion, Philippe, et al., *Competition and Innovation: An Inverted-U Relationship*, Q. J. ECON. 701 (2005).
[102] Id.
[103] Id.
[104] Id.
[105] Id.
[106] Id.
[107] Id.

'Catch-up Innovation' and *'Escape-from-Competition Innovation'*.[108] The former kind takes place when those firms which have been left behind technologically strive to innovate with the aim of catching up with the leaders of the market.[109] The latter kind of innovation takes place when the firms at a similar technological level and they innovate for gaining a competitive edge over their rivals and for escaping competition.[110] The theoretical model explains how these two types of innovation are affected by different competition levels.

In markets which are highly competitive, firms which are neck-and-neck with their rivals are strongly incentivized to innovate for escaping competition by differentiating themselves through innovation.[111] However, if one of the firms takes a significant lead, then since the emergent leader gains an advantage and the intensity of the competition reduces, there is also a simultaneous reduction in the leader's incentive to innovate. At the same time, the followers are also disincentivized to innovate since the innovation alone would be insufficient to bridge the gap.[112] Therefore, in highly competitive markets, usually one firm leads and others follow, thereby reducing the overall incentives to innovate.[113]

Whereas in markets that are less competitive, initially the firms have little incentive to innovate as there is a there is little threat that it faces from its competitors. However, if one of the firms emerges to be the leader, then the firms which are lagging behind are incentivized to innovate and catch up.[114] Therefore, when the markets are

[108] Aghion, Philippe, et al., *Competition and Innovation: An Inverted-U Relationship*, Q. J. ECON. 701 (2005).
[109] Id.
[110] Id.
[111] Id.
[112] Id.
[113] Id.
[114] Id.

uncompetitive, then the firms are often neck-to-neck technologically, which results in consistent innovation efforts.

Hence, it can be said that the '*Composition Effect*' is crucial for the explaining the 'Inverted-U relationship' between competition and innovation. This means that in uncompetitive industries, the firms tend to remain neck-to-neck and try to overtake each other. So, there is an increase in competition, which results in an increase in innovation. Whereas in highly competitive industries, there is a technological leader and followers. This results in a decline in the leader's incentives to innovate, since he is already in the lead. At the same time, the followers are also disincentivized to innovate since it is difficult for them to catch-up.

The findings of the Aghion et al.'s study provides valuable insights for understanding the relationship between competition and innovation. According to their theoretical model, firms have the maximum motivation to innovate when the markets are moderately competitive because in such a scenario, they innovate in order to gain an edge over their rivals.[115] Whereas when the level of competition is too high or too low, in such cases the incentive of the firms to innovate diminishes.

5.4. The Challenge of Regulating Digital Markets: Balancing Competition and Innovation

Designing competition policies is a complex task. Taking into consideration the findings of the study by Aghion et al., the policymakers must try to draw a balance between fostering competition and encouraging innovation. This is because while too much competition would reduce the firms' incentive to innovate, too little competition would result in complacency. Therefore, the policymakers need to adopt a nuanced approach which promotes sustainable innovation avoiding under-regulation or over-

[115] Id.

regulation. They must also take into account industry-specific factors and the dynamic nature of the markets. For instance, traditional competition policies cannot be applied effectively to digital markets because there is a potential for disruptive innovations and rapid technological changes in such markets.

While the focus of traditional industries is on price and output, digital markets mainly focus on intellectual property and innovation.[116] In other words, the firms in the digital markets compete to develop and protect intellectual property; and heavy investment in research and development is made by the firms to create products or services that are innovative and can dominate the market for a considerable period.

If contestability is increased by encouraging new firms to enter, then that can spur innovation because the new firms entering the market bring with them fresh ideas and technologies, which drives the existing companies to innovate further in order to maintain their market positions.[117] However, once the new firms get successful, their incentive to innovate might reduce as a result of reduced appropriability.[118] In other words, if their novel innovation is not protected through IP rights or is imitated, then they would be disincentivized to further invest in new technologies. As a result of this uncertainty the application of traditional competition analysis tools to the digital industries becomes difficult.

Another factor which distinguishes digital markets from traditional industries is the manner in which market power is detected. While the traditional methods used for detecting market power involve the identification of close substitutes and examination of market shares, the same prove to be inadequate for determining market power in

[116] Evans & Schmalensee, *supra* note 87, at 1-49.
[117] Id.
[118] Id.

dynamic digital markets.[119] In digital markets, the more significant constraint to competition is the potential disruptive innovations by the competitors. Since the traditional methods do not capture the competitive constraints in digital markets, they cannot be used to detect market power.

5.5. Drawback of Ex-ante Regulation of Digital Markets

The DMA and the DCB which aim at governing the digital markets in EU and India respectively are prime examples of Ex-ante regulation which aim at regulating large digital firms such as *Alphabet, Amazon, Apple, ByteDance, Meta, Microsoft.*[120]

But a firm's size can be a result of innovation. This means that a firm could have grown in size because of its superior products or services, thereby differentiating itself from its competitors and attracting a larger customer base, which ultimately results in its growth. Therefore, it is not necessary that the large size of the firm is inherently detrimental, rather it could be a testament to the firm's ability to meet the consumer demands by competing on merits.[121]

If a firm is penalized just because of its large size, then could prove to be counterproductive as it would disincentivize the very innovation which lead to the growth of the firm.[122] In other words, when a firm's growth is a direct result of its investment in research and development, lower prices, better products, etc. then penalizing such a firm would discourage it from innovating and competing in future. In the long run, these sanctions being detrimental to innovation, would have an adverse impact on the consumers.

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[119] Id.

[120] European Commission, Digital Markets Act: Commission Designates Six Gatekeepers, *Press Release* (Sept. 6, 2023), https://ec.europa.eu/commission/presscorner/detail/en/ip_23_4328 (accessed Aug. 7, 2024).

[121] Jean Tirole, Market Failures and Public Policy, 105 *Am. Econ. Rev.* 1665, 1665-82 (2015).

[122] Id.

The ex-ante regulations for governing digital markets, such as DMA in EU and proposed DCB in India, identify certain large digital platforms as ‘gatekeepers’ and ‘SSDEs’ respectively and impose certain prohibitions and obligations on them, thereby posing a risk of stifling innovation. This is because these regulations focus solely on size of the company rather than specific anti-competitive behaviours, which might discourage companies from striving for market leadership through superior products or services. The successful firms would be hesitant to expand or invest in new ventures out of fear of regulatory scrutiny. Consequently, this approach hampers competition and innovation which the regulators aim to promote. As a result, this reduced competition and slow technological progress would ultimately harm the interests of the consumers.

6. Evaluating Regulatory Approaches for India's Digital Economy: Ex-Ante vs. Ex-Post

6.1. Implications of the Ex-Ante Approach on India and its Digital Economy

The draft DCB sates that its "*objective is to foster innovation, promote competition, protect the interest of users of such services in India"*[123], but in reality, there is an uncertainty whether its provisions would actually have the desired effects or prove to be counterproductive.

When it comes to *'protecting the interest of the users'* and *'promoting competition'*, the DCB seems to focus more on promoting competition, inadvertently hindering the interests of the consumers. By subjecting the SSDEs to stringent obligations the DCB appears to prioritize the interests of competitors instead. The law aims at levelling the playing field for the rivals of the dominant platforms by subjecting the dominant platforms to certain obligations.

Consequently, there lies a possibility that this law could instead become a tool for less efficient firms to seek protection in the guise of competition. This is could be particularly harmful because it would incentivize the competitor firms to engage in 'rent-seeking' behavior, wherein they might push for regulations which forces the dominant players (i.e. SSDEs/Gatekeepers) to make product design changes, not because it is in the interest of the consumers, but rather because doing so would give the rivals of the dominant firms a competitive edge. This poses a risk to the interest of the consumers who might have not actually wanted such a change.

For instance, it might happen that the regulation requires a certain change to the dominant platform's product or service which has the effect of making its product less

[123] As stated in the 'Long Title' or 'Objects and Reasons clause' of the Digital Competition Bill.

user-friendly or efficient. While this might benefit the competitor firms, it would be detrimental to the consumer interests.

EU's DMA exemplifies how such regulations can inadvertently foster rent-seeking behavior, benefiting competitors at the expense of the consumer welfare. This is evidenced by the five non-compliance investigations which were launched by the European Commission under the DMA shortly after its implementation, one of the reasons for it being stakeholders' dissatisfaction.[124] This can be said to be indicative of the fact that DMA enforcement is partially being driven by competitors' complaint than just by harm to consumer interests.

Since the draft DCB is greatly inspired by the DMA, it is prone to suffer from the same shortcoming of 'competitor appeasement' instead of safeguarding consumer interests. In fact, the draft DCB grants the Central Government influence over the CCI, by giving it the power to issue directions[125] to and supersede the CCI[126], which further exacerbates the risk of 'regulatory capture'. This raises the concerns of regulatory decisions being driven by political considerations and private interests instead of consumer welfare and objective market analysis. Consequentially, due to 'rent-seeking' and 'regulatory capture', the DCB's *objective of fostering innovation*, stands to be hampered.

Additionally, the ex-ante regulation of digital platforms, by imposing blanket prohibitions instead of undertaking a careful, case-by-case enforcement, would result in limiting experimentation by the large digital platforms, thereby *stifling innovation*.[127]

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[124]European Commission, Commission Opens Non-Compliance Investigations Against Alphabet, Apple, and Meta Under the Digital Markets Act, *Press Release*, Mar. 25, 2024, https://ec.europa.eu/commission/presscorner/detail/en/ip_23_4328 (accessed Aug. 9, 2024).

[125] Digital Competition Bill, § 39.

[126] Digital Competition Bill, § 40.

[127] Manne, Geoffrey A., *European Union's Digital Markets Act Not Suitable for Developing Economies, Including India*, Times of India, Feb. 14, 2023,

The changes made by the gatekeepers post the implementation of the DMA in EU stands as a testament to this statement.

For instance, after the implementation of DMA, there have been significant changes made by Google to many of its services in the EU. Like, earlier users could have searched for a location on Google just by clicking on the Google Map link, which made navigation easy. But now this feature of Google has been changed to comply with DMA and thus the users in EU would no longer see 'Maps' as a shortcut at the top of the search page.[128] This action by Google in compliance with DMA's prohibition on self-preferencing has been a cause of a great inconvenience to the users.[129]

Another change introduced by Google for complying with the self-preferencing prohibition under DMA is to its hotel search result pages. As a result of this change, several key features such as ability to: view hotel availability and prices at a glance, make comparison between multiple hotels side-by-side and access their location by clicking on Google Maps, etc. have been curtailed. This has resulted not only in user dissatisfaction, but has also led to a significant reduction in clicks and bookings for the hotels.[130]

The DMA, which is a policy framework tailored keeping in mind the unique conditions of the EU, has had a rough start in the EU itself and has resulted in

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https://timesofindia.indiatimes.com/blogs/voices/european-unions-digital-markets-act-not-suitable-for-developing-economies-including-india/ (accessed Aug. 9, 2024).

[128] The Local France, "*Why Google searches in Europe no longer show maps*", The Local, Mar. 7, 2024, https://www.thelocal.com/20240307/why-google-searches-in-europe-no-longer-show-maps (accessed Aug. 9, 2024).

[129] Edith Hancock, *Severe Pain in the Butt: EU's Digital Competition Rules Make New Enemies on the Internet*, Politico, Mar. 25, 2024, https://www.politico.eu/article/european-union-digital-markets-act-google-search-malicious-compliance/ (accessed Aug. 9, 2024).

[130] Javier Delgado, *DMA Implementation Sinks 30% of Clicks and Bookings on Google Hotel Ads*, Mirai, May 7, 2024, https://www.mirai.com/blog/dma-implementation-sinks-30-of-clicks-and-bookings-on-google-hotel-ads.

unintended consequences. Given the stark differences between the economic landscapes of the EU and India, suitability of a similar law to India is doubtful.

The digital market of India is in a development phase and is significantly different when compared to the U.S. and EU. In order to foster economic growth, developing nations like India must ensure ample investment in digital infrastructure and try to create an environment conducive for innovation. Despite a rapid growth in its digital infrastructure, the Indian market is still underserved by advanced consumer and business technologies.[131] Emerging digital industries like e-commerce, fintech and other digital platforms require consistent investment and expertise to grow.[132] Therefore, India's main focus should be to prioritize fostering an environment which helps it in attracting investments and accelerating the development of its digital infrastructure, rather than imposing potentially stifling regulations.

Accordingly, the Indian government has been giving substantial incentives for attracting tech companies to invest in India. For instance, Google has made a commitment of investing $10 billion in India's digitization fund.[133] Similarly companies like Microsoft and Amazon have promised to invest billions to build data centers and cloud infrastructure respectively in India.[134] This investment and expertise from global digital tech giants is essential for the India's digital economy. But the proposed DCB would discourage it by subjecting the tech giants to strict regulatory compliances. The DMA-like ex-ante framework would also create uncertainty for businesses and thereby

[131] Manne, supra note 127.
[132] Id.
[133]Google to Invest $10 Billion in Digitisation, Says CEO Sundar Pichai After Meeting PM Modi, Econ. Times, June 24, 2023, https://economictimes.indiatimes.com/news/india/google-to-invest-10-billion-in-digitisation-says-ceo-sundar-pichai-after-meeting-pm-modi/articleshow/101229106.cms?from=mdr.
[134]Vasudha Mukherjee, AI in India Gets a Boost as Microsoft, Amazon Invest Billions in Data Infra, Bus. Standard, June 18, 2024, https://www.business-standard.com/technology/tech-news/ai-in-india-gets-a-boost-as-microsoft-amazon-invest-billions-in-data-infra-124061800328_1.html.

reduce ease of doing business in India.[135] As a consequence, this overregulation risks deterring future investments and hindering the growth of India's start-up ecosystem. In other words, India's domestic innovation, which has been the driving force behind initiatives like 'Digital India' and 'Start-up India', would also take a hit.[136]

The proposed DCB should also be looked at from the lens of geoeconomic dynamics, particularly from the point of the relationship between India and U.S., amid China's rise in the tech industry. To counterbalance the growing influence of China, U.S. has made significant investment in India's digital sector.[137] The imposition of stringent regulations on the American tech giants might have an adverse impact on the relationship between the two allies.

6.2. Strengthening Ex-Post Regulation in India

The competition law in India until now operates on an ex-post approach. This means that it deals with anti-competitive activities after they have taken place and the CCI then undertakes investigation into the alleged violations, conduct inquiries, and impose penalties only if evidence of anti-competitive behavior is found. The CDCL was critical of the ex-post approach for governing the digital markets in India because it was of the opinion that the ex-post enforcement is too time-consuming and limited in scope to regulate rapidly changing digital markets effectively. Therefore, it recommended an ex-ante regulation to govern the Indian digital markets, which later resulted in the DCB.

While the CDCL has been quick in recognizing the time-consuming process of arriving at a decision in competition law cases on an ex-post basis, it failed to take into

[135] Nisha Kaur Uberoi et al., *India: Nurturing Competition in a Rapidly Evolving Digital Space*, Global Competition Rev. (Dec. 8, 2023), https://globalcompetitionreview.com/guide/digital-markets-guide/third-edition/article/india-nurturing-competition-in-rapidly-evolving-digital-space.
[136] Lazar Radic, *India Should Question Europe's Digital-Regulation Strategy*, Truth on the Market (Apr. 12, 2024), https://truthonthemarket.com/2024/04/12/india-should-question-europes-digital-regulation-strategy/
[137] Manne, supra note 127.

account the time taken to make changes to the legislative framework in India. Consequentially, the ex-ante regulations risk becoming obsolete and ineffective in dealing with the rapidly changing digital markets in the event of a disruption. Therefore, the need of the hour is not to subject India's developing digital markets to an ex-ante regulation just because the EU has adopted it.

As discussed earlier, EU's digital and economic landscape is quite distinct from India's. While EU can afford experimenting with such a novel way of regulating the digital sector, India risks losing a great deal in terms of investment and innovation, in the event of failure of ex-ante approach to regulation.

Ex-ante enforcement which establishes rules to be followed in advance in order to prevent potential anti-competitive activities before they occur, might lead to false positives, thereby stifling innovation. As opposed to that, the ex-post framework allows for a case-by-case analysis and rule-of-reason approach, which could provide a more nuanced understanding of the cases pertaining to digital markets and be more suitable for India.

Therefore, India can wait for some time to observe what implications does EU's DMA have in the long run before adopting a similar legislation. Meanwhile, efforts can be made to strengthen the ex-post enforcement to do away with the concerns of its time-consuming nature causing an '*irreversible tipping of markets in favor of large digital enterprises'*.[138] This can be done by making use of the already existing provisions of the Competition Act, 2002. As per the provisions of the Act, the CCI is empowered to issue interim orders to temporarily stop the alleged anti-competitive activity until the final

[138] Report of the Committee on Digital Competition Law, Ministry of Corporate Affairs Government of India, New Delhi (Feb. 27, 2024), at 28.

decision is made.[139] This provision helps to prevent immediate harm to competition and consumers while the investigation is being made. In digital market cases, where there is likelihood of an irreversible damage, the CCI can make use of this provision. In fact, the CCI has granted interim measures in a case pertaining to digital markets by directing the digital platform to relist the delisted applicant hotels to prevent any revenue loss and irreparable harm to them during the pendency of the case.[140] This remedy can be used more frequently by the CCI to deal with cases pertaining to digital markets instead of adopting an ex-ante framework.

India should consider the abovementioned potential drawbacks of implementing experimental, pre-emptive digital regulations and the alternative measures available for regulating the digital markets. Instead of mimicking the EU's DMA, which has had potential drawbacks for both consumers as well as businesses, India should aim at creating a regulatory environment which encourages innovation and growth of the burgeoning startup ecosystem.

The factors which have led to India's economic progress could be severely hampered by excessive regulation. Therefore, India can wait for some time and observe the outcomes such regulations have in other countries. This would help India to make a more informed decision concerning its growing digital economy without stifling its potential.

[139] Competition Act, 2002, § 33.
[140] FHRAI v. MMT, Case Nos. 14 of 2019 & 01 of 2020 (Competition Commission of India).

7. Conclusion

Regulating digital markets is a complex and challenging task. This becomes clearer with the analysis of the EU's DMA and India's proposed DCB. Although these regulatory frameworks aim at levelling the playing field in digital markets by limiting the powers of the dominant digital platforms and fostering fair competition, they also pose substantial risks. The experience of the EU with the recently implemented DMA reveals that strict, ex-ante regulations can have unintended consequences such as stifled innovation, reduced consumer satisfaction and rent-seeking behavior by companies, etc.

The DMA has also inspired the proposed DCB in India. But for a developing economy like India where the digital sector is still growing, implementing a DMA-like regulation could be catastrophic since it has the potential to discourage essential investments, hinder the growth of its digital infrastructure and end up damaging the startup ecosystem of the country. Rather than hastily adopting EU-style ex-ante regulations, India should wait and conduct a careful assessment of the DMA's long-term consequences.

While doing that, India should focus on refining its ex-post enforcement mechanisms and coming up with a regulation which is flexible, responsive and more suitable to needs of India's digital economy. India stands at a critical juncture in its digital journey and choices that it makes now regarding its digital regulation will have a profound impact on its digital economy and global tech standing. Therefore, India must create a regulatory framework which goes beyond imitation and prioritizes innovation, investment and consumer welfare, for fostering a thriving digital landscape.

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List of Abbreviations

CCI	Competition Commission of India
CPS	Core Platform Services
DCB	Digital Competition Bill, 2024
DMA	Digital Markets Act, 2022
EC	European Commission
EU	European Union
SSDE	Systemically Significant Digital Enterprises