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The Role of Competition Law in Regulating App Store Policies

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Abstract

The rapid expansion of digital markets has fundamentally transformed the global economy, with mobile app stores emerging as critical gateways for digital content and services. Dominated by major players such as Apple and Google, these platforms have been accused of engaging in anti-competitive conduct that threatens innovation and consumer welfare. Key concerns include the imposition of steep commission fees on app developers, the practice of self-preferencing in search rankings and app visibility, and the imposition of restrictions on the use of alternative in-app payment systems. These issues have prompted significant legal and regulatory attention worldwide.

This paper investigates how various jurisdictions including the European Union, the United States, and India are addressing the competitive dynamics of app store ecosystems through both existing antitrust frameworks and newly enacted digital market regulations. In the European Union, for instance, the Digital Markets Act (DMA) marks a proactive approach to curbing gatekeeper power, while in the United States, both federal and state antitrust authorities have initiated investigations and lawsuits targeting monopolistic behavior. India, through the Competition Commission of India (CCI), has also begun scrutinizing app store practices under the lens of the Competition Act of 2002.

By conducting a comparative analysis of these approaches, the paper evaluates the effectiveness and limitations of current legal mechanisms in promoting fair competition. It highlights the need for adaptive regulatory tools that can keep pace with technological innovation and the evolving nature of digital marketplaces. The paper concludes by proposing targeted reforms aimed at enhancing legal clarity, ensuring developer autonomy, and safeguarding consumer choice in app store environments. Through this inquiry, it underscores the critical role of competition law in shaping equitable and inclusive digital infrastructures in an increasingly platform-driven economy.

Keywords

Dominated, Anit-Competetive, Innovations, Monopolistic, Regulations.

Introduction

Over the last two decades, the mobile application (app) economy has emerged as a transformative force across the global digital landscape. With smartphones becoming ubiquitous, mobile apps have redefined the way individuals communicate, work, shop, learn, and entertain themselves. Central to this ecosystem are app stores specifically Apple's App Store and Google's Play Store which function as digital distribution platforms where developers publish their apps and consumers download them. These two platforms, operated by Apple Inc. and Google LLC respectively, have evolved into dominant gatekeepers, effectively controlling access to the vast majority of smartphone users worldwide. This dominance is partly attributed to the underlying mobile operating systems—iOS and Android—which power the lion's share of global smartphones and are tightly integrated with their respective app stores[1]. The sheer scale and pervasiveness of these platforms have consolidated their market power, allowing them not only to dictate the rules of engagement for developers but also to influence consumer choices and market dynamics in ways previously unimaginable.

The rise of this duopolistic control has led to a reconfiguration of traditional market structures. In a conventional marketplace, developers or manufacturers compete on relatively even ground to reach consumers. However, in the app economy, the same entity that provides the platform for distribution often also competes with third-party developers through its own suite of applications and services. For instance, Apple's pre-installed applications such as Safari, Apple Music, or Mail

[1] Smartphone operating system market shares in Europe in November 2021 were 64% for Android (owned by Alphabet, holding company of Google) and 35% for iOS (owned by Apple Inc.),(Statcounter, n.d.). Neither firm's market share changed significantly in the entire 2012-2020 period (Statista, n.d.)

compete directly with similar third-party offerings, creating an inherent conflict of interest. App store operators thus wield a dual role: as neutral platforms setting policies for app distribution, and as market participants with vested interests. This duality has triggered growing unease among regulators, scholars, and developers alike, particularly in terms of the implications for competition law and policy.

The core of the issue lies in the considerable degree of control that Apple and Google exert over the app ecosystem. App developers are typically required to comply with stringent terms and conditions, including commission structures that often involve a 15–30% cut on in-app purchases and subscriptions. Furthermore, developers must adhere to opaque and occasionally arbitrary app review processes, which can result in the denial or removal of apps without adequate recourse or explanation[2]. Beyond economic implications, these practices may have a chilling effect on innovation, especially for smaller or independent developers who lack the resources to navigate the compliance-heavy environment of the major app stores. In such a scenario, the promise of the internet as a level playing field for innovation and entrepreneurship begins to erode, replaced by a gatekeeping model that favors incumbents.

The problem is compounded by the fact that app store operators are increasingly expanding their footprint across multiple sectors, thereby becoming competitors in the very markets they regulate. When platform owners prioritize their own apps in search rankings, restrict access to platform-specific APIs, or impose disadvantageous terms on third-party developers, they potentially engage in exclusionary conduct that undermines fair competition. This conduct becomes especially problematic under the lens of competition law, which seeks to prevent market abuse and ensure a competitive environment for all stakeholders. The European Commission, for instance, has launched several investigations into Apple's and Google's practices under the provisions of the Treaty on the Functioning of the European Union (TFEU), especially Articles 101 and 102, which address anti-competitive agreements and abuse of dominant position, respectively. Similar scrutiny has emerged in jurisdictions such as the United States, South Korea, Japan, and India, indicating the global relevance and urgency of the issue.

[2] Mishra, D., Kedia, M., Reddy A., Ramnath, K., & Manish, M. (2024). State of India's digital economy (SIDE) report 2024. IPCIDE, Indian Council for Research on International Economic Relations (ICRIER). https://icrier.org/pdf/State_of_India_Digital_Economy_Report_2024.pdf

The inherent conflict in app store operations gives rise to significant competition law concerns, which are increasingly coming under regulatory spotlight. The primary problem centers on the tension between the app store's role as a market facilitator and its function as a competitor. This dual role raises substantial risks of discriminatory practices, including self-preferencing and exclusionary tactics, which not only distort market competition but also compromise consumer welfare. There is a legitimate concern that app store operators may unfairly demote or exclude third-party apps that pose a competitive threat, thereby limiting consumer choice and stifling innovation. The lack of transparency in app review and ranking processes further exacerbates the issue, as developers often find themselves at the mercy of unilateral decisions made by dominant platforms without adequate oversight or accountability.

Another dimension of the problem lies in the imposition of high commission fees and restrictive payment processing requirements. Apple and Google mandate that in-app purchases be processed through their proprietary billing systems, which come with mandatory service fees. This practice has been criticized for limiting the ability of developers to offer competitive pricing and alternate payment options. Moreover, it raises questions about vertical foreclosure and tying practices, which are classic concerns under competition law. Regulatory authorities have expressed apprehension that such practices constitute an abuse of dominance, especially when developers have no viable alternative to reach consumers outside the app stores of these dominant players.

The objective of this research is threefold. First, it seeks to understand the nature of competition law issues that arise from the practices of major app store operators. This entails a comprehensive examination of the structural and behavioral aspects of app store policies, with particular attention to their impact on market competition, consumer welfare, and innovation. By analyzing how app stores function as gatekeepers and potential competitors, the study aims to elucidate the complexities and challenges of applying existing competition law frameworks to digital markets[3].

Second, this research aims to analyze how different jurisdictions across the world are responding to these challenges. As the app economy transcends national boundaries, legal responses have varied across countries depending on the maturity of their competition law regimes and the digital

[3] Malik, P. (2024). Competition issues in digital markets. IPCIDE. Retrieved April 11, 2024, from https://icrier.org/pdf/IPCIDE-Policy_Brief_5.pdf

priorities of their regulatory institutions. The study will delve into legal frameworks and enforcement actions in key jurisdictions such as the European Union, the United States, South Korea, and India, to identify trends, divergences, and emerging best practices. Comparative legal analysis will help in discerning whether existing laws are sufficient to address the unique challenges posed by app store dominance or whether there is a need for specialized digital market regulation.

Third, the research seeks to suggest legal and regulatory reforms that can effectively address the competition concerns associated with app store practices. These may include recommendations for structural remedies, behavioral commitments, or even the introduction of ex-ante regulatory frameworks akin to the European Union's Digital Markets Act (DMA). The emphasis will be on identifying solutions that strike a balance between fostering competition and preserving the legitimate interests of platform operators. The study will also explore the feasibility of mandating interoperability, transparency in app store policies, and fair access to platform-specific technologies as means of restoring competitive neutrality in the app economy.

To achieve the stated objectives, the research adopts a doctrinal and comparative legal methodology. A doctrinal approach will be employed to systematically analyze statutes, case law, regulatory guidelines, and scholarly commentary that govern competition law and digital markets[4]. Key legal instruments, including the Competition Act, 2002 (India), the Sherman Act and Clayton Act (USA), and the TFEU (EU), will be examined to understand the legal principles applicable to app store regulation. Judicial decisions, such as *Epic Games v. Apple* in the United States and investigations conducted by the European Commission, will serve as important sources to identify legal precedents and evolving judicial reasoning in this domain.

In addition to the doctrinal method, a comparative approach will be utilized to assess how different legal systems are addressing similar concerns. This method allows for cross-jurisdictional analysis of regulatory responses, enforcement actions, and policy innovations. By comparing the regulatory stances of developed and emerging economies, the study aims to uncover contextual nuances and

[4] ICRIER Prosus Centre for Internet and Digital Economy's (IPCIDE) policy brief, titled "Competition Issues in Digital Markets", provides a comprehensive analysis of ACPs in digital markets along with examining the theories of harm as identified in the orders of the CCI, their impact on market dynamics, and proposed remedies. See Malik, P. (2024). Competition issues in digital markets. IPCIDE. Retrieved April 11, 2024, from https://icrier.org/pdf/IPCIDE-Policy_Brief_5.pdf

potential pathways for harmonizing competition law enforcement in digital markets. Reports and recommendations from competition authorities, such as the European Commission's Directorate-General for Competition, the Federal Trade Commission (FTC), and the Competition Commission of India (CCI), will be analyzed to understand the evolving regulatory posture towards app store governance.

The research also intends to incorporate insights from academic literature and policy think tanks to enrich the analytical framework and capture diverse perspectives on the issue. Scholarly works that explore the intersection of technology, law, and market regulation will help in framing theoretical underpinnings, while policy reports will provide empirical context and real-world implications of app store practices. Through a rigorous and multi-dimensional approach, the study aspires to contribute to the ongoing discourse on regulating digital platforms and promoting a fair and competitive app economy.

The increasing dominance of app stores operated by tech giants such as Apple and Google presents unprecedented challenges for competition law. As these platforms continue to evolve into essential infrastructures for digital services, the urgency to address their market power and potential anti-competitive practices becomes paramount. Through a comprehensive analysis of legal frameworks, regulatory approaches, and comparative perspectives, this research endeavors to offer actionable insights and recommendations that can inform policy formulation and legal reform in the digital era.

App Store Policies and Market Power

The app store ecosystem has emerged as a critical component of the digital economy, facilitating access to mobile applications across a range of devices. The two most prominent players in this ecosystem—Apple's App Store and Google's Play Store—operate as tightly controlled marketplaces within their respective mobile operating systems, iOS and Android. These platforms serve as the primary, and often exclusive, gateway for developers to reach billions of users globally. Both companies have structured their app store ecosystems around a vertically integrated business model that allows them to maintain strict control over how apps are distributed, monetized, and interacted with. Developers are required to pay commissions ranging from 15% to 30% on transactions, including app purchases and in-app purchases, a model that provides a

significant source of revenue for the platform operators. Additionally, both Apple and Google control key services within the ecosystem such as payment processing and app review which further consolidates their position of power. App review processes are positioned as safeguards for user safety and app quality, but critics argue they also serve as a mechanism to exert discretionary control over which apps gain access to the platform.

A distinctive feature of these app store ecosystems is vertical integration, particularly evident in the bundling of first-party apps developed by Apple and Google. These proprietary applications ranging from browsers and messaging services to maps and music streaming often come pre-installed on devices and are deeply embedded into the operating system. This integration gives the platform owners a competitive edge over third-party developers, whose apps may struggle to gain visibility or compete on equal terms. For example, Apple's Safari and Google's Chrome are not only the default browsers on their platforms but also benefit from preferential treatment in user prompts and system-level functionalities. This close integration blurs the line between the platform as a neutral facilitator and as an active market participant, raising concerns about fairness and competition.

In terms of market dominance, Apple and Google collectively command an overwhelming share of the global mobile operating system market. As of recent years, Android holds approximately 70% of the global market, while iOS covers most of the remaining share, especially in lucrative markets like the United States, Japan, and parts of Europe[5]. This duopoly creates a gatekeeper effect, wherein mobile app developers have no viable alternative platforms to distribute their applications. Unlike web platforms, where developers can create independent websites without seeking approval, the mobile app environment is strictly regulated by the operating system provider. Developers are subject to the rules, fees, and discretionary decisions of the app stores, with little recourse or competition to turn to. This entrenched dominance limits innovation, as startups and smaller developers often lack the resources to absorb high fees or navigate complex compliance requirements. Moreover, switching costs for consumers and developers are high due

[5] Proposed to empower the European Commission to initiate market investigations (independent of any established infringement of competition rules) into perceived structural competition problems, with the ability to impose market-wide remedies on companies. See Schweitzer, H. (2020). The new competition tool: Its institutional set up and procedural design. European Commission, Publications Office. https://doi.org/10.2763/060011

to user interface familiarity, app store lock-ins, and ecosystem dependencies such as data sync and cross-device compatibility.

One of the most controversial aspects of app store policies is the commission fee structure imposed by Apple and Google. Historically set at 30%, this fee applies to all paid apps and in-app purchases processed through the store's payment system. In response to criticism and regulatory scrutiny, both companies have introduced a reduced rate of 15% for smaller developers earning below a certain revenue threshold. However, critics argue that the reduced rate is insufficient to address the broader issue of monopolistic pricing. For many developers, particularly those offering subscription-based services or digital goods, these commissions significantly cut into profit margins. This has led to high-profile disputes, such as the legal battle between Epic Games and Apple, where the game developer challenged the mandatory use of Apple's in-app payment system and the associated fees. The core of the issue lies in the lack of choice developers cannot use alternative payment processors or link users to external purchase options without risking removal from the app store.

Another contentious policy is the strict prohibition on external payment systems within apps. Both Apple and Google mandate the use of their own payment gateways for in-app transactions, effectively creating a closed-loop system where they control every monetary exchange within their platforms. This restriction not only guarantees commission revenue but also limits price competition and consumer choice. Developers who wish to use third-party payment systems—for reasons ranging from lower fees to better user experience—are often denied that opportunity. Although some regulatory bodies and courts have begun to push back against these policies, enforcement remains inconsistent across jurisdictions. For instance, recent rulings in South Korea and the Netherlands have required Apple and Google to allow external payment methods in specific contexts, but global implementation remains limited. The tightly controlled payment ecosystem also hinders innovation in financial technology, as developers are unable to experiment with alternative billing models or emerging technologies such as blockchain-based micropayments.

Self-preferencing of proprietary apps further exacerbates concerns about market fairness. Apple and Google have been accused of promoting their own services within the app store and the broader

operating system in ways that disadvantage competitors. For example, search results within the app store may prioritize first-party apps even when third-party alternatives are more relevant or highly rated. System-level prompts and integrations often steer users toward the platform's own apps, reducing visibility and downloads for independent developers. This preferential treatment can distort user behavior, not based on product quality but due to engineered convenience and exposure. Critics argue that such practices constitute anti-competitive behavior, as they leverage control over the platform to favor affiliated services. This dynamic is particularly harmful in sectors such as music streaming, navigation, and email services, where competing apps face an uphill battle against pre-installed and heavily promoted incumbents.

The issue of data harvesting from third-party developers adds another layer of complexity to the app store power dynamic. Both Apple and Google collect extensive metadata on app usage, downloads, and user behavior. While this data is ostensibly used to improve the app store experience, there have been concerns that it can also be used to inform the development of competing first-party apps. In essence, the platform operators act as both referees and players, with privileged access to market insights derived from rival developers. This asymmetry of information gives them a strategic advantage in identifying successful trends and replicating popular features, often undercutting the original developers. Although Apple has recently introduced privacy labels and promised to limit certain data practices, skepticism remains regarding the true extent of data separation between store operations and internal product development.

In summary, app store policies crafted by dominant platform operators such as Apple and Google play a pivotal role in shaping the competitive landscape of the mobile app economy. Through mechanisms such as commission fees, payment restrictions, self-preferencing, and data control, these companies maintain a powerful grip over app distribution and monetization. While some of these policies are justified on grounds of security, quality control, and user experience, they also raise significant concerns about monopolistic behavior and market distortion. As regulatory scrutiny intensifies around the globe, the future of app store governance will likely depend on striking a balance between platform oversight and ensuring a level playing field for all developers.

Competition Law Frameworks and Their Applicability

Competition law serves as a cornerstone of modern market economies, aiming to prevent market distortions, promote consumer welfare, and foster innovation. Across jurisdictions, despite differing legal traditions and structures, competition frameworks tend to converge on certain fundamental principles. These include the prohibition of abuse of dominance, restrictions on anti-competitive agreements, and the handling of mergers that might harm competition. As digital markets evolve, particularly in the platform economy, traditional frameworks are being tested and stretched to remain relevant and effective. This section explores the key concepts underpinning competition law, significant legal precedents across jurisdictions, and the jurisdictional challenges that emerge in an increasingly digital and borderless market landscape.

Key Concepts in Competition Law

One of the most pivotal aspects of competition law is the regulation of dominant players in the market to prevent them from engaging in conduct that harms competition. Section 4 of the Indian Competition Act, 2002, explicitly prohibits any enterprise or group from abusing its dominant position. Abuse may include unfair pricing, limiting production or market access, and leveraging dominance in one market to enter another. This provision is aligned with international norms such as Article 102 of the Treaty on the Functioning of the European Union (TFEU), which prohibits any abuse by one or more undertakings of a dominant position within the internal market. Similarly, Section 2 of the Sherman Act in the United States targets monopolization and attempts to monopolize, recognizing the harm that unchecked market power can pose to consumer welfare and market integrity.

Alongside the abuse of dominance, competition law also addresses anti-competitive agreements, which are arrangements that prevent, restrict, or distort competition. Section 3 of the Indian Competition Act prohibits such agreements and classifies certain types, like price-fixing, market allocation, and bid rigging, as per se illegal. This mirrors Article 101 of the TFEU, which invalidates agreements that may affect trade between EU member states and prevent or restrict competition. In the U.S., Section 1 of the Sherman Act renders illegal any contract, combination, or conspiracy in restraint of trade. These laws seek to prevent collusion and ensure that businesses compete on merit rather than through coordinated behavior that stifles innovation and harms consumers.

Relevant Legal Precedents

A few landmark cases illustrate how these foundational principles are applied in the context of modern, digital marketplaces. In *Epic Games v. Apple* (United States), the core issue revolved around Apple's anti-steering provisions in its App Store, which restricted app developers from directing users to alternative payment options outside the Apple ecosystem. Epic argued that such practices amounted to an abuse of dominance and harmed consumer welfare by inflating costs. Although the court did not find Apple to be a monopolist under Sherman Act 2, it acknowledged the anti-competitive nature of the anti-steering rules under California's Unfair Competition Law, ordering Apple to permit developers to redirect users to alternative payment systems. This case exemplifies the tension between platform control and open market access in digital environments.

In the European Union, *Apple vs. European Commission*, often referenced in relation to the complaint by Spotify, showcases a similar concern. Spotify alleged that Apple's App Store rules, particularly the 30% commission and restrictions on informing users about alternative subscriptions, were anti-competitive. The European Commission issued a preliminary finding that Apple had distorted competition in the music streaming market, in breach of Article 102 TFEU. The case is emblematic of how gatekeeper platforms can use their control to suppress competition, raising significant questions about neutrality and fairness in platform governance.

In India, *Competition Commission of India (CCI) v. Google* marked a major decision where Google was found to have engaged in anti-competitive practices in its Android mobile operating system. The CCI held that Google's mandatory pre-installation of its suite of applications on Android devices restricted the choice of device manufacturers and consumers, thereby violating Section 4 of the Competition Act. Google was fined and ordered to cease such practices. This case underscores the applicability of Indian competition law to global digital giants operating within the country, emphasizing the importance of fair market practices in the digital age.

Jurisdictional Challenges

Despite the general convergence in legal principles, applying competition law to platform-based business models presents significant jurisdictional and conceptual challenges. Unlike traditional firms that operate in clearly defined vertical or horizontal structures, digital platforms often blur

these lines. For instance, a platform like Amazon simultaneously acts as a marketplace, a service provider, and a direct competitor to many of the sellers on its platform. This hybrid structure complicates the analysis under conventional competition frameworks, which are built around clear-cut distinctions between suppliers, distributors, and competitors.

Another major challenge lies in the definition of the "relevant market," which is crucial in assessing dominance and anti-competitive conduct. In digital markets, many services are offered for free (such as search engines or social media), making it difficult to use price-based tests to define market boundaries. Moreover, digital ecosystems are often multi-sided, involving different user groups such as advertisers and end-users, which further complicates market definition and competitive assessment. Traditional tools like the Small but Significant and Non-transitory Increase in Price (SSNIP) test often fail to capture the dynamics of non-price competition, such as data accumulation and network effects.

Additionally, global digital players operate across multiple jurisdictions, each with its own legal standards and enforcement priorities. This creates challenges in cross-border enforcement and regulatory coordination. A practice that may be deemed lawful in one jurisdiction might attract penalties in another, leading to regulatory fragmentation. It also opens the door to regulatory arbitrage, where companies design their operations to exploit gaps or inconsistencies between legal regimes.

In sum, while the core tenets of competition law remain robust, their applicability to digital markets demands nuanced interpretation and innovative enforcement strategies. With the growing dominance of technology giants and the expansion of data-driven business models, there is an urgent need for legal systems to evolve in sync with market realities. This includes refining the tools for market definition, enhancing inter-agency cooperation across jurisdictions, and ensuring that platform governance does not come at the cost of consumer choice and fair competition.

Regulatory Responses: A Comparative Analysis

European Union

The European Union has taken a front-running position in the global effort to regulate digital platforms and their market dominance through the adoption of the Digital Markets Act (DMA).

This landmark regulation, enacted in 2022 and operational from March 2024, specifically targets so-called "gatekeepers"—large online platforms that serve as critical intermediaries between businesses and consumers. Under the DMA, gatekeepers are identified based on criteria such as market capitalization, annual turnover in the EU, and active user base. Once designated, these entities are subject to a series of obligations and restrictions designed to curb anti-competitive behavior.

One of the central tenets of the DMA is the prohibition of self-preferencing. This means that gatekeepers, such as Google or Apple, are not allowed to favor their own products or services over those of competitors within their platforms. For instance, if Apple were to prioritize its own apps in the App Store search results or impose restrictive terms on developers using competing services, such actions would directly contravene the DMA. Another significant aspect of the DMA is the requirement to allow sideloading—installing apps from sources outside the official app stores. This provision seeks to dismantle the walled gardens constructed by Apple and Google, thereby enhancing user freedom and developer choice.

Recent enforcement actions highlight the EU's assertive regulatory approach. The European Commission has initiated proceedings against Apple, scrutinizing its App Store practices, particularly restrictions on steering users toward alternative payment options. Similarly, Google has faced multiple antitrust investigations regarding its advertising technologies and bundling of services. Amazon, too, has come under the scanner for alleged preferential treatment of its own products over those of third-party sellers. These cases underscore the EU’s commitment to translating legislative principles into tangible enforcement outcomes. Through the DMA and a robust competition law framework, the EU aims to foster a fair, open, and contestable digital market environment.

United States

The United States adopts a somewhat different approach to regulating digital markets, largely grounded in its century-old antitrust framework, primarily the Sherman Act (1890) and the Clayton Act (1914). These laws focus on curbing monopolization and promoting consumer welfare, though they have often struggled to address the nuances of modern digital ecosystems. Unlike the EU’s

ex-ante regulatory model, the US relies more heavily on ex-post enforcement—taking legal action after anti-competitive conduct has occurred.

In response to growing concerns over the dominance of Big Tech, various legislative proposals have emerged in recent years, including the Open App Markets Act. This proposed law, although not yet enacted, specifically targets app store operators by prohibiting them from forcing developers to use their in-app payment systems or from penalizing them for offering better terms elsewhere. The Act also aims to promote interoperability and reduce entry barriers for smaller app developers, thereby fostering a more competitive app economy. While the bill enjoys bipartisan support, it has faced stiff resistance from industry lobbyists, delaying its passage through Congress.

On the enforcement side, the Department of Justice (DOJ) and the Federal Trade Commission (FTC) have intensified scrutiny of major digital platforms. The DOJ is currently engaged in high-profile antitrust lawsuits against Google, focusing on its dominance in online search and digital advertising. Meanwhile, the FTC has pursued actions against Meta (formerly Facebook) for its acquisitions of Instagram and WhatsApp, alleging that these deals were intended to stifle competition. Although the US has yet to adopt a comprehensive legislative overhaul akin to the EU's DMA, the cumulative effect of judicial actions, congressional hearings, and public debate signals a growing appetite for reform in digital market regulation.

India

India's regulatory stance in the digital space has witnessed significant evolution in recent years, particularly in relation to the operations of app store platforms such as Google's Play Store. The Competition Commission of India (CCI) has been at the forefront of this development. In 2022, the CCI imposed a substantial fine on Google, accusing the tech giant of abusing its dominant position by forcing app developers to use its proprietary billing system and restricting third-party payment options. This decision marked a pivotal moment in India's competition law enforcement and signaled an assertive shift towards curbing monopolistic practices in the digital sector.

Building on these enforcement actions, India is in the process of formulating a more comprehensive regulatory framework through the Draft Digital Competition Bill (2024). The proposed bill aims to introduce an ex-ante approach to digital competition regulation, akin to the

European model. It proposes to designate "Systemically Significant Digital Enterprises (SSDEs)"—a category comparable to the EU's gatekeepers—and impose specific obligations to ensure fair market behavior. These obligations may include prohibiting self-preferencing, mandating data portability, and ensuring non-discriminatory access to app stores and payment systems.

Moreover, the draft bill emphasizes the need for a specialized Digital Competition Commission to oversee compliance and enforcement. This reflects the Indian government's recognition of the limitations of traditional antitrust enforcement in the fast-paced digital economy. The bill also proposes mechanisms for collaboration between sectoral regulators and competition authorities, which is crucial given the complex and overlapping jurisdictions in the digital space. Through these measures, India aims to create a more level playing field for digital enterprises and enhance consumer choice, innovation, and economic inclusivity in the app economy.

South Korea and Japan

South Korea has emerged as a global pioneer in regulating app store practices, particularly in challenging the dominance of Apple and Google. In 2021, South Korea became the first country to enact legislation mandating alternative billing systems for in-app purchases. Popularly known as the "Anti-Google Law", this amendment to the Telecommunications Business Act prohibits app store operators from requiring the use of their own payment systems. The law aims to empower developers by allowing them to offer alternative billing methods and to prevent tech giants from extracting excessive commissions.

This legislative move was lauded internationally and is widely viewed as a model for other countries seeking to curb the market power of digital gatekeepers. The enforcement of this law has already resulted in changes to Google's billing practices in South Korea, although concerns remain about compliance and implementation. Apple, for instance, has been criticized for introducing alternative billing in a way that still retains significant commissions and imposes burdensome conditions on developers. Nonetheless, South Korea's approach underscores the effectiveness of legislative tools in counterbalancing platform dominance.

In parallel, Japan has adopted a more collaborative strategy, working closely with international partners to promote fair competition in digital markets. In recent years, Japan has intensified its antitrust cooperation with the European Union, focusing specifically on app store fairness and platform neutrality. The Japan Fair Trade Commission (JFTC) has conducted investigations into the practices of Apple and Google, including allegations of anti-competitive bundling and coercive contracts with device manufacturers. These inquiries have resulted in increased transparency and concessions from the tech giants, including commitments to improve contract terms with app developers and reduce platform restrictions.

Japan is also actively exploring legislative reforms to strengthen its digital competition framework. In 2023, the government introduced a Digital Market Competition Council, tasked with evaluating the conduct of dominant platforms and recommending policy measures. Although Japan has not yet adopted ex-ante legislation similar to the DMA or South Korea's Anti-Google Law, its coordinated regulatory and diplomatic efforts reflect a comprehensive and pragmatic approach to platform regulation. This model balances enforcement, negotiation, and international cooperation, and serves as an important point of reference in the evolving global discourse on digital competition.

Challenges in Enforcement and Regulatory Gaps

The regulation of digital platforms, particularly app stores, has emerged as a complex challenge for competition authorities across jurisdictions. While competition law traditionally focused on well-defined market structures and price-centric analyses, the advent of multisided digital platforms has rendered many of these tools inadequate. App stores, operated by dominant players like Apple and Google, serve as gatekeepers in the digital economy, exerting significant influence over app developers, consumers, and even advertisers. However, the enforcement of competition law in this space is riddled with regulatory gaps and enforcement challenges, particularly in the areas of market definition, evidence of harm, jurisdictional coordination, and compliance monitoring.

Market Definition and Thresholds

One of the primary regulatory challenges in enforcing competition law in digital app store markets lies in the difficulty of accurately defining the relevant market. Traditional tools used to delineate markets, such as the SSNIP (Small but Significant and Non-transitory Increase in Price) test, are often ill-suited for digital platforms that operate in multisided markets where services are frequently offered for free on one side. For instance, consumers typically do not pay to use an app store, and developers often bear the cost through commission structures. This makes it challenging to determine market power based on price metrics alone. Furthermore, digital platforms often operate across multiple markets simultaneously — for example, app distribution, in-app payment processing, and mobile operating systems — which complicates the assessment of competitive dynamics. Over-reliance on price as the sole indicator of competition ignores the broader strategic control these platforms exert through non-price mechanisms, such as preferential access, data advantages, or restrictive contractual terms imposed on developers. The challenge is further intensified when competition authorities must establish dominance thresholds in markets where traditional indicators like market share or profitability may not accurately reflect competitive constraints due to network effects and data-driven advantages.

Evidence of Harm

Establishing evidence of anti-competitive harm in the context of app stores is particularly complex, especially when the harm is non-price in nature. In conventional markets, authorities could demonstrate consumer harm through increased prices or reduced output. However, in the app economy, exclusionary conduct often manifests through more subtle mechanisms such as self-preferencing, unfair ranking algorithms, or imposing mandatory use of proprietary in-app payment systems. These practices may not immediately raise prices for consumers but can suppress innovation, limit consumer choice, and distort competitive opportunities for smaller developers. Quantifying such harms remains elusive due to the difficulty in measuring foregone innovation or market access denial. Additionally, the opacity of algorithmic decision-making further impedes enforcement. App stores typically use proprietary algorithms to determine app visibility, rankings, or user recommendations, but these algorithms lack transparency and are shielded by intellectual property protections. Regulators, therefore, face an uphill task in acquiring the technical knowledge and evidence required to demonstrate that such algorithmic decisions lead to competitive harm or unfair advantages for the platform operator’s own services. The information

asymmetry between tech companies and regulatory authorities exacerbates this challenge, leaving competition watchdogs reliant on limited disclosures or whistleblower testimonies.

Jurisdictional Overlaps

Another significant barrier in regulating app store policies is the growing overlap and conflict between competition law enforcement and other regulatory domains, particularly data protection and consumer protection. For example, certain conduct by app stores—such as mandating the use of specific in-app payment systems or integrating user data across services—may simultaneously raise antitrust and data privacy concerns. However, the lack of coordination between competition regulators and data protection authorities can lead to inconsistent enforcement approaches. In some jurisdictions, actions taken under one legal regime may inadvertently undermine or conflict with efforts in another. Moreover, the global nature of digital platforms invites fragmentation in regulatory approaches across countries, which further complicates enforcement. While the European Union has introduced a comprehensive regulatory framework through the Digital Markets Act (DMA), other regions like the United States, India, or Japan continue to follow different enforcement strategies and legal standards. This creates opportunities for regulatory arbitrage, where tech companies can exploit differences in national regulations to avoid stringent scrutiny. Jurisdictional ambiguity is also a hurdle in cross-border investigations, particularly when companies are headquartered in one country but their market conduct affects consumers and developers worldwide. Without effective international cooperation, enforcement actions risk being piecemeal, delayed, or insufficient to deter anti-competitive practices.

Compliance and Monitoring

Even when regulatory action is taken, ensuring compliance with competition rules in the app store ecosystem presents significant difficulties. The policies of digital platforms are dynamic and often revised without much transparency or stakeholder engagement[6]. For instance, changes in commission structures, eligibility criteria, or ranking methodologies may not be publicly disclosed in advance, making it difficult for regulators to assess their impact in real time. This constant

[6] All stakeholder perspectives draw from IPCIDE, NASSCOM, and ADBI, "Regulating Competition in Digital Markets," (closed-door roundtable), February 27, 2024, https://icrier.org/ipcide_events/roundtable-on-regulating-competition-in-digital-markets/

evolution complicates the task of monitoring conduct and ensuring sustained compliance with regulatory mandates. Additionally, platform operators often argue that their policies serve broader security, quality, or user experience objectives, which creates ambiguity around their competitive intent. Enforcement agencies are left with the burden of demonstrating that such justifications are pretextual and conceal anti-competitive motives. Another critical challenge lies in the limited technical expertise and resource constraints faced by many competition authorities. Monitoring complex technological ecosystems requires specialized knowledge of algorithms, data analytics, software design, and cybersecurity, which traditional antitrust agencies may lack. Moreover, smaller or developing countries often do not have the institutional capacity to keep up with the regulatory demands of overseeing global tech giants. As a result, enforcement becomes reactive rather than proactive, and compliance mechanisms remain fragile, particularly in the absence of ongoing audit powers or independent third-party assessments.

The enforcement of competition law in app store markets is a rapidly evolving challenge that exposes significant regulatory gaps. From the inadequacy of traditional market definition tools to the complexity of evidentiary standards, from jurisdictional conflicts to the burdens of compliance monitoring, regulators face multifaceted obstacles in addressing the dominance of digital platforms. Bridging these gaps will require a rethinking of legal doctrines, greater inter-agency coordination, the development of new analytical tools tailored to the digital economy, and significant investments in regulatory capacity. Without such efforts, the promise of competitive digital markets may remain elusive, to the detriment of innovation, consumer welfare, and fair market access.

The Way Forward: Reform and Recommendations

The dynamic evolution of digital markets necessitates a forward-looking legal framework that not only addresses current challenges but anticipates future developments. The role of competition law in regulating app store policies is no longer a matter of traditional antitrust enforcement alone; it must be reimagined to keep pace with technological innovation, evolving consumer behaviors, and the global nature of digital ecosystems. In this context, reform must proceed on multiple fronts—through ex-ante regulation, international cooperation, consumer empowerment, and domestic

legislative and institutional strengthening. The sections below outline key recommendations for shaping a more equitable, competitive, and innovation-friendly digital market environment.

Need for Ex-Ante Regulation

One of the most urgent needs in digital competition regulation is the adoption of ex-ante frameworks—regulations that intervene before harm occurs—rather than relying solely on ex-post remedies that often come too late to restore competitive conditions. The current model of enforcement, which reacts after dominant players engage in anti-competitive conduct, has repeatedly failed to produce timely or effective remedies[7]. Legal proceedings can take years, during which smaller developers suffer market exclusion or diminished visibility, and innovation is stifled.

To counteract this delay, regulators must embrace a proactive stance. The idea of ex-ante rules, as embodied in the European Union's Digital Markets Act (DMA), presents a valuable blueprint. The DMA outlines a set of pre-defined obligations and prohibitions for so-called "gatekeepers"—platforms that wield significant market power. These include bans on self-preferencing, requirements for data sharing, and mandatory interoperability standards. A similar approach could be adapted to app store governance, where pre-emptive rules could require platform operators to allow alternative app distribution channels, prohibit discriminatory ranking algorithms, and mandate fair terms for access to platform infrastructure.

Furthermore, inspiration can be drawn from the telecom sector, where structural separation has been used to prevent vertical integration from distorting competition. In cases where app store operators also offer competing applications (e.g., Apple's App Store and its own services), structural or functional separation could help ensure a level playing field. Such a measure would require gatekeepers to separate their app review and ranking functions from their own commercial

[7] The report identified ten anti-competitive practices: (i) anti-steering provisions; (ii) platform neutrality/self-preferencing; (iii) adjacency/bundling and tying; (iv) data usage (use of non-public data); (v) pricing/deep discounting; (vi) exclusive tie-ups; (vii) search and ranking preferencing; (viii) restricting third-party applications; (ix) advertising policies; and (x) acquisitions and mergers. The Draft Bill, however, does not address the issue of mergers and acquisitions.

interests. While structural separation is a drastic step, it can be an effective deterrent against abuse of dominance and should be seriously considered by policymakers.

Global Harmonization

Digital markets transcend national boundaries, and app stores are quintessentially global platforms. Therefore, fragmented national regulations risk creating compliance burdens for developers and enforcement loopholes for dominant firms. A coordinated international response is vital to ensure that digital competition rules are consistent, enforceable, and universally respected. The development of cross-border standards for digital competition is thus a strategic necessity.

Institutions such as the G20, WTO, and OECD are well-positioned to lead this harmonization process. The G20, by virtue of its global economic footprint, can set the agenda for digital economy regulation and promote dialogue among major jurisdictions. It can serve as a political forum for consensus-building around the need for digital antitrust frameworks. The WTO, through its work on e-commerce and trade in digital services, can contribute to establishing binding multilateral rules that govern the cross-border aspects of app store policies, such as non-discriminatory access and data localization. The OECD, known for its policy guidelines and peer reviews, can assist in crafting best practices and conducting comparative studies of national approaches to digital market regulation.

Moreover, there is scope for developing international model laws or guidelines for digital platform governance, much like the OECD's Model Tax Convention or UNCITRAL’s work in commercial law. A multilateral instrument for digital competition could help avoid regulatory arbitrage, facilitate data portability and interoperability, and provide a cooperative framework for cross-border investigations and remedies. Given the speed and complexity of digital market dynamics, international cooperation must move from rhetoric to tangible frameworks and institutional mechanisms.

Empowering Developers and Consumers

At the core of digital market regulation lies the imperative to empower both developers and end-users. Dominant app store operators often impose restrictive terms that limit developers’ freedom

and innovation, while consumers are offered limited choices and little transparency. To correct this imbalance, reform must enshrine specific rights and safeguards.

First, developers should have the right to use alternative payment systems within apps, rather than being compelled to route all transactions through the platform's billing system, often at exorbitant commission rates. The freedom to choose payment solutions can reduce costs, encourage innovation, and foster competition in digital financial services. The recent decisions by competition authorities in jurisdictions such as South Korea and the European Union offer encouraging precedents, and similar provisions should be incorporated into national frameworks.

Second, data portability must be mandated to allow both developers and consumers to migrate easily between platforms. Portability enhances consumer autonomy, reduces switching costs, and compels platforms to compete on the merits of their services. For developers, access to anonymized user data can help tailor services more effectively and innovate rapidly, thereby contributing to a more dynamic app economy.

Third, greater transparency is needed in the way app stores review, rank, and display applications. App store operators must disclose the criteria used for ranking apps, as opaque algorithms often favor in-house applications or high-revenue partners. Transparent processes can reduce arbitrary decisions, ensure fair treatment of all developers, and build consumer trust. Additionally, clearer rules and fast-track grievance redressal mechanisms must be in place to address instances of sudden de-platforming or unfair treatment.

India's Role

India, with its rapidly expanding digital economy and vibrant start-up ecosystem, is uniquely positioned to take the lead in shaping a fair and competitive digital market. The proposed Digital Competition Bill is a timely initiative that seeks to address the challenges posed by entrenched digital gatekeepers. However, for the Bill to be truly effective, it must be fast-tracked, and its provisions must reflect global best practices while being adapted to the Indian context.

The Bill should include clear ex-ante obligations for dominant digital platforms, covering aspects such as fair access, non-discrimination, interoperability, and consumer protection. It must also provide for swift and effective enforcement, including penalties, injunctive relief, and structural

remedies where necessary. Importantly, it must recognize the need for periodic review to remain relevant in a rapidly evolving technological landscape.

Moreover, the Competition Commission of India (CCI) must be equipped with the requisite digital expertise and institutional capacity to handle complex platform economy cases. This includes hiring technical experts, investing in digital forensics, and adopting AI-enabled monitoring tools. The CCI should also collaborate with sectoral regulators such as the Telecom Regulatory Authority of India (TRAI) and the Ministry of Electronics and Information Technology (MeitY) to create a cohesive digital regulation framework.

India should also proactively participate in global forums to influence the development of international norms and ensure that the interests of emerging economies are represented. As a major digital market, India has the leverage to advocate for inclusive and balanced global standards that support innovation while curbing monopolistic tendencies.

The way forward in regulating app store policies and digital platforms lies in a comprehensive, multi-pronged approach that combines proactive regulation, international harmonization, user and developer empowerment, and institutional reform. Ex-ante rules tailored to digital gatekeepers, supported by international consensus and robust national legislation, can transform the digital ecosystem into one that is open, fair, and competitive. India, with its growing digital footprint and policy momentum, has the opportunity to become a global leader in this transformative process. The time to act is now—before digital dominance becomes irreversible and innovation is stifled at its roots.

Conclusion

The rise of app stores as dominant digital gatekeepers has brought to the forefront serious concerns regarding fair competition, consumer choice, and innovation. The key findings of this study reiterate that app store policies—particularly those enforced by major players like Apple and Google—raise substantial antitrust issues. These concerns revolve around practices such as mandatory use of proprietary payment systems, imposition of high commission fees, preferential treatment of in-house applications, and restrictive terms that hinder app developers from reaching users through alternative means. Such practices not only limit market access for smaller developers

but also reduce incentives for innovation, thereby undermining the fundamental principles of a competitive digital marketplace.

While competition law has historically provided a framework for addressing anti-competitive conduct, the unique characteristics of the digital economy demand a more nuanced and adaptive approach. Traditional antitrust tools, though still relevant, often struggle to address the speed and complexity of digital platforms. For instance, the reliance on market share as a determinant of dominance may not accurately reflect the multifaceted influence wielded by app store operators. Additionally, the delayed pace of legal proceedings can render enforcement actions ineffective by the time they are concluded. This underscores the need for competition law to evolve in tandem with technological advancements, ensuring that enforcement mechanisms remain responsive and effective in dynamic digital environments.

To address these challenges, a balanced approach is imperative one that blends conventional antitrust principles with new digital-specific legislative interventions. This hybrid model should aim to establish clearer standards for app store conduct, improve transparency in policy enforcement, and ensure that market participants operate on a level playing field. Furthermore, it should empower regulatory authorities with the tools necessary to intervene promptly and proportionately when anti-competitive behavior is identified. Such a framework would not only protect consumer interests but also foster a more vibrant and diverse app economy.

Lastly, in an era marked by global digital interconnectivity, international cooperation and strong domestic enforcement must go hand in hand. Disparities in regulatory approaches can create loopholes, allowing dominant players to exploit jurisdictional gaps. Therefore, aligning competition standards across jurisdictions, sharing best practices, and strengthening cross-border regulatory coordination are essential steps toward ensuring consistency and fairness in the global app ecosystem. At the same time, robust local enforcement mechanisms remain vital to uphold these standards at the national level. Only through such concerted efforts can the app economy continue to thrive in a manner that is equitable, innovative, and inclusive for all stakeholders.

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