

APPLE AND GOOGLE APP STORES V. DEVELOPERS

INTRODUCTION

Cell phones are becoming an extension of the human body. Users must download applications through app stores to add functionality to phones. Those applications are created by developers who also need app stores to market and sell their products. Those applications are becoming more and more necessary to function in modern society. With people doing their banking, paying their bills, making appointments, and even paying at the register through mobile phone applications, app stores are starting to look more like a public necessity than a luxury.

In an efficient market, app stores would compete for developers to use their platforms. In theory, that would lead to terms the app stores and developers are all happy with. However, due to an effective duopoly over the app store market, the app stores have immense leverage in their dealings with developers. They are not forced to meet the developers halfway in their terms of service.

This article explains issues resulting from this bargaining power gap and outlines how different parts of the world are regulating the relationship between app stores and developers. I will describe how the European Union, South Korea, the United States, India, and Japan have attempted to legislate this area. I will compare these evolving strategies and offer my take on the best way to move forward in regulating the space.

I. BACKGROUND

Any industry which is controlled by two companies is likely to be riddled with issues related to competition, market power, and barriers to fairness.¹ The market for mobile applications and games is a prime example.² The Google Play Store generated \$47.9 billion³ and the Apple App Store generated \$85.1 billion in app store revenue in

¹ See Thomas B. Leary, *Antitrust in a Technology Economy: What's New and What's Not*, https://www.ftc.gov/system/files/documents/public_statements/418681/antitrustinatchecon.pdf; See also Guy Sagi, *The Oligopolistic Pricing Problem: A Suggested Price Freeze Remedy*, 2008 COLUM. BUS. L. REV. 269 (2008); Jeffrey Manns, *The Case for Preemptive Oligopoly Regulation*, 96 IND. L.J. 751 (2021); Alexander Henderson, *The Theory of Duopoly*, 1 J. REPRINTS ANTITRUST L. & ECON. REV. 1485 (1970); Robert J. Rhee, *On Duopoly and Compensation Games in the Credit Rating Industry*, 108 NW. U. L. REV. 85 (2013); James D. Cox, *Regulatory Duopoly in U.S. Securities Markets*, 99 COLUM. L. REV. 1200 (1999); Kirk Brown, *Stranglehold on Chicago: Airline Duopoly, Inflated Fares, and Stunted Economic Growth*, 29 ANTITRUST L. & ECON. REV. 85 (1998).

² The Google Play Store accounted for 80 percent of mobile game downloaded in the second quarter of 2021, while the Apple App Store accounted for 65 percent of app store consumer spending on in-app purchases and subscriptions in the same quarter. Mansoor Iqbal, *App Revenue Data (2022)*, (Feb. 16, 2022), <https://www.businessofapps.com/data/app-statistics-citing-actionable-intelligence-for-the-digital-world/>, (2022), <https://sensortower.com>; See also Nikolas Guggenberger, *Essential Platforms*, 24 STAN. TECH. L. REV. 237 (2021). See generally, Josh Centers, *Developers v. Apple: Outlining Complaints about the App Store*, (Aug. 13, 2020), <https://tidbits.com/2020/08/13/developers-v-apple-outlining-complaints-about-the-app-store>.

³ L. Ceci, *Worldwide gross app revenue of Google Play from 2016 to 2021*, (Dec. 10, 2021), <https://www.statista.com/statistics/444476/google-play-annual-revenue>.

2021.⁴ Seventy-one percent of app sales came from mobile phone games in 2020, a market Apple dominates.⁵

Digital markets are subject to a ‘winner-takes-most’ principle which can reduce competition, consumer welfare, and productive efficiency.⁶ Further, app stores benefit from economies of scale.⁷ Apple and Google host millions of applications and millions of users.⁸ Consumers know them as one stop shops for all their application needs and have no reason to change their habits. Developers justify which markets to sell their product based on the number of customers they can reach.⁹ As developers are most likely to tailor their applications for these stores and consumers are looking for stores that

4 *Id.* Compare this to the companies’ total revenues of \$456 billion, \$274 and \$182 billion respectively in 2020. Joseph Johnson, *Revenue comparison of Apple, Google, Alphabet, and Microsoft from 2008 to 2021*, (Feb. 9, 2022), <https://www.statista.com/statistics/234529/comparison-of-apple-and-google-revenues>.

5 Iqbal, *supra* note 2; Mark Bergen, *A Crack Opens in the App Store Economy*, (last updated Sept. 14, 2021), <https://www.bloomberg.com/news/articles/2021-09-14/what-the-apple-epic-games-ruling-means-for-the-app-store-economy>. The majority of app store revenue comes from in-app purchases from a small subset of repeat purchasers. Using Apple’s internal documents, the Court calculated Apple’s market share at 57.1 percent in the global mobile gaming industry in 2017. *Epic Games, Inc. v. Apple Inc.*, 559 F. Supp. 3d 898 (N.D. Cal. 2021).

6 Susanna Kyloinen, *The P2B Regulation and its Effects on Competition and Consumer Choice in Digital Markets in the Perspective of Abuse of Dominance by Ranking*, (Jan. 2021), https://www.utupub.fi/bitstream/handle/10024/151252/Kyloinen_Susanna_opinnayte.pdf, at 58.

7 See Cremer Report 2019, Chapter 2; See also George J. Stigler, *The Economies of Scale*, 1 J.L. & ECON. 54 (1958) (explaining how economies of scale operate). See also Frank H. Easterbrook, *Information and Antitrust*, 2000 U. CHI. LEGAL F. 1 (2000) (explaining why economies of scale happen in the technology industry). See also *Scale Economies and the Competitive Price*, 9 ANTITRUST L. & ECON. REV. 1 (1977).

8 Buildfire, *Mobile App Download Statistics & Usage Statistics (2022)*, (2022), <https://buildfire.com/app-statistics>.

9 See L. Ceci, *Number of apps available in leading app stores as of 1st quarter 2021*, (Jan. 27, 2022), <https://www.statista.com/statistics/276623/number-of-apps-available-in-leading-app-stores>.

have many developers, the market for apps is quickly consolidating.¹⁰ Further, consumers in digital markets are influenced by a “status quo bias,” pressuring them to stick with their current digital marketplaces.¹¹ Therefore, Google and Apple are not pressured by new stores to change policies. Susanna Kyllöinen explained this issue in her article *The P2B Regulation and its Effects on Competition and Consumer Choice in Digital Markets in the Perspective of Abuse of Dominance by Ranking*:

Online platforms are involved in almost all transactions that deliver services or applications over the internet to consumers. Online platforms also have a role as an intermediary to other online and offline services. Competition among sellers intensifies when more variety of goods are offered. This creates a more attractive trading platform for more potential buyers. The buyer or the seller side of a multi-sided market will be most attracted to the idea of joining the platform only if the other side of the market is deemed large enough. Therefore, attracting users only from one market side is not sufficient because of the interrelationship of the user groups on both market sides.¹²

Developers are concerned that nothing is stopping the app stores from abusing their power.¹³ This leaves legislation as the only conceivable way to solve this problem. The question then turns to

10 See Julie E. Cohen, *Law for the Platform Economy*, 51 U.C.D. L. REV. 133 (2017).

11 People who already have a trusted app store are unlikely to switch to another unless the other has obvious benefits. See Russell Korobkin, *Status Quo Bias and Contract Default Rules*, 83 CORNELL L. REV. 608 (1997-1998) citing William Samuelson & Richard Zeckhauser, *Status Quo Bias in Decision Making*, 1 J. RISK & UNCERTAINTY 7, 8 (1988) (Faced with new options, decisionmakers often stick with the status quo alternative, for example, to follow customary company policy, to elect an incumbent to still another term in office, to purchase the same product brands, or to stay in the same job).

12 Kyllöinen, *supra* note 6.

13 See Centers, *supra* note 2.

how much society is willing to exchange in intellectual property rights and freedom to contract in return for a more efficient market.¹⁴

Apple and Google have spent the past decade building a platform to connect developers to consumers safely and seamlessly.¹⁵ In 2010 Apple started to change and reinterpret its guidelines.¹⁶ For instance, in 2011 Apple instituted a 30 percent fee on developers, required applications use the Apple payment system, and prohibited developers from linking customers to other payment methods.¹⁷ In 2016 Apple started prohibiting developers from advertising alternative payment methods.¹⁸ Google follows similar policies but is often seen as less of a threat to developers, as it allows users to download apps through other methods than the Google Play Store.¹⁹ Android devices often come with two app stores preinstalled, allowing developers to reach their users without using the Google Play Store.²⁰

14 See Eric Benjamin Seufert, *Presentation: Winner Takes All: App Discovery, Quality, and the App Economy*, (Nov. 24, 2014), <https://mobiledevmemo.com/presentation-winner-takes-app-discovery-quality-app-economy>; but see Lain Murray, *Why Government Should Not Regulate the App Economy: Guys and Dolls and Apps and Regulators*, (Jan. 21, 2016), <https://fee.org/articles/why-government-should-not-regulate-the-app-economy>.

15 Katerina Zolotareva, *Infographic: The Evolution (History) of the App Stores*, (Aug. 8, 2017), <https://thetool.io/2017/evolution-app-stores-infographic>; Time to Play Fair, *A Timeline: How we got here*, (2022), <https://timetoplayfair.com/timeline>.

16 *Id.*

17 *Id.*

18 *Id.*

19 See Elad Natanson, *The “Other” Android App Stores – A New Frontier for App Discovery*, (Sept. 3, 2019), <https://www.forbes.com/sites/eladnatanson/2019/09/03/the-other-android-app-stores-a-new-frontier-for-app-discovery>; see also Makenna Kelly and Russell Brandom, *Google faces new antitrust lawsuit over Google Play Store fees*, (July 7, 2021), <https://www.theverge.com/2021/7/7/22567532/google-play-store-antitrust-lawsuit-state-ag-app-fees>.

20 Sameer Samat, *Listening to Developer Feedback to Improve Google Play*, (Sept. 28, 2020), <https://android-developers.googleblog.com/2020/09/listening-to-developer-feedback-to.html>.

While it does not break down research and development spending by product, Apple spent \$18.75 billion in research and development in 2020.²¹ App stores claim to charge fees in part in exchange for access to intellectual property necessary to build an app.²² However, Apple and Google have realized an effective duopoly of control over one of the fastest growing markets in the world: the market for mobile phone applications.²³

II. THE RELATIONSHIP BETWEEN APP STORES AND DEVELOPERS

Google mirrors most of Apple's terms and procedures regarding relationships with developers. Along with flat fees for using the app store,²⁴ app stores charge developers commission fees on every sale made on the market.²⁵ The market rate for commissions charged to

21 Johnson, *supra* note 4.

22 *Epic Games*, *supra* note 5.

23 See Tom Wijman, *The World's 2.7 Billion Gamers Will Spend \$159.3 Billion on Games in 2020; The Market Will Surpass \$200 Billion by 2023*, (May 8, 2020), <https://newzoo.com/insights/articles/newzoo-games-market-numbers-revenues-and-audience-2020-2023>; see also Pramod Borasi and Supradip Baul, *Mobile Application Market by Marketplace (Apple iOS Store, Google Play Store, and Other Marketplaces) and App Category (Gaming, Entertainment & Music, Health & Fitness, Travel & Hospitality, Retail & E-Commerce, Education & Learning and Others): Global Opportunity Analysis and Industry Forecast, 2019-2026*, (Nov. 2019), <https://www.alliedmarketresearch.com/mobile-application-market>.

24 Apple charges a 99-dollar annual fee to be published on the Apple App Store. *Epic Games*, *supra* note 5. For the Google Play Store, annual fees can range from free to \$99 per year. Tim Mackenzie, *App store fees, percentages, and payouts: What developers need to know*, (May 7, 2012), <https://www.techrepublic.com/article/app-store-fees-percentages-and-payouts-what-developers-need-to-know>.

25 *Id.*; Apple Developer Program License Agreement, (Dec. 13, 2021), <https://developer.apple.com/support/downloads/terms/apple-developer-program/Apple-Developer-Program-License-Agreement-20211213-English.pdf>, Schedule 2, section 3.4(a); Centers, *supra* note 2. The commissions are applied to digital purchases, therefore real-world goods and services such as Uber rides or food delivery services are not subject to this commission even if the purchases are made inside the apps. Max Yampolsky, *App Store 30% Developer Cut: All You Need To Know*, (March 5, 2021), <https://medium.com/remote-ceo/app-store-30-developer-cut-all-you-need-to-know-9e2e4f5b6ea3>.

developers is 30 percent for standard purchases or the first year of subscriptions and 15 percent for subsequent years.²⁶

Apple and Google have made concessions in response to complaints about high commissions.²⁷ Apple recently reduced the commission on in-app sales to 15 percent for small developers.²⁸ Google followed, reducing commissions to 15 percent on the first \$1 million developers earn.²⁹ Google also offers a “Media Experience Program,” decreasing service fees on certain transactions involving video, audio, and books to as low as 10 percent starting in 2022.³⁰ According to Apple, “headline” rates are frequently negotiated down.³¹ Apple justifies their fee based on cost of upkeep and argues that the cut is much lower than what one may pay a retail store. Also, most applications do not generate revenue, so they are free riders on

²⁶ *Id.* This is standard across the Google Play Store, Apple App Store, Samsung Galaxy App Store, Amazon App Store, Xbox Game Store, and Windows Store. L. Ceci, *Commission rates for leading app stores worldwide as of July 2020*, (July 7, 2021), <https://www.statista.com/statistics/975776/revenue-split-leading-digital-content-store-worldwide>; Horace Dediu, *The Triumph of the Walled Garden*, (Sept. 25, 2019), <http://www.asymco.com/2019/09/25/the-triumph-of-the-walled-garden>.

²⁷ See Press Release, *Apple, US developers agree to App Store updates that will support businesses and maintain a great experience for users*, (Aug. 26, 2021), <https://www.apple.com/newsroom/2021/08/apple-us-developers-agree-to-app-store-updates>.

²⁸ Small developers are defined as generating less than one million dollars annually. Apple Newsroom, *Apple announces App Store Small Business Program*, (Nov. 18, 2020), <https://www.apple.com/newsroom/2020/11/apple-announces-app-store-small-business-program>.

²⁹ Jiyoung Sohn, Wall St. J., *Google, Apple Hit by First Law Threatening Dominance Over App-Store Payments*, (Aug. 31, 2021), <https://www.wsj.com/articles/google-apple-hit-in-south-korea-by-worlds-first-law-ending-their-dominance-over-app-store-payments-11630403335?mod=djemalertNEWS>; *Android Developers Blog, Evolving our business model to address developer needs*, (Oct. 21, 2021), <https://android-developers.googleblog.com/2021/10/evolving-business-model.html>.

³⁰ Google Play, *Play Media Experience Program*, (last visited March 23, 2022), <https://play.google.com/console/about/mediaprogram>.

³¹ For example, the Amazon App Store has a headline rate of 30 percent, but its effective commission is only 18.1 percent. This is more common with large developers. *Epic Games, supra* note 5, at 167, 168.

the platform.³² Still, many agree that app stores deserve high profits, because they are costly to create, and profits were only speculative when they entered the business.³³

There are also complaints related to the contracts app stores require developers to sign.³⁴ These contracts have complex terms that are difficult for developers without a legal background to understand.³⁵ Further, platforms give themselves the ability to change the terms and conditions without notice.³⁶ Apple also imposes strict parameters on sale of applications such as requiring prices end in .99.³⁷

Lately developers have expressed increasing concerns with the excessive nature of this fee structure. To avoid the fees, apps such as Spotify and Netflix direct users to buy subscriptions on their websites.³⁸ Developers have also made attempts at selling in-app purchases using payment systems such as PayPal, but Apple has since

32 See Politico Staff, *Tech CEO's opening statements for Wednesday's tech antitrust hearing*, (July 28, 2020), <https://www.politico.com/news/2020/07/28/tech-ceo-antitrust-hearing-opening-statement-385233>; See also Jignesh Padhiyar, *Why Apple's App Store is Charging 30% Fees and How is it Justified*, (Oct. 21, 2021), <https://www.igeeksblog.com/why-app-store-is-charging-30-percent-commission>.

33 *Id.*

34 These contractual terms are standardized and nonnegotiable—a contract of adhesion. Only a few developers have succeeded in negotiating modifications to these terms or threatening to go to other platforms. Specifically, Spotify and Netflix have been successful by removing in-app purchasing functionality from iOS apps. Todd Spangler, *Variety*, *Google Will Let Spotify Add In-App Billing on Android and Lowers App-Store Fee Cut*, (March 23, 2022), <https://variety.com/2022/digital/news/spotify-google-billing-system-subscription-deal-1235212772>; Cohen Coberly, *Netflix dodges Apple's App Store revenue cut by ending in-app subscription purchases*, (Jan. 3, 2019), <https://www.techspot.com/news/78101-netflix-dodges-apple-app-store-revenue-cut-ending.html>.

35 See Apple Developer Support, *Agreements and Guidelines for Apple Developers*, (last visited March 23, 2022), <https://developer.apple.com/support/terms>.

36 *Id.*

37 *Epic Games*, *supra* note 5.

38 See *Epic Games*, *supra* note 5.

prohibited this.³⁹ Developers in the past were not allowed to advertise substitute payment methods on their applications.⁴⁰ Spotify has complained that Apple prohibited them from emailing customers information about deals and promotions, as this would be “circumventing” their rules.⁴¹ Google allows developers to communicate to customers about alternative payment methods such as external websites and pricing thereof,⁴² but only outside their apps.⁴³ Google will not allow developers to use other payment systems on apps which are distributed on the Google Play Store and offer in-app purchases.⁴⁴ Google is temporarily relaxing this rule for businesses who moved their physical businesses online.⁴⁵ Apple claims allowing outside downloads or sales brings security concerns but never stated a reason for the “anti-steering” provisions which disallowed advertising other payment methods.⁴⁶ Google also stressed the importance of the security of its payment systems and risks involved with outside systems.⁴⁷

39 *Id.* PayPal charges lower rates of two to three percent. PayPal Merchant Fees, (last visited March 23, 2022), <https://www.paypal.com/us/webapps/mpp/merchant-fees>.

40 *Epic Games*, *supra* note 5.

41 Time to Play Fair, *Four Fast Facts*, (last visited March 23, 2022), <https://www.timetoplayfair.com/facts>.

42 Samat, *supra* note 20.

43 Google, *Payments*, (last visited March 23, 2022), https://support.google.com/googleplay/android-developer/answer/9858738?visit_id=637778177000668333-1058469853&rd=1.

44 Mrinalini Loew, *Answering your FAQs about Google Play billing*, (Sept. 28, 2020), <https://android-developers.googleblog.com/2020/09/commerce-update-faqs.html>. Developers are allowed to offer “consumption-only” apps on the Google Play Store and sell their content elsewhere. Abner Li, *Google requiring Android apps on the Play Store to use its IAP billing system next year*, (Sept. 28, 2020), <https://9to5google.com/2020/09/28/google-play-android-billing>.

45 *Id.*

46 *Id.*

47 Samat, *supra* note 20; Four Fast Facts, *supra* note 15. On March 23, 2022, Google announced that they will allow Spotify to offer an alternative payment system within the app. Meghan Bobrowsky and Tim Higgins, Wall St. J., *Google to Allow Alternative In-App Payments for Spotify Users, a New Step in App Battle*, (March 23, 2022), <https://www.wsj.com/articles/google-to-allow-alternative-in-app-payments-for-spotify-users-a-new-step-in-app-battle-11648068690>.

While third party app stores could force Apple and Google to compete, users have proven wary about trying new app stores.⁴⁸ The network effects on app stores are endless.⁴⁹ This creates a "winner-take-all" environment, that allows only a few large platforms to survive.⁵⁰ On the other hand, the mobile game market is ever changing and barriers to entry may be decreasing.⁵¹ As app stores make most of their sales in mobile gaming, this may impact the entire business environment.⁵²

Apple refuses to allow users to download applications from other methods than the App Store due to claimed concerns about potential viruses in apps that had not been vetted.⁵³ Google on the other hand,

48 Twenty-nine percent of smartphone users have iPhone products which are unable to use other app stores without illegally manipulating their iPhone's code, while 70 percent of users have Android devices with the Google Play Store preinstalled. Statcounter, *Mobile Operating System Market Share Worldwide*, (last visited March 23, 2022), <https://gs.statcounter.com/os-market-share/mobile/worldwide>.

49 As the Apple and Google App stores are home to millions of applications, and nearly every mobile phone user uses their stores, opening a new app store would undoubtedly be an uphill battle for developers as well as the creator and manager of the store. See Cornell University, *Why Apple is So Successful: Looking at Network Effects*, (Nov. 10, 2012), <https://blogs.cornell.edu/info2040/2012/11/10/why-apple-is-so-successful-looking-at-network-effects>.

50 *Epic Games*, *supra* note 5, at 162.

51 Including the introduction of cross-platform policies, cross-platform services (e.g. cloud-based game streaming), and new hybrid platforms such as the Nintendo Switch, a gaming device which can be used as a mobile device or connected to a display to be used similarly to a traditional video game console. The introduction of cross-platform middleware like cross-wallet and cross-play allows users to interact across platforms, plausibly decreasing barriers to new entrants.

52 Jessica Bursztynsky, *Apple vs. Epic ruling reveals 70% of App Store revenue comes from a small fraction of customers playing games*, (Sept. 10, 2021), <https://www.cnbc.com/2021/09/10/apple-vs-epic-70percent-of-app-store-revenue-from-customers-playing-games.html>.

53 *Epic Games*, *supra* note 5. See also Steve Symanovich, *The risks of third-party app stores*, (July 18, 2018), <https://us.norton.com/internetsecurity-mobile-the-risks-of-third-party-app-stores.html>.

allows other app stores to run on Android phones.⁵⁴ Apple has made it clear that it will not allow developers to offer their own application stores on Apple products.⁵⁵ Curiously, Apple does allow apps such as Netflix, Hulu, and Amazon to make sales outside of the Apple App Store and payment system.⁵⁶ In September 2020, Apple modified their Guidelines to allow for the inclusion of game streaming apps, but only if each streamed app is made available as a separate app on the App Store.⁵⁷

Another concern is that Apple could treat applications from developers which it owns or has business relationships with more favorably.⁵⁸ Developers complain that app store rankings are not transparent and search results are manipulated. Both stores offer app store advertisements, where developers can pay to be placed highly in search results. This allows apps to jump over Apple or Google on

54 Samat, *supra* note 20.

55 For instance, Epic Games attempted to offer an application on the Apple App Store which would allow users to download games without going through the app store every time only to get rejected by Apple. *Epic Games*, *supra* note 5.

56 Down Dog and Match Group testified that they have been unable to entice users to other platforms with lower prices. Match Group has employed marketing campaigns and promotions for web purchases, but the app sales have continued to "dominate." Down Dog has had better success at offering cheaper subscriptions on the web, but Apple's anti-steering provision has prevented it from directing users to the cheaper price. Thus, while 90 percent of Down Dog's Android users make purchases on the web, only 50 percent of its iOS users do so, even though about half of its total revenues still come from iOS users." *Epic Games*, *supra* note 5.

57 William Gallagher and Mike Wuerthele, *Apple opens the door to game streaming services with new App Store guidelines*, (Sep. 11, 2020), <https://appleinsider.com/articles/20/09/11/apple-opens-the-door-to-game-streaming-services-with-new-app-store-guidelines>. Nvidia, Microsoft, and Google sought to launch their game streaming services as native iOS apps before Apple modified its Guidelines, but all three were rejected by Apple. None of these services chose to subsequently launch separate iOS apps—one per streamed game. *Epic Games*, *supra* note 5, at 72.

58 See Anuj Puri, *Moral Imitation: Can an Algorithm Really Be Ethical?*, 48 RUTGERS L. REV. 47 (2020-2021). Compare this to utilities also operating in distribution. James M. Van Nostrand, *Keeping the Fox from Managing the Henhouse: Why Incumbent Utilities Should Not Be Allowed to Operate the Distribution System Platform*, 8 GEO. WASH. J. ENERGY & ENVTL. L. 23 (2017).

the search results but at a cost. This could lead to developers double paying commission to reach users.

While the Apple App Store has a manual pre-approval mechanism before allowing apps onto its store, the Google Play Store uses an automated threat protection service.⁵⁹ There are criticisms of both systems. Commentators have criticized Google's algorithmic approach for leaving too much room for gaming algorithms and letting predatory applications into the market.⁶⁰ Apple argues that its pre-approval system is necessary for security. Developers complain of Apple approving copies of existing apps, implying that the pre-approval system may not be effective as a security mechanism anyways.⁶¹ This problem still exists on the Google Play Store where the preapproval system is not manual.⁶²

App stores argue that high fees and regulations are necessary to maintain an effective platform,⁶³ but developers complain of unfair terms in exchange for minimal service.⁶⁴ In the following sections I will compare how different regimes regulate app stores, the apparent effectiveness of these strategies, and I will offer my opinion about where regulation should go. In short, I believe that new regulations

⁵⁹ *Id.* Tidbits, *supra* note 2.

⁶⁰ Liz Lanier, *Google Changes 'Discovery Algorithm' on Google Play, Leading to Panic From Some Devs*, (June 29, 2018), <https://variety.com/2018/gaming/news/developers-sudden-drop-downloads-on-google-play-store-1202861850/#!>.

⁶¹ Some have even copied well known apps to collect fees and steal users' information. Tidbits, *supra* note 2.

⁶² *Id.*

⁶³ Google claims to use the proceeds from fees it charges developers on running the store, building new Android platforms, increase security, app distribution, new developer tools such as experiments, beta tests, optimized listings, and performance analysis, and billing systems. Wilson White, *Enabling alternative billing systems for users in South Korea*, (Nov. 4, 2021), <https://developers-kr.googleblog.com/2021/11/enabling-alternative-billing-in-korea-en.html>.

⁶⁴ *How We Got Here*, *supra* note 15; *Four Fast Facts*, *supra* note 41; Alex Hern, *UK regulator to investigate Apple over 'unfair' App Store terms*, (March 4, 2021), <https://amp.theguardian.com/business/2021/mar/04/uk-regulator-to-investigate-apple-over-unfair-app-store-terms>.

are needed to bridge the gap in bargaining power between app stores and developers and to maintain effective marketplaces for applications.

A. The European Union

On July 12, 2020, one of the first European Union regulations of app stores, Regulation (EU) 2019/1150 (“P2B Regulation”), went into effect.⁶⁵ P2B regulation supplements existing EU competition law with the goal of improving transparency and fairness in digital markets.⁶⁶ Under P2B Regulation, app stores are regulated alongside other online intermediaries such as social media, search engines, price comparison websites, and ecommerce platforms.⁶⁷ If a platform decides to make any changes to its terms, it is required to notify developers 15 days before the change and give them an opportunity to adjust their applications.⁶⁸

P2B Regulation requires a 30-day notice for terminations of apps with reasoning.⁶⁹ The regulation requires app stores provide an opportunity for developers to file a formal complaint when their service is restricted, suspended, or terminated.⁷⁰ Further, app stores are required to provide relevant reasons for a decision, including notifications that led to the decision.⁷¹ Also, it requires app stores to write contract terms in plain intelligible language.⁷²

Article 5 requires online intermediaries set out the parameters for rankings and reasons for them.⁷³ This information will be publicly available.⁷⁴ They will not be required to disclose algorithms, due to

⁶⁵ Regulation (EU) 2019/1150, 2019 O.J. (L 186) 57 (EC) [P2B Regulation]; Dr. Florian Lorsch, *P2B Regulation or “platform, be kind to your merchants”*, (March 17, 2020), <https://paytechlaw.com/en/p2b-regulation>.

⁶⁶ *Id.*

⁶⁷ *Id.*

⁶⁸ *Id.* Art. 3(2).

⁶⁹ *Id.* (23).

⁷⁰ *Id.* (37).

⁷¹ *Id.* (22).

⁷² *Id.* Art. 11.

⁷³ *Id.* Art. 5(2).

⁷⁴ *Id.* Art. 5(2).

concerns about gaming the algorithm.⁷⁵ It requires that app stores outline in their terms and conditions parameters for ranking applications and reasons for those parameters' relative importance.⁷⁶ Article 7 deals with avoiding “differentiated treatment” by requiring app stores to disclose any differentiated treatment involving access to personal data or influencing search ranking.⁷⁷ Moreover, this regulation attempts to lessen differentiated treatment by prohibiting discriminating against rivals.⁷⁸

Article 9 requires platforms tell users what personal and non-personal data they collect from apps.⁷⁹ Article 12 sets out a mediation and dispute resolution process if they arise.⁸⁰ This regulation does not impose any legal consequence for violations besides ruling terms that do not comply null and void.⁸¹

There are two more bills in Europe which could further support developers called the Digital Markets Act⁸² and Digital Services Act.⁸³ The Digital Markets Act was passed on December 15, 2021, and the Council has yet to vote on the Digital Services Act.⁸⁴ The Digital Markets Act levels the playing field between small and large

⁷⁵ *Id.* Art. 5(6).

⁷⁶ *Id.* Art. 5.

⁷⁷ *Id.* Art. 7.

⁷⁸ *Id.*

⁷⁹ *Id.* Art. 9.

⁸⁰ *Id.* Art. 12.

⁸¹ *See generally id.*; also see Kyllöinen, *supra* note 6.

⁸² Proposal for a Regulation of the European Parliament and of the Council on Contestable and Fair Markets in the Digital Sector (Digital Markets Act), European Commission, *The Digital Markets Act: ensuring fair and open digital markets*, (last visited March 23, 2021), https://ec.europa.eu/info/strategy/priorities-2019-2024/europe-fit-digital-age/digital-markets-act-ensuring-fair-and-open-digital-markets_en.

⁸³ European Commission, *The Digital Services Act: ensuring a safe and accountable online environment*, (last visited March 23, 2021), https://ec.europa.eu/info/strategy/priorities-2019-2024/europe-fit-digital-age/digital-services-act-ensuring-safe-and-accountable-online-environment_en.

⁸⁴ European Parliament, *EU Digital Markets Act and Digital Services Act explained*, (last updated Jan. 20, 2022), <https://www.europarl.europa.eu/news/en/headlines/society/20211209STO19124/eu-digital-markets-act-and-digital-services-act-explained>.

platforms.⁸⁵ It outlines requirements and prohibited practices for large platforms, prohibiting anticompetitive search preferencing and requiring that users be allowed to uninstall preinstalled software or apps.⁸⁶ It also prevents large tech platforms from abusing a gatekeeper position with the threat of fines to stores which are found to be in violation.⁸⁷ The Digital Services Act aims to protect online rights by stopping the spread of disinformation, unethical targeted advertising, and sale of illegal products on online platforms.⁸⁸

Apple was also subject to multiple successful antitrust investigations in the EU in 2020.⁸⁹ Spotify filed an antitrust complaint in Europe in 2019, claiming that Apple, whose Apple Music service competes with Spotify, made it difficult for rival services to market themselves without using Apple's payment system and paying commissions.⁹⁰ These cases have led to major shifts including changes to the black box agreement Apple and Google make with developers, removal of anti-steering provisions, and prohibitions of unfair algorithms.⁹¹ The EU is leading the fight for developers but has done nothing to decrease the commission issues.

B. South Korea

The Telecommunications Business Act in South Korea was amended on August 31, 2021, to bridge the gap between app stores

⁸⁵ *Id.*

⁸⁶ *Id.*

⁸⁷ Sam Schechner, Wall St. J., *Tech Giants Face New Rules in Europe, Backed by Huge Fines*, (Dec. 16, 2020), https://www.wsj.com/articles/tech-giants-face-new-rules-in-europe-backed-by-huge-fines-1608046500?mod=article_inline.

⁸⁸ Digital Services Act, *supra* note 84.

⁸⁹ See Michael Sweeney and Paulina Zawislak, *Antitrust Investigations and Lawsuits Against Google, Apple, Facebook, and Amazon (GAFA)*, (March 19, 2021), <https://clearcode.cc/blog/antitrust-investigations-gafa>.

⁹⁰ Valentina Pop and Sam Schechner, *Spotify Accuses Apple of Stifling Competition in EU Complaint*, Wall St. J., (March 13, 2019), https://www.wsj.com/articles/spotify-files-eu-antitrust-complaint-over-apples-app-store-11552472861?mod=article_inline.

⁹¹ *Id.*

and developers.⁹² This amendment has been dubbed the “Google power-abuse-prevention law.”⁹³ The amendment prevents app store operators from unreasonably delaying the approval of applications or deleting already approved ones.⁹⁴ It also prohibits app stores from requiring specific in-application purchase systems with “unreasonable fees.”⁹⁵ The amendment prohibits discriminatory conditions or forcing developers to exclusively offer their content on one market.⁹⁶ Further, app stores cannot unfairly delete mobile content or impose discriminatory conditions and restrictions.⁹⁷ Companies that do not comply with this regulation could be fined up to three percent of their South Korea revenue.⁹⁸

This is the first regulation in the world to force app stores to allow outside payment methods.⁹⁹ Forcing app stores to compete for payment processing pressures lowers commission rates.¹⁰⁰ It may also be a signal that app stores should create a fair and equitable business

92 Enforcement Decree of the Telecommunications Business Act, Pres. Decree No. 30509, Mar. 3, 2020, (online at https://elaw.klri.re.kr/eng_service/lawView.do?hseq=53730&lang=ENG).

93 James Vincent, *Google outlines plans for first alternative in-app payments in South Korea*, (Nov. 4, 2021), <https://www.theverge.com/2021/11/4/22763040/google-in-app-purchases-alternative-south-korea-payments>; James Vincent, *Google outlines plans for first alternative in-app payments in South Korea*, (Nov. 4, 2021), <https://www.theverge.com/2021/11/4/22763040/google-in-app-purchases-alternative-south-korea-payments>.

94 *Id.*; Enforcement Decree of the Telecommunications Business Act, *supra* note 92.

95 *Id.*

96 *Id.*

97 *Id.*; Library of Congress, *South Korea: Amended Telecommunications Business Act Will Ban App Payment Monopolies*, (last visited March 24, 2022), <https://www.loc.gov/item/global-legal-monitor/2021-09-16/south-korea-amended-telecommunications-business-act-will-ban-app-payment-monopolies>.

98 Enforcement Decree of the Telecommunications Business Act, *supra* note 92.

99 Sohn, *supra* note 29.

100 See Coalition for App Fairness, *South Korea Makes History with World’s First National Law Opening App Store Payments to Competition*, (last visited Feb. 2, 2022), <https://appfairness.org/south-korea-worlds-first-national-law-opening-app-store-payments-to-competition>.

model or else face harsher regulations.¹⁰¹ App developers have praised this regulation as a significant move in the right direction toward fairness in the internet markets.¹⁰² The Coalition for App Fairness hopes that the regulation can set an example for other parts of the world.¹⁰³ The more standard these kinds of regulations become around the world, the stronger the incentives to comply will be.¹⁰⁴

In response to the Telecommunications Business Act, Google will allow third-party developers to offer alternative payment services for purchases made in South Korea.¹⁰⁵ Google will also decrease developer service fees by four percent when users select alternative billing.¹⁰⁶ Google stated that it still needs commissions to keep the Android operating system free.¹⁰⁷ Apple expressed concerns of fraud and privacy violations in third party payment methods but will still allow developers to use their own payment systems in South Korea.¹⁰⁸

101 *See Id.*

102 *See Id.*; Minjoo Jang and Crispian Wong, *Access Alert: First “Anti-Google Law” Passed in South Korea – Who Regulates the Digital Gatekeepers?*, (Sept. 14, 2021), <https://www.accesspartnership.com/access-alert-first-anti-google-law-passed-in-south-korea-who-regulates-the-digital-gatekeepers>.

103 “The Coalition for App Fairness is an independent nonprofit organization formed to protect consumer choice, foster competition, and create a level playing field for all app and game developers globally.” The group includes members from development teams of Epic Games, Blockchain.com, Match Group, Spotify, Tile, and others. Coalition for App Fairness, *supra* note 100.

104 Ian Sherr, *Epic Asks Apple to allow Fortnite back in App Store ahead of landmark South Korean law*, (Sept. 9, 2021), <https://www.cnet.com/news/epic-asks-apple-to-allow-fortnite-back-in-app-store-ahead-of-landmark-south-korean-law>.

105 Michael Allison, *Apple joins Google in allowing alternative app store payment systems in South Korea*, (Jan. 11, 2022), <https://www.digitaltrends.com/mobile/apple-app-store-third-party-payments>; Michael Allison, *Google opens up Play Store payments in South Korea in response to legislation*, (Nov. 4, 2021), <https://www.digitaltrends.com/mobile/google-play-store-south-korea-billing-developers>; Wilson White, *Enabling alternative billing systems for users in South Korea*, (Nov. 4, 2021), <https://developers-kr.googleblog.com/2021/11/enabling-alternative-billing-in-korea-en.html>.

106 *Id.*

107 *Id.*

108 Vincent, *supra* note 93; Allison, *supra* note 105.

The stores cite consumer security as the reason for charging fees and requiring developers to use their stores.¹⁰⁹

C. *The United States*

Both political parties in the United States see issues with the big tech power structure.¹¹⁰ In 2020, the Senate Judiciary Committee brought in representatives from developers such as Spotify, Tile, and Match Group for a hearing to explain how app store policies harm developers.¹¹¹ An expert witness testified that tech giants “are forcing their own app stores on users at the expense of innovative startups,” adding “their anticompetitive conduct is a direct affront to a free and fair marketplace.”¹¹² Another common sentiment was that Apple’s business model involved inviting developers into the app store then changing their developer terms to benefit themselves.¹¹³ Senators expressed concerns the stores could take control of the way consumers make all purchases through their Apple and Google Pay

109 *Id.*

110 Nilay Patel, *Elizabeth Warren Wants to Break Up Apple, Too*, (March 9, 2019), <https://www.theverge.com/2019/3/9/18257965/elizabeth-warren-break-up-apple-monopoly-antitrust>; Alex Munguia, *Parler and Conservatives Versus the World of Big Tech: Who is “Winning”?*, (Jan. 11, 2021), <https://loneconservative.com/2021/01/11/parler-and-conservatives-versus-the-world-of-big-tech-who-is-winning>.

111 Makena Kelly, *Congress is Diving Into the App Store Fight*, (April 21, 2021), <https://www.theverge.com/2021/4/21/22396544/apple-app-store-google-play-monopoly-antitrust-bill-hearings>; (Subcommittee hearing) *Antitrust Applied: Examining Competition in App Stores* Before the Subcommittee on Competition Policy, Antitrust, and Consumer Rights of the S. Comm. On the Judiciary, 117th Cong. (April 21, 2021) (online at <https://www.judiciary.senate.gov/meetings/antitrust-applied-examining-competition-in-app-stores>).

112 John D. McKinnon, *App Store Competition Targeted by Bipartisan Senate Bill*, (Aug. 11, 2021), https://www.wsj.com/articles/app-store-competition-targeted-by-bipartisan-senate-bill-11628704834?mod=article_inline.

113 Kelly, *supra* note 111.

Services.¹¹⁴ The Senate claimed that Apple and Google have been harming competitors at the expense of consumers.¹¹⁵

In August 2021, Senators in the United States introduced the “Open App Markets Act,” aiming to boost competition and protect consumers through imposing restrictions on app stores.¹¹⁶ The proposed Open Markets Act would prohibit requiring developers to use specific app store payment systems and prohibit punishing developers that offer lower prices outside their payment systems.¹¹⁷ The act would apply to App Stores with over 50 million users, therefore only Apple and Google.¹¹⁸ It further bars restrictions on communications between developers and consumers related to pricing, product or service offerings, or third-party stores such as anti-

114 *In Re Apple iPhone Antitrust Litigation*, 874 F. Supp. 2d 889, (N.D. Cal. 2012).

115 In a House Judiciary Committee hearing in July 2020, Amazon, Apple, Google, and Facebook’s CEOs were brought in for over 5 hours of intense questioning about antitrust concerns related to big tech. At the close of the hearing, Chairman of the committee, David Cicilino, read a pre-written statement: “This hearing has made one fact clear to me: these companies, as they exist today, have monopoly power. Some need to be broken up. All need to be properly regulated.” Apple was accused in the hearing of, among other things, giving Amazon special deals and treating certain developers with favoritism. Politico Staff, *supra* note 32; Josh Centers, *A Quick Rundown of Big Tech’s Showdown with Congress*, (July 31, 2020), <https://tidbits.com/2020/07/31/a-quick-rundown-of-big-techs-showdown-with-congress>; *Online Platforms and Market Power: Examining the Dominance of Amazon, Apple, Facebook, and Google*, Before the Subcomm. on Antitrust, Commercial, and Administrative Law of the H. Comm. On the Judiciary, 117th Cong (July 29, 2020), (online at <https://www.youtube.com/watch?v=WBFDQvIrWYM>); Chris Fox, *Five key moments from the big tech grilling*, (July 30, 2020), <https://www.bbc.com/news/technology-53592751>; <https://www.blumenthal.senate.gov/imo/media/doc/8.11.21%20-%20Open%20App%20Markets%20Act%20-%20Bill%20Text.pdf>

116 Open Markets Act, H. R. 5017, 117th Cong. (2021).

117 Under the act, an app store “shall not require developers to use or enable an in-app payment system owned or controlled by the covered company or any of its business partners as a condition of the distribution of an app on an app store or accessible on an operating system” Open App Markets Act, S. 2710, 117th Cong. § 3(a) (2022).

118 *See Id.* § 2(3).

steering provisions.¹¹⁹ It also prohibits preventing consumers from selecting their own default apps and app stores, installing third party app stores through existing stores, or installing app stores through other means.¹²⁰ It further requires users be allowed to hide or delete preinstalled app stores.¹²¹

The regulation further limits an app store's ability to give its own applications favorable treatment in search results by ranking its own applications differently, prioritizing its own apps, failing to disclose advertisements clearly, or withholding information related to hardware or software features.¹²² App stores would, however, be able to treat apps differently on searches if they "clearly disclose" that they are advertisements.¹²³ Finally, app stores would be required to provide developers with access to "operating system interfaces, development information, and hardware and software features" on a timely basis and on terms equivalent to the terms for access by similar apps provided by the app store themselves or their business partners.¹²⁴

The bill qualifies that platforms would not be in violation for an action which is necessary for user privacy, security, fraud prevention, or compliance with other federal or state law.¹²⁵ To qualify for this

119 *See Id.* §§ 3(b)-(c).

120 *See Id.* § 3(d)(1)-(2). This allows developers to "sideload" software onto mobile devices through methods outside the app store, some argue this may create real security concerns. *See Ashley Gold, Apple and Google could be forced to give up full control of their app stores*, AXIOS, (Feb. 3, 2022), <https://www.axios.com/app-store-crackdown-senate-apple-google-3b1a7028-0037-42e1-a116-f9e653ded82c.html>; Mark MacCarthy, *The Open App Markets Bill Moves Out of the Senate Judiciary Committee*, LAWFARE, (Mar. 8, 2022, 10:26 AM), <https://www.lawfareblog.com/open-app-markets-bill-moves-out-senate-judiciary-committee>.

121 *See S.* 2710, § 3(d)(3).

122 *See Id.* § 3(e)(1); *see also* Makena Kelly, *Senators target Apple's App Store exclusivity in new bill*, VERGE, (Aug. 11, 2021, 1:08 PM), <https://www.theverge.com/2021/8/11/22620454/apple-google-app-store-senate-play-bill-epic-games-fortnite>. Spotify is a music app in competition with Apple's Apple Music.

123 *Id.* 3(e)(2)(B).

124 *Id.* 3(f).

125 *Id.* 4; McKinnon, *supra* note 112.

exception, they must clearly show that they apply these policies consistently across apps, narrowly tailor the breaches, do not use them as pretext to exclude or impose discriminatory terms on a third party, and their goal could not be achieved through a less discriminatory means.¹²⁶ Under the regulation, the Federal Trade Commission and State Attorneys General could take action, or developers could sue for injunctions.¹²⁷ Any developer injured could also sue and recover attorney's fees along with injunctive relief.¹²⁸

This still may not solve the problem of high commissions. It also leaves open loopholes that are likely to be used.¹²⁹ As it is difficult to pull users from their trusted platforms, developers may not be successful in avoiding Apple's contractual terms further than the regulations require. It still may lead Apple to negotiate more fair terms for contracts out of the fear of competition or further regulation.

The Coalition for App Fairness has also been lobbying state legislatures to push bills specific to the developer app store relationships.¹³⁰ Notably, House Bill 2005 in Arizona would have allowed alternative payment systems which could help developers avoid the app store commissions.¹³¹ Other states such as North

126 *Id.* 4(b)(3).

127 The FTC and the Attorney General would enforce the act using jurisdiction through the Federal Trade Commission Act (15 U.S.C. 41 et seq.) or the Clayton Act (15 U.S.C. 12 et seq.). *Id.* 5; <https://www.cnn.com/2021/08/11/bipartisan-bill-targets-apple-and-googles-ability-to-profit-from-app-stores.html>.

128 *Id.* 5(b).

129 *Id.* 4. App stores already claimed that their terms were efforts to protect consumers, exactly what the loopholes seek to maintain. See Graham Dufault, *On Open App Markets Act, Sponsors Make Progress but the Bill Still Diminishes Developers' Prospects on App Stores*, (Feb. 2, 2022), <https://actonline.org/2022/02/02/on-open-app-markets-act-sponsors-make-progress-but-the-bill-still-diminishes-developers-prospects-on-app-stores>.

130 Cat Zakrzewski, *The Technology 202: State legislatures across the country are targeting app stores*, (March 5, 2021), <https://www.washingtonpost.com/politics/2021/03/05/technology-202-state-legislatures-across-country-are-targeting-app-stores>.

131 It passed the Arizona House of Representatives, and the Senate was supposed to vote on it in May when it was mysteriously pulled from the agenda

Dakota have attempted to pass similar legislation with little success.¹³² However, legislators do see a problem- a positive sign for developers.¹³³

In late August 2021, Apple agreed to settle a 2019 federal class action lawsuit in the United States related to their monopoly power and excessive fees.¹³⁴ The settlement included an agreement to allow developers to use information captured from apps to tell customers about alternatives to Apple’s payment system.¹³⁵ But developers still wouldn’t be able to promote payment systems inside the apps.¹³⁶

Google and Apple are subject to multiple antitrust lawsuits at the state and federal levels.¹³⁷ In *Epic Games v. Apple*, Epic Games sued Apple and Google for the operations of their stores, alleging

last minute. Congressional members have publicly stated that Apple and Google “hired almost every lobbyist in town” which allegedly affected some senators support for the bill. Now it will need to be reintroduced in 2022 to go into effect, which Arizona Senator Cobb says is unlikely to happen. Prop. Amendments to H. B. 2005, 55th Leg. 1st Reg. Sess., (Az. 2021); Nick Statt, *Arizona advances bill forcing Apple and Google to allow Fortnite-style alternative payment options*, (March 4, 2021), <https://www.theverge.com/2021/3/3/22309284/arizona-app-store-bill-2005-apple-30-percent-cut-bypass-legislation>.

132 S. B. 2333 67th leg. Assemb. (N.D. 2021); Nick Statt, *Apple won’t have to allow App Store alternatives on iOS after North Dakota bill fails*, VERGE, (Feb. 16, 2021), <https://www.theverge.com/2021/2/16/22286234/apple-app-store-north-dakota-bill-sb-2333-failed-vote>.

133 See Zakrzewski, *supra* note 130.

134 U.S. *iOS Developers to Benefit from \$100 Million Apple Small Developer Assistance Fund and Changes to App Store Policies in Developer Antitrust Class-Action Settlement*, HAGENS BERMAN, (Aug. 26, 2021), <https://www.hbsslaw.com/press/apple-ios-app-developers/us-ios-developers-to-benefit-from-100-million-apple-small-developer-assistance-fund-and-changes-to-app-store-policies-in-developer-antitrust-class-action-settlement>; Christina Tabacco, *Apple Settles Antitrust Suit with App Developer Class for \$100M*, L. ST., (Aug. 27, 2021), <https://lawstreetmedia.com/news/tech/apple-settles-antitrust-suit-with-app-developer-class-for-100m>.

135 *Id.*

136 The settlement also included \$100 of compensation to developers in the class. This led to Apple agreeing to decrease their commissions on sales up to \$1 million, a global policy that Apple already had announced intentions of implementing. *Id.*

137 See *id.*; see also Brandom, *supra* note 19.

violations of federal and state antitrust laws and California's unfair competition law.¹³⁸ Epic challenged their control over the distribution of apps and the requirement that developers use app stores' in-app purchase systems, subject to a 30 percent commission fee.¹³⁹ Epic also challenged the anti-steering provisions.¹⁴⁰

Epic's business model involved generating revenue through selling virtual currency called "V-bucks" in the app or directly from Epic's website for a discount.¹⁴¹ Under their contract, Epic was required to pay commission on in-app purchases and use Apple's payment system.¹⁴² Epic was also prohibited from putting a store within the App Store or sideloading apps on to devices.¹⁴³ In 2019, Epic staged a publicity stunt termed "Project Liberty" to bring this issue into consumers' and lawmakers' purview and pressure the stores to deal more fairly without using the court system.¹⁴⁴ Their goal was to sell

138 *Epic Games v. Apple*, 493 F. Supp. 3d 817 (N.D. Cal. 2022). Epic Games is the developer of a video game called Fortnite. Fortnite can be played on PC, Xbox, PlayStation, and Mobile. In this game players compete to be the last one standing using weapons and supplies found in a cartoon world. Over 350 million people have played Fortnite as of May 2020. J. Clement, *Registered users of Fortnite worldwide from August 2017 to May 2020*, STATISTA, (Feb. 21, 2022), <https://www.statista.com/statistics/746230/fortnite-players>.

139 See *Epic Games*, 493 F. Supp. 3d 817. For another challenge to Apple's commissions, see *Cameron v. Apple Inc.*, No. 19CV03074YGRTH, 2021 WL 827234 (N.D. Cal. Mar. 4, 2021) (Westlaw).

140 *Id.*

141 Epic set this discount at 20 percent, slightly less than the amount saved from avoiding Apple or Google's commissions. Epic admitted to paying over 30 percent commissions at times on other platforms such as the PlayStation Store. *Epic Games*, 493 F. Supp. 3d at 830; Todd Spanger, *'Fortnite' Looks to Sidestep Apple, Google App Store Fees With 20% Discount for Direct Payment*, VARIETY, (Aug. 13, 2020), <https://variety.com/2020/digital/news/fortnite-discount-epic-games-apple-google-app-store-fees-1234734274/#!>.

142 *Epic Games*, 493 F. Supp. 3d. 817.

143 *Id.*

144 Rebekah Valentine, *How Epic's 'Project Liberty' Weaponized Fortnite Fans Against Apple*, IGN, (May 7, 2021), <https://www.ign.com/articles/how-epics-project-liberty-weaponized-fortnite-fans-against-apple>; Ian Sherr, *Apple says Epic's Fortnite lawsuit is a marketing stunt to revive 'flagging interest' in the game*, CNET, (April 8, 2021), <https://www.cnet.com/tech/mobile/apple-says-epics-fortnite-lawsuit-is-a-marketing-stunt-to-revive-flagging-interest-in-the-game>.

in-app purchases outside of the Apple and Google payment systems and eventually open their own virtual reality “metaverse.”¹⁴⁵ Part of this stunt included sneaking a loophole into an update to sell in game purchases at a discount without using Apple or Google’s payment methods or paying commissions.¹⁴⁶ The game was quickly removed from the Apple and Google app stores as soon as the update was enacted.¹⁴⁷

Apple’s anti-steering provision reads: “If you want to unlock features or functionality within your app... ..you must use in-app purchase. Apps may not use their own mechanisms to unlock content or functionality...”¹⁴⁸ Section 2.3.10 of the Guidelines reads: “. . . don't include names, icons, or imagery of other mobile platforms in your app or metadata, unless there is a specific, approved interactive functionality.”¹⁴⁹ Section 3.1.3 Other Purchase Methods states: “The following apps may use purchase methods other than in-app purchase.”¹⁵⁰ Apps in this section cannot, either within the app or through communications sent to points of contact obtained from account registration within the app, encourage users to use a purchasing method other than in-app purchase.”¹⁵¹

Regarding the antitrust claims, the court defined the relevant market as the mobile gaming market.¹⁵² Under this definition, Apple had 55 percent market share, not enough to be a monopolist.¹⁵³ On September 10, 2021, a federal court delivered an opinion which could be seen as a step backward in the quest to solving the app store duopoly problem. The court held that Apple was not a monopolist. Apple’s market share of 55 percent and high profit margins was not

145 *Epic Games*, 493 F. Supp. 3d at 935-36.

146 *Id.* at 940.

147 *Id.*

148 *Id.* at 944. (quoting App Store Review Guidelines, Sec. 3.1.1, <https://developer.apple.com/app-store/review/guidelines>.)

149 Apple, *App Store Review Guidelines*, Sec. 2.3.10 <https://developer.apple.com/app-store/review/guidelines>.

150 *Id.* at Sec. 3.1.3.

151 *Id.*

152 *Epic Games*, 559 F. Supp. 3d at 921.

153 *Id.* at 922.

enough.¹⁵⁴ The opinion included some major wins for developers. The court found that Apple was engaging in anticompetitive conduct under California's competition laws and that Apple's anti-steering provisions illegally stifled consumer choice in an anticompetitive fashion.¹⁵⁵

During the period when Epic decided to offer in-app purchases outside of the app store, it made more than \$12 million in revenue. As this was an admitted breach of their contract (which Apple successfully countersued for in this case), Epic must pay 30 percent of that amount in damages.¹⁵⁶ Apple won nine of ten counts that Epic complained of, but the court found the anti-steering restrictions to be anticompetitive.¹⁵⁷

The court ruled that Apple must allow payment options outside of their store. This could lead to users benefiting from major price reductions. For example, Epic Games offered a 30 percent discount on purchases that were made through their own system due to savings from not paying Apple its arguably steep commission. The ruling also found that Apple can legally reduce rates for specific developers, a loss for developers in competition with Apple, which were looking for equal treatment. Apple would later reduce rates charged to fellow tech giant, Amazon, to 15 percent. The court noted that Nintendo, Xbox, and PlayStation all charge similar commissions on their game sales and that antitrust suits are not a venue for people to complain about prices being too high.¹⁵⁸

"Apple's revenue from app sale commissions in 2020 was \$21.7 billion, according to market research firm SensorTower. Analysts have guessed that it stands to lose \$1 billion to \$4 billion annually if the Epic verdict stands; it applies only to the U.S."¹⁵⁹ Both companies are expected to appeal the decisions. This saga has led to bills being

¹⁵⁴ *Id.* at 922.

¹⁵⁵ *Id.* at 1068.

¹⁵⁶ *Id.* at 924.

¹⁵⁷ *Id.* at 1068.

¹⁵⁸ Bobby Allyn, *What The Ruling In The Epic Games V. Apple Lawsuit Means For iPhone Users*, NPR, (Sept. 10, 2021), <https://www.npr.org/2021/09/10/1036043886/apple-fortnite-epic-games-ruling-explained>.

¹⁵⁹ Bergen, *supra* note 5.

introduced in Congress which could move toward a system more favorable to Epic Games and developers.¹⁶⁰

D. India

According to Reuters, Apple is being sued in India for potential antitrust violations relating to its practice of forcing developers to use its in-app purchase systems.¹⁶¹ Weeks after being accused of antitrust violations in India, Apple started allowing developers to use communications to share information about payment alternatives outside of their iOS app.¹⁶² Apple even said it would allow some apps to provide customers an in-app link to bypass Apple's purchase system, though they retained a ban on allowing other forms of payment options inside apps.¹⁶³

E. Japan

Apple announced an update coming to the App Store that closes an investigation by the Japan Fair Trade Commission (JFTC).¹⁶⁴ The update involves “reader” apps, which allow users to view purchased content such as magazines, books, or music.¹⁶⁵ Now “reader” apps

¹⁶⁰ See McKinnon, *supra* note 112 for an example of a bipartisan bill aimed at solving this discrepancy.

¹⁶¹ Aditya Kalra, *EXCLUSIVE Apple hit with antitrust case in India over in-app payments issues*, REUTERS, (Sept. 2, 2021), <https://www.reuters.com/technology/exclusive-apple-hit-with-antitrust-case-india-over-in-app-payments-issues-2021-09-02>.

¹⁶² Tech Desk, *Apple updates App Store payment guidelines to allow developers to contact customers directly*, THE INDIAN EXPRESS, (Oct. 25, 2021), <https://indianexpress.com/article/technology/tech-news-technology/apple-updates-app-store-payment-guidelines-allows-developers-to-contact-customers-directly-7589473>.

¹⁶³ *Id.*

¹⁶⁴ Michael Allison, *Apple makes another concession to developers, lets some link outside its app*, DIGITALTRENDS, (Sept. 2, 2021), <https://www.digitaltrends.com/mobile/apple-developers-app-store-reader-changes>.

¹⁶⁵ Apple Newsroom, *Japan Fair Trade Commission closes App Store investigation*, APPLE, (Sept. 1, 2021), <https://www.apple.com/newsroom/2021/09/japan-fair-trade-commission-closes-app-store-investigation>.

can include links to their websites so that users can create or manage their accounts outside of the app.¹⁶⁶ This way developers can sell content outside of the app store's systems, but still offer it in iPhone applications. This update applies to all reader apps globally.¹⁶⁷ This is one of the first examples of a country's regulation affecting the global market.

III. THE UTILITY APPROACH

It is likely that Apple and Google want app stores to be treated like a "walled garden," free to require developers to abide by their content and security rules and guidelines.¹⁶⁸ This approach may create a more trustworthy and efficient marketplace. It also could be seen as rewarding innovation and respecting app stores as private companies. Some may argue they should be able to profit from the products they created or that high profits could incentivize innovation. If developers dislike policies, they can switch stores.¹⁶⁹ They might also argue that they are adding value as a safe, trusted platform, connecting users to apps, therefore they are entitled to profits from their services.¹⁷⁰ This approach would mean allowing stores more leeway to do business as they wish.

App Store sales are driven by engagement, a characteristic that one could argue developers, not the stores, are responsible for.¹⁷¹ Initially,

166 *Id.*

167 *Id.*

168 See Dediu *supra* note 26 and Andrew Froehlich, *walled garden*, (last updated Nov. 2021), <https://www.techtarget.com/searchsecurity/definition/walled-garden>. See also Aniruddh Nigam, *App Stores and Cracks in the 'Walled Garden' Approach*, VIDHI CENTRE FOR LEGAL POLICY, (Oct. 21, 2020), <https://vidhilegalpolicy.in/blog/app-stores-and-cracks-in-the-walled-garden-approach>.

169 See Maria Dinzeo, *Apple's App Store Not Anticompetitive*, *Economist Testifies*, COURTHOUSE NEWS SERVICE, (May 12, 2021), <https://www.courthousenews.com/apples-app-store-not-anticompetitive-economist-testifies>.

170 See *id.*

171 Forty-one percent of monthly billings in the App Store are made on applications which were downloaded more than 180 days prior. John Koetsier,

Apple claimed that developers were paying for a curated marketplace. This may have been compelling when they only offered hundreds or even thousands of apps exclusively, but they now offer millions of applications. Are the developers paying for a service, or are the developers paying for a list of sales leads along with access to their searches?

According to an expert witness in *Epic Games*, the Apple App Store generated a 77.8 percent operating margin in 2019.¹⁷² The current structure seems to favor the app stores, as developers have no options other than acquiescing to the terms of the app stores their customers use.¹⁷³ Also, the app stores can let developers do all the work and reap the benefits. The current regulations are sparse, creating a walled garden environment, but there are places I think regulation could bridge gaps. Given app stores' immense power, I see reason for more regulation to protect the developers.¹⁷⁴

The 36 Most Interesting Findings In The Groundbreaking Epic Vs Apple Ruling That Will Free The App Store, FORBES, (Sept. 10, 2021), <https://www.forbes.com/sites/johnkoetsier/2021/09/10/the-36-most-interesting-findings-in-the-groundbreaking-epic-vs-apple-ruling-that-will-free-the-app-store/?sh=187fe5a6fb3f>.

¹⁷² Written Direct Testimony of Ned S. Barnes, *Epic Games, Inc. v. Apple Inc.*, 493 F. Supp. 3d 817 (N.D. Cal. 2020) (Document 556-1) (online at https://cdn.vox-cdn.com/uploads/chorus_asset/file/22484513/ned_barnes_testimony.pdf).

¹⁷³ See *How We Got Here*, *supra* note 15 (outlining a timeline of Spotify's attempts to negotiate new terms to no avail); *Four Fast Facts*, *supra* note 41; but see Elliott Long, *Why Users Aren't Locked into Their Smartphone Brand*, PROGRESSIVE POLICY, (Apr. 8, 2021), <https://www.progressivepolicy.org/publication/why-users-arent-locked-into-their-smartphone-brand>.

¹⁷⁴ See *App stores should be more competitive, says Microsoft*, DECCAN HERALD, (updated Oct. 15, 2020), <https://www.deccanherald.com/business/business-news/app-stores-should-be-more-competitive-says-microsoft-902123.html>. See also *Fair play in the app store industry and the need for choice*, INDUS, (Mar. 3, 2022), <https://www.indusos.com/media-story/fair-play-in-the-app-store-industry-and-the-need-for-choice>.

I propose that these stores be treated more like essential utilities.¹⁷⁵ This means exercising more government control over the platform's functions, like how governments regulate water or other utilities.¹⁷⁶ The stores should be treated like utilities because they provide a public function of connecting users to developers. However, this form of regulatory framework sacrifices app store autonomy and incentives to innovate.¹⁷⁷ This is the direction Korea may be going with the most liberal regulation of the App Stores and prioritization of protection of developers and competition.¹⁷⁸ As the use of smartphones grow, life without the app store becomes less and less possible. App stores are a vital part of everyday life, making them more and more like a necessary facility than a product.¹⁷⁹ Regulators may need to decide what terms are fair, because only a small number of app stores can function alongside each other. Without regulation, developers are trapped in whatever terms the stores demand of them. Regulators can use experts to decide what a fair return on investment is to the app stores and how much leeway the stores can be given without users

¹⁷⁵ See Nikolas Guggenberger, *Essential Platforms*, 24 STAN. TECH. L. REV. 237 (2021); Tarleton Gillespie, *Platforms Are Not Intermediaries*, 2 GEO. L. TECH. REV. 198 (2018); Philip J. Weiser, *Law and Information Platforms*, 1 J. ON TELECOMM. & HIGH TECH. L. 1 (2002).

¹⁷⁶ Guisepe Colangelo and Oscar Borgogno, *App Stores as Public Utilities*, TRUTH ON THE MARKET, (Jan. 19, 2022), <https://truthonthemarket.com/2022/01/19/app-stores-as-public-utilities>. For example, in the United States, utilities can be private companies, but they are heavily regulated by commissions who decide things such as the rates they charge the public. Jim Lazar, *Electricity Regulation in the US: A Guide. Second Edition*, RAP, (June 2016), <https://www.raponline.org/wp-content/uploads/2016/07/rap-lazar-electricity-regulation-US-june-2016.pdf>.

¹⁷⁷ Aniruddh Nigam, *India needs laws to regulate app stores but first know how Google, Apple control the system*, THEPRINT, (Oct. 23, 2020), <https://theprint.in/opinion/india-needs-laws-to-regulate-app-stores-but-first-know-how-google-apple-control-the-system/529447>.

¹⁷⁸ Enforcement Decree of the Telecommunications Business Act (S. Kor.), *supra* note 92.

¹⁷⁹ See Krunal Vyas, *Importance of Mobile Applications in Everyday Life*, INDIA APP DEVELOPER, (Jan. 2, 2022), <https://www.indiaappdeveloper.com/blog/importance-of-mobile-applications-in-everyday-life>.

falling victim to unfair algorithms and developers being constrained by exploitative rules.¹⁸⁰

I also suggest countries disfavor the loopholes built into the regulations of app stores. They all include exceptions to rules where the app store finds necessary for security. I fear these loopholes may be used pretextually or excessively. As it is difficult to know when and why an app store may need to stray from rules for security reasons, accountability will be difficult.

CONCLUSION

In conclusion there is a long way to go in creating a fair landscape for app stores, developers, and consumers. Luckily for developers, rule makers have shown an awareness to this problem and seem willing to experiment with tilting the scale.¹⁸¹ Further, new third-party app stores are being built which could push the leading app stores to meet the developers halfway.¹⁸² With mobile devices becoming more and more prevalent and powerful, this battle is not over and will continue to be an important issue in technology and business around the world.¹⁸³

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¹⁸⁰ Patel, *supra* note 110.

¹⁸¹ Zakrzewski, *supra* note 130; S. B. 2333 67th leg. Assemb., 29th day, (N.D. 2021).

¹⁸² See *Ultimate Mobile App Stores List*, BUILD FIRE, (2022), <https://buildfire.com/mobile-app-stores-list>.

¹⁸³ See *Forecast number of mobile devices worldwide from 2020 to 2025 (in billions)*, STATISTA, (Sept. 24, 2021), <https://www.statista.com/statistics/245501/multiple-mobile-device-ownership-worldwide>.

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