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An Epic Rebuke of Antitrust Hyper-Formalism

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I. If The Shoe Fits: Legal Misdirects Amid Established Anti-Competitive Effects

A. Epic v. Apple: Case Overview

In August 2020, Epic Games updated its Fortnite iPhone app to allow its users to make in-app transactions directly with Epic, bypassing Apple’s In-App Purchase (“IAP”) payment system.¹ Apple subsequently removed Fortnite from its App Store, citing Epic’s violation of Apple’s Developer Program License Agreement (“DPLA”), which contractually bound Epic and other developers to channel all app distributions and in-app transactions through the App Store and Apple’s IAP.² Epic Games responded with a well-orchestrated media campaign and filed a complaint seeking injunctive relief, alleging that Apple engaged in unfair and anti-competitive practices: (1) Apple maintained a complete monopoly over the iOS App Distribution Market by imposing technical and contractual restrictions³; and (2) Apple monopolized the iOS in-app payment processing market by unlawfully channeling all app and in-app purchases through its IAP.⁴ Much of the litigation was consumed by Epic and Apple’s skirmish over the relevant market definition. Whereas Epic narrowly defined the relevant market as the iOS App Distribution Market, Apple countered that the relevant market was the “market for all digital video games in which it and Epic Games compete[d] heavily.”⁵

Wrapping up a highly anticipated and expedited litigation cycle, the court issued a ruling in just over a year on September 10, 2021. The court rejected both parties’ market definitions and instead proposed its own: “the relevant market here is *digital mobile gaming transactions*, not gaming generally and not Apple’s own internal operating systems related to the App Store.”⁶ The court concluded that within the digital mobile gaming transactions market, Apple did not qualify as a monopolist under either federal or state antitrust laws.⁷ Among several reasons, the court first pointed to Apple’s market share in mobile gaming transactions as evidence that it lacked monopoly power in the market. Between 2015 and 2017, Apple’s share in mobile gaming ranged between 52% and 57%, reflecting “some stability.”⁸ The 52% – 57% range was also “below the general ranges of where courts found monopoly power under Section 2.”⁹ The court additionally found that Epic Games failed to provide substantial direct evidence demonstrating that Apple’s alleged monopoly conduct restricted the output of mobile game transactions.¹⁰ For instance, the Nintendo

¹ Shannon Liao, *What the Epic v. Apple lawsuit means for the gaming industry*, WASHINGTON POST, Sep. 13, 2021, <https://www.washingtonpost.com/video-games/2021/09/13/epic-games-apple-lawsuit-ruling-impact/> (last visited Apr 12, 2023).

² Complaint at 7, *Epic Games, Inc. v. Apple, Inc.*, No. 4:20-cv-05640 (N.D. Cal. Aug. 13, 2020), 2020 WL 5073937.

³ *Id.* at 19-21.

⁴ *Id.* at 27.

⁵ *Id.* at 16; Rule 52 Order after Trial on the Merits, *Epic Games, Inc. v. Apple Inc.*, Case No. 4:20-cv-05640-YGR (N.D. Cal. Sept. 10, 2021) (“Order”), at 1.

⁶ *Id.*

⁷ *Id.*, 1

⁸ *Id.*, 137

⁹ *Id.*

¹⁰ *Id.*, 137

Switch’s entry into the mobile gaming transactions market in 2017 indicated that the degree of entry barrier was not high enough to bar new entrants.¹¹

However, the court did agree with Epic Games that Apple’s anti-steering provisions stifled consumer choice, violating California’s Unfair Competition Law (UCL).¹² The court accordingly enjoined Apple from prohibiting developers from including in their: (1) “Apps and their metadata buttons, external links, or other calls to action that direct customers to purchase mechanisms, in addition to IAP”; and (2) “communicating with customers through points of contact obtained voluntarily from customers through account registration within the app.”¹³ While some legal experts and media outlets characterized the ruling as a “partial victory for both sides,” whether the court’s injunction will prove helpful for Epic Games and other developers is not yet so clear.¹⁴ For one, the decision leaves wiggle room for Apple to still require developers to use IAP for purchases that are made in-app.¹⁵ The injunction only requires that Apple allow third party developers to promote external payment systems—there is no telling whether users will actually choose the external payment option if they find the process tedious and disruptive.¹⁶

On April 24, 2023, the U.S. Court of Appeals for the Ninth Circuit released an opinion affirming the district court’s findings. As such, the outcome of the case is still pending, as the parties may still resort to further proceedings.

B. *Direct Evidence of Apple’s Market Power*

What is striking about *Epic v. Apple* is that the court correctly identifies how Apple’s conduct manifested harms in the digital market. The court acknowledges direct evidence of Apple’s anti-competitive conduct, yet largely sides with Apple on the merits. For instance, *first*, the court found that Apple’s strict restriction of the iOS distribution market reduced innovation in game distribution. The court extensively cited Apple’s developer surveys from 2010 and 2017, both of which found that “Apple [was] not moving quickly to address developer concerns or dedicating sufficient resources to their issues.”¹⁷ One developer compared the App Store’s lagging capabilities to Steam, an online gaming store for personal computers: “Discoverability is still a significant challenge on the App Store. . . . Our organic downloads for games on Steam are much higher than our games on the App Store, even though the App Store has more active users. This doesn’t make

¹¹ Id., 138

¹² Id., 1

¹³ Id., 168

¹⁴ Shannon Liao, *What the Epic v. Apple lawsuit means for the gaming industry*, THE WASHINGTON POST, Sep. 13, 2021, <https://www.washingtonpost.com/video-games/2021/09/13/epic-games-apple-lawsuit-ruling-impact/>.

¹⁵ Takeaways From the Trial Court’s Decision in *Epic v. Apple*, (Sullivan & Cromwell LLP ed., 2021), 7.

¹⁶ Id.

¹⁷ Rule 52 Order after Trial on the Merits, *Epic Games, Inc. v. Apple Inc.*, Case No. 4:20-cv-05640-YGR (N.D. Cal. Sept. 10, 2021) (“Order”), at 101.

sense.”¹⁸ Leaning on these facts, the court expressly found that “Apple’s restrictions reduce innovation in ‘core’ game distribution services.”¹⁹

Second, the court agreed with Epic Games that Apple’s app distribution restrictions had “some anticompetitive effects.”²⁰ Apple maintained its 30% commission rate for more than a decade, suggesting that the price was set artificially high.²¹ Pointing again to the facts of the case, the court reiterated: “Apple’s maintenance of its commission rate stems from market power, *not competition* in changing markets.”²² The court further agreed that Apple’s commission rate not only harmed developers, but possibly impacted consumers as well.²³

Third, the court suggested that Apple’s anti-steering provisions generated lock-in by raising information costs: “[Due to Apple’s anti-steering provisions,] developers cannot communicate lower prices on other platforms either within iOS or to users obtained from the iOS platform. Apple’s general policy also prevents developers from informing users of its 30% commission.”²⁴ The court rightfully concluded that Apple acted anti-competitively by blocking developers from communicating with its users and generating lock-in.²⁵ Moreover, the court further acknowledged the presence of switching costs: “it takes time to find and reinstall apps or find substitute apps; to learn a new operating system; and to reconfigure app settings. It is further apparent that one may need to repurchase phone accessories.”²⁶

The court is not alone in its findings of Apple’s sizable market power. A 2020 report by the House Subcommittee on Antitrust echoed many of the court’s conclusions. The report found that Apple exercised monopoly power by leveraging its dominance in the iOS market to maintain supra-competitive prices and exclude competitors.²⁷ The subcommittee directly concluded that Apple’s monopoly power “[reduced] quality and innovation among app developers, and [increased] priced and [reduced] choices for consumers.”²⁸ What’s worse, while Apple justified its 30% commission rate as necessary to maintain the iOS ecosystem, a study by Match Group found that Apple’s “expenses related to payment processing [justified] charging no more than 3.65% of revenue.”²⁹ Despite such manifestation of direct harm, the court found that Epic Games still failed

¹⁸ Id.

¹⁹ Id., 102.; *See also* Takeaways From the Trial Court’s Decision in Epic v. Apple, (Sullivan & Cromwell LLP ed., 2021), 5.

²⁰ Rule 52 Order after Trial on the Merits, Epic Games, Inc. v. Apple Inc., Case No. 4:20-cv-05640-YGR (N.D. Cal. Sept. 10, 2021) (“Order”), at 144.

²¹ Id.

²² Id.

²³ Id.

²⁴ Id., 163-64.

²⁵ Id., 164.

²⁶ Id., 50.

²⁷ Staff of S. Comm. On Antitrust, Com. And Admin. L. of the Comm. on the Judiciary, 116th Cong., Investigation of Competition in Digital Markets 10 (Comm. Print 2020).

²⁸ Id., 11.

²⁹ Id., 292.

to prove an antitrust violation because it determined that there were no aftermarkets for iOS app distribution or in-app payment.³⁰

C. *Placing Apple’s Conduct Under the Proverbial Microscope: Emphasizing Market Realities over Extreme Formalism*

The anticompetitive effects of Apple’s conduct serve as clear indicia of the company’s market power. To suggest otherwise would be inconsistent with *Eastman Kodak Co. v. Image Technical Services, Inc.*, where the Court found that Kodak exercised monopoly power by “locking in” consumers with high information and switching costs, and preventing them from reacting to aftermarket exploitations.³¹ The Court’s direct findings of market power through consumer “lock-in” sufficiently demonstrated that Kodak’s service and parts aftermarkets were relevant antitrust markets.³² Without getting entangled in the complexities of defining relevant markets, the Court relied on the direct evidence of consumer lock-in and its anticompetitive effects to infer Kodak’s market power.³³ The Court correctly pinpointed the central issue of antitrust jurisprudence: “Whether considered in the conceptual category of ‘market definition’ or ‘market power,’ the ultimate inquiry is the same—whether competition in the equipment market will significantly restrain power in the service and parts markets.”³⁴

Had the *Epic* court similarly leaned heavily on the direct evidence of Apple’s anticompetitive conduct and the realities of multi-sided digital markets, the court may have more congruously concluded that Apple exercised market power. Indeed, *Epic v Apple* epitomizes the courts’ misplaced emphasis on market definition in monopolization cases, in particular, and antitrust jurisprudence, in general. By centering market definitions, the *Epic* court expanded what we regard as a judicial preoccupation with extreme antitrust formalism.

Professor Steven Salop’s recommendation that antitrust analysis take a “first principles approach” rings true today, and rings especially true when dealing with the plasticity and growing complexity of digital markets. In *The First Principles Approach to Antitrust, Kodak, and Antitrust at the Millenium*, Salop argues that although market definition was initially treated as a proxy and means for evaluating market effects, courts have incorrectly treated them as ends in themselves.³⁵ At its core, antitrust analysis is about *competitive effects*; therefore, Salop asserts that “market power and market definition. . . should not be analyzed in a vacuum or in a threshold test divorced from the conduct and allegations about its effects.”³⁶ The court must respond to antitrust cases with flexibility and without “[rigidly adhering] to a single brand of economic orthodoxy.”³⁷ By zeroing

³⁰ Brief for The American Antitrust Institute as Amicus Curiae Supporting Plaintiff at 3-8, *Epic Games, Inc. v. Apple*, No. 21-16506 & 21-16695 (9th Cir. Jan. 27, 2022).

³¹ *Id.*, 6-7; *Eastman Kodak Co. v. Image Tech. Servs.*, 540 U.S. 451, 469 (1992)

³² Brief for The American Antitrust Institute as Amicus Curiae, *supra* note 30, at 7.

³³ *See* *Kodak*, 540 U.S. at 477.

³⁴ *Id.*, 469.; *See also* Brief for The American Antitrust Institute as Amicus Curiae, *supra* note 30, at 7.

³⁵ Steven C. Salop, *The First Principles Approach to Antitrust, Kodak, and Antitrust at the Millennium*, 68 *Antitrust L.J.* 187, 188 (2000)

³⁶ *Id.*, 188

³⁷ *Id.*, 187

in on the anticompetitive conduct at hand, courts can maintain better “logic and consistency while avoiding analytic traps and factual errors.”³⁸

Focusing on direct evidence makes it easier for district court judges to design remedies – as will further be elaborated the remainder of this paper, by focusing on market power instead of market definitions, courts can design remedies that more narrowly correspond to that exercise of power. Doing so would (1) assuage district court judges’ concerns about inaccurately imposing a new competitive equilibrium; (2) conform with district court judges’ central role in determining the relevant facts and evidence; and (3) give a clearer road map for appellate courts to which to adhere and review.

II. Anti-Competitive Effects as Direct Evidence of Market Power

Epic v. Apple case raised eyebrows due to its over-reliance on a formal market definition and market share evidence to establish market power. It appears that the court may have placed the cart before the horse, considering that anti-competitive effects are direct evidence of market power, for which market definition is dispensable.³⁹ Market definition is an analytical tool for assessing the ability to inflict harm, or market power, but direct evidence of actual anticompetitive effects can make it unnecessary to prove market power indirectly.

The court’s adherence to a formalist approach is somewhat understandable, given its concern that structural remedies might disrupt the product and destabilize the market. Nonetheless, by pinpointing the specific harm through direct evidence, the court could devise more customized and specifically targeted and tailored remedies. By focusing on direct evidence, the court can identify specific harms and develop remedies that directly address these issues, ensuring that they are both relevant and proportional. A re-emphasis on direct evidence allows trial courts to focus on addressing the reality of the market – a function for which they are best suited as fact-finders.

This section explores the concept of direct evidence and provides examples thereof as relied upon by U.S. courts. Focusing on direct evidence makes it easier for district court judges to design remedies.

A. *Direct Evidence of Market Power: Concept and Judicial Application*

Direct evidence demonstrates anticompetitive behavior by concentrating on the actual detrimental effects of a firm’s conduct on competition, bypassing the need to define a relevant market and calculate market shares.⁴⁰ This approach allows fact-finders to evaluate actual and

³⁸ *Id.*, 189

³⁹ See *U.S. v. Microsoft*, 253 F.3d 34 (D.C. Cir. 2001).

⁴⁰ Hovenkamp, Herbert, *Antitrust and Platform Monopoly* (July 24, 2021). 130 *Yale Law Journal* 1952 (2021), U of Penn, Inst for Law & Econ Research Paper No. 20-43.

potential harm caused by anticompetitive practices through evidence such as restricted output, supra-competitive prices, or diminished consumer welfare, among other factors.⁴¹

Since direct evidence aims to address the market reality and specific circumstances of each case, there is no definitive or all-encompassing list available. However, various types of direct evidence can be considered in combination with one another to provide a comprehensive understanding. Some commonly examined types of direct evidence in practice include:

- Restricted output: A decrease in the production or supply of goods and services as a result of anticompetitive behavior.⁴²
- Supra-competitive prices: Prices set above the competitive level, often as a result of the exercise of market power.⁴³
- Diminished consumer welfare through another channel: reduced quality, limited choices, or other restrictions resulting from anticompetitive conduct.⁴⁴
- Exclusionary behavior: Practices that aim to eliminate or significantly hinder competitors from entering or competing in the market.⁴⁵
- Coordinated behavior: Agreements or concerted practices among competitors that restrict competition, such as price-fixing, bid-rigging, or market allocation.⁴⁶
- Barriers to entry: creation of factors that make it difficult for new competitors to enter the market, thereby protecting the market position of incumbent firms.⁴⁷
- Sudden disruptions in market practices: Abrupt shifts in business conduct following the elimination of competitors or implementation of anticompetitive strategies.⁴⁸

Direct evidence has long been entrenched judicial practice, as illustrated by *Federal Trade Commission v. Indiana Federation of Dentists*. This case emphasizes that demonstrating actual detrimental effects can obviate the need for an inquiry into market power, and suggests that the market definition/market power approach is merely a circumstantial means of proving anticompetitive effects.⁴⁹

However it is still important to note that courts generally accept direct evidence in conjunction with market definition. For instance, in *U.S. v. Microsoft*, the D.C. Circuit underscored

⁴¹ Raymond Hartman et al., *Assessing Market Power in Regimes of Rapid Technological Change*, 2 *INDUSTRIAL AND CORPORATE CHANGE* 317 (1993).

⁴² *Theme Promotions, Inc. v. News Am. Mktg.* FSI, 546 F.3d 991, 1001 (9th Cir. 2008); *Coastal Fuels of P.R., Inc. v. Caribbean Petrol. Corp.*, 79 F.3d 182, 196–97 (1st Cir. 1996).

⁴³ *Town Sound & Custom Tops, Inc. v. Chrysler Motors Corp.*, 959 F.2d 468, 481 n.17 (3d Cir. 1992).

⁴⁴ HERBERT HOVENKAMP, *FEDERAL ANTITRUST POLICY* § 3.4b, at 106 (3d ed. 2005); *United States v. Eastman Kodak Co.*, 63 F.3d 95, 106 (2d Cir. 1995).

⁴⁵ *Heerwagen v. Clear Channel Commc'ns*, 435 F.3d 219, 227 (2d Cir. 2006); *Geneva Pharms. Tech. Corp. v. Barr Labs. Inc.*, 386 F.3d 485, 500 (2d Cir. 2004); *PepsiCo., Inc. v. Coca-Cola Co.*, 315 F.3d 101, 107 (2d Cir. 2002); *Conwood Co. v. U.S. Tobacco Co.*, 290 F.3d 768, 783 n.2 (6th Cir. 2002); *Tops Mkts., Inc. v. Quality Mkts., Inc.*, 142 F.3d 90, 98 (2d Cir. 1998).

⁴⁶ *Coastal Fuels of P.R., Inc. v. Caribbean Petrol. Corp.*, 79 F.3d 182, 196–97 (1st Cir. 1996).

⁴⁷ *Broadcom Corp. v. Qualcomm Inc.*, 501 F.3d 297, 307 (3d Cir. 2007).

⁴⁸ *In re Crude Oil Commodity Futures Litig.*, 913 F. Supp. 2d 41, 51 (S.D.N.Y. 2012).

⁴⁹ *FTC v. Ind. Fed'n of Dentists*, 476 U.S. 447 (1986).

that courts typically examine market structure for circumstantial evidence of monopoly power, as direct proof is seldom available.⁵⁰ Courts have also implied that plaintiffs using a direct evidence approach should make at least a modest attempt to prove a relevant market and market shares.⁵¹ Scholars have observed that courts often evaluate both direct and indirect evidence, allowing inaccuracies in one approach to be offset by those in the other.⁵²

Within the realm of digital platforms, various perspectives can be used to identify direct evidence of market injury. Firstly, data accumulation can create market imbalances, enabling tech companies to dominate consumers and competitors. This is largely due to network effects compounded by information asymmetries between tech businesses and their rivals or end-users. For example, the German Federal Cartel Office recently issued a decision prohibiting Facebook's unauthorized data processing.⁵³ This decision was based on Facebook's exploitation of ambiguous language in Instagram's Terms of Service and Privacy Policy to collect and store Instagram data.⁵⁴ This data was then linked to Facebook user accounts, allowing the company to bolster its targeted advertising business.⁵⁵ The BKA highlighted the power imbalance between data controllers, who process data for business purposes, and data subjects, who aim to protect their right to informational self-determination. The agency observed that Facebook users cannot negotiate better privacy conditions or easily switch to alternative platforms due to network effects.⁵⁶

Even issues such as tying,⁵⁷ competition foreclosure,⁵⁸ price discrimination,⁵⁹ and more have also emerged in the context of digital platforms. Nonetheless, determining the specific manifestation of market injury in a case necessitates thorough factual investigation to reveal the underlying market reality.

B. A Return to Market Realities Through Direct Evidence and Proportionate Remedies

Epic v. Apple offers an opportunity to revisit the use of direct evidence in antitrust cases. The court was caught in the dilemma of formalism. The inherent complexity of platform-based markets makes it particularly challenging for judges to establish a clear market definition and accurately calculate market shares. Since market definitions can be ambiguous, debates over their

⁵⁰ United States v. Microsoft Corp., 253 F.3d 34, 51 (D.C. Cir. 2001) (en banc) (per curiam).

⁵¹ e.g., Cason-Merenda v. Detroit Med. Ctr., 862 F. Supp. 2d 603, 648–49 (E.D. Mich. 2012).

⁵² See generally Joseph E. Harrington, Jr., *How Do Cartels Operate?*, in 2 FOUNDATIONS & TRENDS IN MICROECONOMICS 1, 64–69 (2006).

⁵³ Bundeskartellamt [BKA] [Federal Cartel Office] February 6, 2019, Facebook, Exploitative Business Terms Pursuant to Section 19(1) GWB for Inadequate Data Processing, Case No. B6-22/16.

⁵⁴ *Id.* at ¶ 125-127.

⁵⁵ *Id.* at ¶ 886.

⁵⁶ *Id.* at ¶ 646.

⁵⁷ Qian Wu, Niels J Philipsen, The Law and Economics of Tying in Digital Platforms: Comparing Tencent and Android, *Journal of Competition Law & Economics*, Volume 19, Issue 1, March 2023, Pages 103–122.

⁵⁸ Salop, Steven C., Dominant Digital Platforms: Is Antitrust Up to the Task? (January 18, 2021). Yale Law Journal Forum, Vol. 130, Pp. 563-587 (2021).

⁵⁹ Steinbaum, M. (2022). Establishing Market and Monopoly Power in Tech Platform Antitrust Cases. The Antitrust Bulletin, 67(1), 130–145.

scope often lead to an undue focus on technicalities rather than the underlying conduct. Furthermore, any definitive market definition may not be able to catch up with the rapidly evolving nature of these markets and could quickly become outdated, potentially leading to unintended consequences for the judges' future decisions. Judges, despite their expertise, may not be the most well-versed in economic theories to untangle the complexities and nuances of the ever-evolving platform-based markets. The formalism over market definition can overshadow the need to respond effectively to the realities of ever-changing market dynamics.

In comparison, the direct evidence approach provides another, more accurate and administrable route to demonstrating market power, offering a way to navigate market definition ambiguities. By relying on direct evidence, the focus shifts to the actual harm caused by the anticompetitive behavior, avoiding potential pitfalls of market definition disputes. By focusing on the real-world consequences of anticompetitive behavior, direct evidence helps to establish a more accurate and comprehensive assessment of the competitive landscape.

Moreover, this case is not just about reintroducing direct evidence into the conversation, but also about revisiting the "First Principles Approach". Conventionally, antitrust agencies may resort to structural approaches, which typically involve divestitures or the breakup of a company to reduce its market power and promote competition, as a form of remedy in addressing competition concerns.⁶⁰ In *Epic*, the court was hesitant to impose structural remedies, as the certainty and accuracy of the market definition are low, while the potentially adverse ramifications that could arise from implementing these remedies are high. This hesitancy also stemmed from the fact that Apple organically developed the entire ecosystem, without a past merger akin to Instagram or DoubleClick. However, by returning to the market reality and identifying direct evidence of harm on a case-by-case basis, more tailored and targeted remedies can be proposed. The First Principles Approach can provide a clearer causal link between the anticompetitive conduct and its effects on competition. This can strengthen the case against the alleged antitrust violator and support remedies aimed at addressing the specific harm identified. Moreover, it plays a pivotal role in uncovering and articulating effective remedies that will ultimately restore the lost competition.

In this approach, there isn't a comprehensive list of direct evidence for the courts to consider, and they must still undertake a case-by-case examination to delve into the market realities and identify the unique aspects of each situation. However, this is in line with the purpose of First Principles Approach, as it aims to avoid establishing a new form of formalism. Instead, it encourages a more nuanced, fact-based analysis that can lead to a better understanding of the market dynamics and more effective antitrust remedies. The concept of micro-antitrust serves as a way of thinking that liberates the court from the intricate web of economic theories they may not be proficient in, while easing their apprehensions about the possible market repercussions caused by structurally disproportionate remedies. By utilizing direct evidence, the court can focus on the tangible market conditions, transcend formalism, and devise tailored remedies to tackle the specific issues at hand.

⁶⁰ Hovenkamp, Herbert, Antitrust and Platform Monopoly (July 24, 2021). 130 Yale Law Journal 1952 (2021), U of Penn, Inst for Law & Econ Research Paper No. 20-43.

III. Remedies Rooted in Competition Realities

In designing antitrust remedies, judges must consider the principles of market contestability, innovation, and proportionality.

Contestability requires that a market be susceptible to competitive forces.⁶¹ Entry by potential disruptors must be free, easy, and profitable for more efficient and qualitatively superior products and services.⁶² Especially in digital markets – most of which have arguably tipped already in favor of the largest platforms – contestability entails “head-to-head competition between digital platforms (inter-platform competition) and also opens up existing digital platforms to competition at different layers of the value chain (intra-platform competition).”⁶³

Moreover, market contestability is a critical predicate for the potential for innovation. The “opportunity for profitable market-share grab...is the lever that spurs innovation: Firms will be more motivated to innovate the more opportunity they perceive to achieve profitable sales.”⁶⁴ More concretely, when a digital platform like Apple dominates its customer base, potential disruptors like Epic have little incentive to invest.⁶⁵ By opening incumbents to challenge, antitrust remedies boost incentives for innovation.⁶⁶

Finally, the remedy must be proportional to the antitrust violation. It must effectively restore competition to the marketplace, neither over-detering what might be efficient conduct, nor under-detering harmful behavior.⁶⁷ Proportional remedies are “tailored to the violations that were actually found, the harm they actually caused, and the actual ways in which they caused it...Proportional remedies do not attempt to inject more competition into the relevant market than that which would have existed but for the violation.”⁶⁸ Tying neatly into the contestability and innovation objectives, proportionality also entails an analysis of structural conditions, *e.g.*, entry barriers, since these conditions should facilitate the restoration of competition.⁶⁹

⁶¹ Elizabeth Bailey, *Contestability and the Design of Regulatory and Antitrust Policy*, 71 Papers and Proceedings of the 93rd Annual Meeting of the American Economic Association 178, 178 (1981).

⁶² Elizabeth Bailey, *Contestability and the Design of Regulatory and Antitrust Policy*, 71 Papers and Proceedings of the 93rd Annual Meeting of the American Economic Association 178, 178 (1981).

⁶³ Alexandre de Streel & Peter Alexiadis, *The European Way to Regulate Big Tech: the EU's Digital Markets Act* (forthcoming), in *The Legal Challenges of the Fourth Industrial Revolution: The European Union's Digital Strategy* (2023).

⁶⁴ Sruthi Thatchenkery & Riitta Katila, *Innovation and profitability following antitrust intervention against a dominant platform: The wild, wild west?*, 44 *Strategic Management Journal* 943, 946 (2022).

⁶⁵ See Sruthi Thatchenkery & Riitta Katila, *Innovation and profitability following antitrust intervention against a dominant platform: The wild, wild west?*, 44 *Strategic Management Journal* 943, 947 (2022).

⁶⁶ Sruthi Thatchenkery & Riitta Katila, *Innovation and profitability following antitrust intervention against a dominant platform: The wild, wild west?*, 44 *Strategic Management Journal* 943, 947 (2022).

⁶⁷ Edward Cavanagh, *Antitrust Remedies Revisited*, 84 *Oregon Law Review* 147, 201-02 (2005).

⁶⁸ Edward Cavanagh, *Antitrust Remedies Revisited*, 84 *Oregon Law Review* 147, 201-02 (2005).

⁶⁹ Organisation for Economic Co-operation and Development, *Remedies and Sanctions in Abuse of Dominance Cases* 22 (2006).

With the foregoing principles, and considering the factual findings in *Epic*, the court could have ordered Apple to lift its contractual restrictions, and obviate technological barriers, on Epic's deployment of third-party app stores and in-app purchase options. Granted, digital platforms' technological novelties and market idiosyncrasies may render uncertain the effects of such remedies. Nevertheless, to alleviate concerns that imposing antitrust remedies would be risky or imprudent, analogous lessons could have been drawn from markets like multi-channel television and personal computer browsers.

Multi-channel television can be likened to mobile phone application transactions. With the use of a gadget (*e.g.*, television set, mobile phone), end-users can access material (*e.g.*, television content, applications and transactions subsidiary thereto) through certain gateways (*e.g.*, stations, app stores). As espoused in the DOJ Antitrust Division's Competitive Impact Statement in *United States v. Comcast Corp.*:⁷⁰

Generally, programmers want to distribute their content in multiple ways to maximize viewers' exposure to the content and the impact of any advertising revenues. Likewise, distributors must be able to license a sufficient quantity and quality of content to create a compelling video programming service. A distributor also must gain access to a sufficient variety of content from different sources. This "aggregation" of a variety of content is important to a distributor's ability to succeed.

In *United States v. National Broadcasting Co., Inc.*,⁷¹ the Antitrust Division challenged NBC's practices of hoarding independent producer content and restricting distribution through its own networks and those stations with which NBC had standing affiliate agreements. Of 700 TV stations in the U.S., 200 stations had affiliation agreements with NBC.⁷² Apart from producing its own programs, NBC also purchased programs from independent producers.⁷³ Its dominance in production and distribution allowed NBC to exclude TV programs, in which NBC had no ownership interest, from prime-time broadcast; and as a producer itself, obtain a competitive advantage over other producers and distributors of television programs and motion picture feature films.⁷⁴ These restraints deprived the viewing public of the benefits of free and open competition in the broadcasting of television entertainment programs.⁷⁵ The Antitrust Division asked that NBC be prohibited from using its control of access to broadcasting time on its own network to foreclose competition or obtain an unfair competitive advantage in any other field.⁷⁶

National Broadcasting concluded in a consent judgment which, among other directives, limited the exclusive exhibition rights NBC could acquire from independent program suppliers, barred NBC's acquisition of exclusive exhibition rights as against theatrical and non-theatrical

⁷⁰ Case: 1:11-cv-00106 (D.C. Jan. 18, 2011).

⁷¹ 449 F.Supp. 1127 (C.D. Cal. 1978).

⁷² 449 F.Supp. 1127, 1129 (C.D. Cal. 1978).

⁷³ 449 F.Supp. 1127, 1130 (C.D. Cal. 1978).

⁷⁴ 449 F.Supp. 1127, 1130 (C.D. Cal. 1978).

⁷⁵ 449 F.Supp. 1127, 1131 (C.D. Cal. 1978).

⁷⁶ 449 F.Supp. 1127, 1131 (C.D. Cal. 1978).

direct projection, and restricted NBC's ability to obtain first-year pick up options from an independent program supplier for "pilot programs".⁷⁷

As in *Epic*, *National Broadcasting* demonstrates how a chokehold on a distribution gateway (e.g., the station, the app store) can restrict consumer choice and foreclose access to upstream suppliers (e.g., independent content producers, third-party application developers). By limiting NBC's abilities to obtain exclusive rights from producers, the consent judgment made the TV station gateway more contestable, allowing other TV stations to compete for content that NBC had previously hoarded, and increased the viewers' access points to content. By the court's own findings, Epic's evidence suggested that "Apple's restrictions foreclose competition for large game developers who have well-known games[,] " since these developers possessed the resources to open their own app stores.⁷⁸ Essentially, Epic seeks to also launch a distribution arm for its own content, but the same is foreclosed by the contractual and technical barriers cementing exclusive use of Apple's own App Store.

More on point is the Comcast video store business model. Comcast, which provides the most extensive fiber optic connectivity across America, also features its own Xfinity TV, which offers various packages of quality TB line-ups, from fast-action sports to premium audience-pleasers like HBO and Starz.⁷⁹ But since Xfinity also offers fast and reliable internet, those hooked up to Comcast's fiber optics can also stream video-on-demand of their choosing. Hence, despite Comcast fiber's near ubiquity (which can be analogized to the widespread use of Apple gadgets), audience choices remain broad and competitive because they can watch Hulu or Amazon Prime or Netflix or Disney as well as Comcast content. Thus, customers enjoy these options without the lock-in effects posed by the Apple app store. Additionally, this Comcast model promotes innovation despite the need to ensure a connective interface between cable TV and the Comcast video store.

Similarities may also be drawn from *United States v. Microsoft*⁸⁰ where Microsoft viewed Netscape and Java as threats that would "usurp the operating system's platform function and might eventually take over other operating system functions[.]" Analogous to *Epic* and *National Broadcasting*, *Microsoft* involved computers as the gadgets on which users could use various applications – ideally, accessed through their choice of operating system or browser. Netscape and Java would have diminished the market power of Microsoft's operating system, and its ability to capture much of the users and application developers.

Microsoft was found to have anti-competitively maintained its market power by (a) contractually, prohibiting original equipment manufacturers (OEM) from: removing desktop, folders, or "Start" menu entries; altering the initial boot sequence; and altering the Windows desktop appearance; and (b) technologically, binding Windows and Internet Explorer, as well as

⁷⁷ 449 F.Supp. 1127, 1133 (C.D. Cal. 1978).

⁷⁸ *Epic Games, Inc. v. Apple Inc.*, Rule 52 Order After Trial on the Merits, Case No. 4:20-cv-05640-YGR (N.D. Cal. Sept. 10, 2021), at p. 96.

⁷⁹ Jared, *Are Comcast and Xfinity the same?*, Channel Choice (Mar. 1, 2021), <https://channelchoice.com/is-comcast-and-xfinity-the-same/>.

⁸⁰ 253 F.3d 34 (D.C. Cir. 2001).

deliberately crashing the operating system each time engineers sought to customize the software.⁸¹ Hence, similar to the Apple app store’s restrictions on choosing payment options and the means of accessing apps, Microsoft restricted its end-users’ installation and usage of software suited to their preferences.

In both the *Microsoft* and *Epic* cases, the courts observed how network effects cause users and developers to gravitate towards a single platform or operating system. On direct network effects, the court in *Microsoft* noted how “one product or standard tends towards dominance, because ‘the utility that a user derives from consumption of the good increases with the number of other agents consuming the good.’”⁸² Meanwhile, the court in *Epic* underscored that “indirect network effects often dominate and create a ‘winner-take-all’ system that allows only a few large platforms to survive.”⁸³ In such scenarios, interoperability is essential to maintain competition.

Microsoft concluded in a consent decree which, among other orders, prevented Microsoft from retaliating against OEMs and independent software and hardware vendors that sought to develop, use, install, or distribute competing software; allowed flexibility to OEMs in configuring personal computers by launching other operating systems.⁸⁴ These remedies acknowledged that personal computer equipment and software exhibited strong network effects, but prohibited Microsoft from wielding these dynamics as entry barriers. Like the *Microsoft* remedies’ promotion of software competition, lifting the Apple app store’s technical and contractual restrictions will also promote competition as to price (developers and users can arrive at prices that bypass Apple’s commission system), quality and innovation (developers can offer users more tailored functionality as to search, access, promotions, and payment alternatives).

Considering the harm to nascent competition, *Microsoft* was ultimately concerned about the stifled innovation in the browser market. Similarly, by the court’s own words in *Epic*, “the point is that a third-party app store could put pressure on Apple to innovate by providing features that Apple has neglected.”⁸⁵ Apple’s “simplistic rules” for refunds also demonstrate foregone innovation which could have been spurred had developers like Epic been permitted to interact directly with their users.⁸⁶ That way, developers can tailor the user experience, directly addressing user concerns – even providing safeguards against fraud, which Apple proffers as justification for the arrangement.

During the pendency of the *Epic* case, both the U.S. and EU legislatures contemplated legislation that would have directly addressed app store-related competition issues. While crafted from regulators’ perspectives, these developments at least demonstrated attempts to repurpose

⁸¹ 253 F.3d 34 (D.C. Cir. 2001).

⁸² 253 F.3d 34 (D.C. Cir. 2001).

⁸³ *Epic Games, Inc. v. Apple Inc.*, Rule 52 Order After Trial on the Merits, Case No. 4:20-cv-05640-YGR (N.D. Cal. Sept. 10, 2021), at p. 94.

⁸⁴ *United States v. Microsoft, Corp.*, 231 F.Supp.2d 144 (2002).

⁸⁵ *Epic Games, Inc. v. Apple Inc.*, Rule 52 Order After Trial on the Merits, Case No. 4:20-cv-05640-YGR (N.D. Cal. Sept. 10, 2021), at p. 102.

⁸⁶ *Epic Games, Inc. v. Apple Inc.*, Rule 52 Order After Trial on the Merits, Case No. 4:20-cv-05640-YGR (N.D. Cal. Sept. 10, 2021), at pp. 40-41.

long-standing competition principles into a digital scenario. Legislators – as should also be the case with judges – to quote *National Collegiate Athletic Association v. Alston*,⁸⁷ channeled “the sensitivity of antitrust analysis to market realities[.]”

Under the Open App Markets Act⁸⁸ (“OAMA”) a covered company may not:

(1) 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;

(2) require as a term of distribution on an app store that pricing terms or conditions of sale be equal to or more favorable on its app store than the terms or conditions under another app store; or

(3) take punitive action or otherwise impose less favorable terms and conditions against a developer for using or offering different pricing terms or conditions of sale through another in-app payment system or on another app store.⁸⁹

The bill also mandated interoperability, requiring covered entities to allow and provide readily accessible means for users to:

(1) choose third-party apps or app stores as defaults for categories appropriate to the app or app store;

(2) install third-party apps or app stores through means other than its app store; and

(3) hide or delete apps or app stores provided or preinstalled by the app store owner or any of its business partners.⁹⁰

To ensure a more contestable marketplace, the bill contained a provision on open app development, particularly:

A covered company shall provide access to operating system interfaces, development information, and hardware and software features to developers on a timely basis and on terms that are equivalent or functionally equivalent to the terms for access by similar apps or functions provided by the covered company or to its business partners.⁹¹

⁸⁷ 594 U.S. ____ (2021).

⁸⁸ S. 2710, 117th Cong. (2021) (“OAMA”).

⁸⁹ OAMA, Section 3(a).

⁹⁰ OAMA, Section 3(d).

⁹¹ OAMA, Section 3(f).

The bill allowed covered companies to adopt technical measures to maintain user privacy, security, or digital safety. Nevertheless, to surmount any technicalities that covered companies may invoke to block competition, the bill required companies to establish by a preponderance of evidence that such technical measures are “not used as a pretext to exclude, or impose unnecessary or discriminatory terms,”⁹² and are “narrowly tailored and could be achieved through a less discriminatory and technically possible means.”⁹³

Meanwhile, the EU’s Digital Markets Act⁹⁴ (“DMA”) harmonizes data protection and competition standards, for a fairer and more contestable digital economy. The DMA—which entered into force just on November 1, 2022, and made applicable on May 2, 2023⁹⁵—addresses unfair practices by undertakings that perform core platform services and, through data-driven advantages, “substantially [undermine] the contestability of the core platform services, as well as impacting the fairness of the commercial relationship between undertakings [...] and their business users and end users.”⁹⁶

To rectify market imbalances, the DMA trains its sights on gatekeepers,⁹⁷ or undertakings performing core platform services (*e.g.*, online search engines, web browsers, video-sharing platform services),⁹⁸ with significant market impact and which enjoy an entrenched and durable position.⁹⁹ Gatekeepers’ advantages engender “serious imbalances in bargaining power”¹⁰⁰ allowing them to “unilaterally set unbalanced conditions for the use of their core platform services[.]”¹⁰¹

Pertinent to app store competition, Article 5(3) provides that gatekeepers “shall not prevent business users from offering the same products or services to end users through third-party online intermediation services or through their own direct online sales channel at prices or conditions that are different from those offered through the online intermediation services of the gatekeeper.” Allowing users to bypass the gatekeeper and transact directly with the business user, Article 5(5) requires a gatekeeper to “allow end users to access and use, through its core platform services, content, subscriptions, features or other items, by using the software application of a business user, including where those end users acquired such items from the relevant business user without using the core platform services of the gatekeeper.” Finally, Article 5(7) states that a “gatekeeper shall not require end users to use, or business users to use, to offer, or to interoperate with...payment systems for in-app purchases, of that gatekeeper in the context of services provided by the business users using that gatekeeper’s core platform services.”

⁹² OAMA, Section 4(b)(2).

⁹³ OAMA, Section 4(b)(3).

⁹⁴ Commission Regulation 2022/1925, 2022 O.J. (L265) 1.

⁹⁵ Commission Regulation 2022/1925, art. 54, 2022 O.J. (L265) 1.

⁹⁶ Commission Regulation 2022/1925, whereas par. 2, 2022 O.J. (L265) 1.

⁹⁷ Commission Regulation 2022/1925, art. 2(1), 2022 O.J. (L265) 1.

⁹⁸ Commission Regulation 2022/1925, art. 2(2), 2022 O.J. (L265) 1.

⁹⁹ Commission Regulation 2022/1925, art. 3(1), 2022 O.J. (L265) 1.

¹⁰⁰ Commission Regulation 2022/1925, whereas par. 4, 2022 O.J. (L265) 1.

¹⁰¹ Commission Regulation 2022/1925, whereas par. 33, 2022 O.J. (L265) 1.

The point is not that the *Epic* court could have easily fashioned a remedy out of the directives laid out in the OAMA and the DMA. Rather, these developments show attempts to adapt antitrust principles to competition issues in the digital economy. Antitrust laws empower judges to craft and impose structural and behavioral remedies, and such discretion was never tolled by the onset of the digital revolution. Similarly imposing targeted structural remedies would have eased the app store bottlenecks¹⁰² which the court itself acknowledged.

Apple's contractual breach allegation aside, the court could strike down the anti-competitive terms of the Developer Product Licensing Agreement, or at least permit its enforcement in ways that still foster market contestability. Removing these rules would have given users alternative access points to, and possibly lower prices on, their desired gaming content.¹⁰³ For instance, permitting the display of alternative payment options, with price differences on either route, would put pressure on Apple to lower its 30% commission allowing developers to pass along these savings as lower prices for users.¹⁰⁴

From a technical standpoint, the court would not have had to impose on Apple the positive obligation to feature and promote Epic's own app store and alternative payment options. Instead, it could simply enjoin Apple from erecting technical entry barriers which would prevent users from accessing Epic's systems. Users should be capable of installing their preferred software even if not listed on Apple's own app store. Effectively, Apple locks consumers in by imposing prohibitive switching costs should users really wish to access an alternative app store, *i.e.*, they would have to buy and adapt to a new phone.¹⁰⁵

On innovation, developers should be given the flexibility in adopting their favored business models, all while novel hardware and software are made available to all developers, not just first-party apps and products.¹⁰⁶ Rather than users being limited to the Apple app store interface, there could be scenarios where app developers can place text and images inside their apps to feature promotions, discounts, or alternative payment methods. Developers could place multiple format widgets in their apps, advertise or paste links of their own monetization methods, and send user-targeted notifications.¹⁰⁷

¹⁰² John Bergmayer, *Who Won Epic v. Apple? Consumers (But More Is Needed)*, PUBLIC KNOWLEDGE (Sept. 16, 2021) <https://publicknowledge.org/who-won-epic-v-apple-consumers-but-more-is-needed/>.

¹⁰³ John Bergmayer, *Who Won Epic v. Apple? Consumers (But More Is Needed)*, PUBLIC KNOWLEDGE (Sept. 16, 2021) <https://publicknowledge.org/who-won-epic-v-apple-consumers-but-more-is-needed/>.

¹⁰⁴ John Bergmayer, *Who Won Epic v. Apple? Consumers (But More Is Needed)*, PUBLIC KNOWLEDGE (Sept. 16, 2021) <https://publicknowledge.org/who-won-epic-v-apple-consumers-but-more-is-needed/>.

¹⁰⁵ Dennis Rickert, *A Bad Apple in the Basket? Market Power in Digital Markets illustrated by the Epic-Apple Case*, KLUWER COMPETITION LAW BLOG (Feb. 17, 2022) <https://competitionlawblog.kluwercompetitionlaw.com/2022/02/17/a-bad-apple-in-the-basket-market-power-in-digital-markets-illustrated-by-the-epic-apple-case/>

¹⁰⁶ John Bergmayer, *Who Won Epic v. Apple? Consumers (But More Is Needed)*, PUBLIC KNOWLEDGE (Sept. 16, 2021) <https://publicknowledge.org/who-won-epic-v-apple-consumers-but-more-is-needed/>.

¹⁰⁷ Dean Takahashi, *The DeanBeat: Interpreting what Epic v. Apple means for games*, VENTUREBEAT (Sept. 17, 2021) <https://venturebeat.com/mobile/the-deanbeat-interpreting-what-epic-vs-apple-means-for-games/>.

