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## Does Antitrust Have Digital Blind Spots?

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## DOES ANTITRUST HAVE DIGITAL BLIND SPOTS?

John M. Yun\*

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### I. INTRODUCTION

The extraordinary success of the economy’s digital sector is indisputable. Microsoft, Apple, Amazon, Alphabet (Google), and Facebook are the top five companies traded on the U.S. stock market. Not coincidentally, all five companies are digital “platforms” to one degree or another.<sup>1</sup> With this level

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1. The term “platforms” (a.k.a. “multi-sided” or “two-sided markets”) describes a business model that utilizes a system or network where more than one group (e.g., users, merchants, or advertisers) participates in order to engage in a mutually beneficial exchange.

of market success, growth, and influence—both economically and culturally—it is perhaps inevitable that a litany of concerns have been raised about these platforms and their conduct.<sup>2</sup> Concerns range from privacy violations to political influence, the promulgation of fake news, and the downfall of investigative journalism.<sup>3</sup> Most relevant for this Article is the claim that these firms have been engaging in anticompetitive conduct, or are otherwise insulated from competitive forces, and that this has remained unchecked despite antitrust laws.<sup>4</sup>

Recently, these concerns have transitioned into calls for more aggressive antitrust enforcement—primarily through changes in predicates and presumptions—and, increasingly, direct government regulation to address the market power and associated misconduct of leading digital platforms.<sup>5</sup> These calls are coming from both sides of the political divide. In Congress, Senate Democrat Amy Klobuchar introduced a bill that would ban significant acquisitions by any company with a market capitalization over \$100 billion unless the acquirer could demonstrate that the transaction would not lessen competition by more than a *de minimis* amount.<sup>6</sup> Senate Republican Josh

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While there is no canonical definition, Professors Andrei Hagiu and Julian Wright offer a good starting point: Platforms “enable direct interactions between two or more distinct [groups]” where each group “is affiliated with the platform” in some manner—typically through “platform-specific investments.” Andrei Hagiu & Julian Wright, *Multi-Sided Platforms*, 43 INT’L J. INDUS. ORG. 162, 163 (2015). Regardless of their precise definition, platforms are principally characterized by cross-group effects, or indirect network effects. *Id.* These are effects that occur when the size of one group on the platform creates a positive externality on one or more of the other groups, which, in turn, attracts them to the platform. *See id.* at 164. Some platforms also have direct network effects, which occur when the increase in the size of a given group confers additional benefits to other members of the same group (e.g., telephone systems, fax machines, e-mail, and social media). *See id.* at 163.

2. While Microsoft is no stranger to antitrust scrutiny and is one of the largest American companies in terms of market capitalization, Microsoft appears, at the moment, to be largely immune from the current debate regarding platforms and antitrust. The consensus is either that Microsoft is not engaging in antitrust violations or that it has an insufficient amount of market power in the areas of commerce that are attracting the most attention, such as social media, online search, and mobile services.

3. See Maureen K. Ohlhausen & Alexander P. Okuliar, *Competition, Consumer Protection, and the Right [Approach] to Privacy*, 80 ANTITRUST L.J. 121, 132 (2015); Maurice E. Stucke, *Here Are All the Reasons It’s a Bad Idea to Let a Few Tech Companies Monopolize Our Data*, HARV. BUS. REV. (Mar. 27, 2018), <https://hbr.org/2018/03/here-are-all-the-reasons-its-a-bad-idea-to-let-a-few-tech-companies-monopolize-our-data> [<https://perma.cc/4UXJ-NX4N>].

4. Stucke, *supra* note 3.

5. See, e.g., Brent Kendall & John D. McKinnon, *Congress, Enforcement Agencies Target Tech—House Panel to Probe Industry over Concerns About Competition as Oversight Intensifies*, WALL ST. J. (June 3, 2019), <https://www.wsj.com/articles/ftc-to-examine-how-facebook-s-practices-affect-digital-competition-11559576731> [<https://perma.cc/VZ8Z-5R72>].

6. Consolidation Prevention and Competition Promotion Act of 2017, S. 1812, 115th Cong. §§ 2(b), 3 (2017).

Hawley cosponsored a bill that would require large platforms to conform to regulations governing the portability of data generated on the platform as well as the interoperability of the platform.<sup>7</sup> And Senate Democrat Elizabeth Warren has proposed breaking up big technology companies and regulating them as public utilities.<sup>8</sup>

State attorneys general have formed a nationwide coalition to investigate the “troubling concerns for businesses and consumers” due to Google’s practices.<sup>9</sup> The two federal antitrust agencies, the Department of Justice (DOJ) and the Federal Trade Commission (FTC), are both actively investigating most of the large technology companies.<sup>10</sup>

The justification and intellectual foundation for this reform movement is coming from two broad sources. First, a group of academics have called for a

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7. Augmenting Compatibility and Competition by Enabling Service Switching Act of 2019, S. 2658, 116th Cong. §§ 3(a), 4(a) (2019).

8. See Elizabeth Warren, *How We Can Break Up Big Tech*, MEDIUM (Mar. 8, 2019), <https://medium.com/@teamwarren/heres-how-we-can-break-up-big-tech-9ad9e0da324c> [<https://perma.cc/HFE6-2JF7>]. More recently, Senator Warren has drafted the Anti-Monopoly and Competition Restoration Act, which would, among other things, change the burden of proof; amend the Clayton Act to ban “mega-mergers”; and add more conduct to a prohibited list of conduct. See Eric Newcomer & Joshua Brustein, *Warren Is Drafting U.S. Legislation to Reverse ‘Mega Mergers’*, BLOOMBERG (Dec. 4, 2019, 6:43 PM), <https://www.bloomberg.com/news/articles/2019-12-04/warren-is-drafting-u-s-legislation-to-reverse-mega-mergers> [<https://perma.cc/SP8L-K59S>]. Relatedly, there have been proposals to regulate the algorithms that platforms use, such as the Filter Bubble Transparency Act. See, e.g., Press Release, John Thune, U.S. Sen. for S.D., Thune, Colleagues Introduce Bipartisan Bill to Increase Internet Platform Transparency and Provide Consumers with Greater Control Over Digital Content (Nov. 1, 2019), <https://www.thune.senate.gov/public/index.cfm/2019/11/thune-colleagues-introduce-bipartisan-bill-to-increase-internet-platform-transparency-and-provide-consumers-with-greater-control-over-digital-content> [<https://perma.cc/GJ24-5BBX>].

9. Brent Kendall, *Attorneys General Launch Probe of Google*, WALL ST. J. (Sept. 9, 2019), <https://www.wsj.com/articles/attorneys-general-launch-probe-of-google-11568055853> [<https://perma.cc/T2SM-3W6U>]. State attorneys general have the ability to bring both federal and state antitrust actions. The authority to bring a federal action, either as a direct purchaser of products or as *parens patriae* for persons residing in their state, was part of the Hart-Scott-Rodino Antitrust Improvement Act of 1976. Milton A. Marquis et al., *State Attorney General Antitrust Enforcement: Trends and Insights*, CPI ANTITRUST CHRON., Aug. 2019, at 2, 2. Most states also have their own state antitrust statutes. For example, Iowa’s antitrust statute, “An Act for the Punishments of Pools, Trusts and Conspiracies,” Act of Apr. 16, 1888, ch. 84, 1888 Iowa Acts 124, was passed on April 16, 1888, and predates the Sherman Act.

10. Complaint, United States et al. v. Google, LLC, 1:20-CV-03010 (D.D.C. Oct 20, 2020) [hereinafter Google Complaint]; Complaint for Injunctive & Other Equitable Relief, Federal Trade Commission v. Facebook, Inc. (D.D.C. Dec. 9, 2020); Ryan Tracy, *FTC Says Several Tech Antitrust Probes Are Under Way*, WALL ST. J. (Nov. 18, 2019), <https://www.wsj.com/articles/ftc-says-multiple-antitrust-probes-are-under-way-11574100990> [<https://perma.cc/NKJ5-MX6K>]; Brent Kendall, *Justice Department to Open Broad, Antitrust Review of Big Tech Companies*, WALL ST. J. (July 23, 2019), <https://www.wsj.com/articles/justice-department-to-open-broad-new-antitrust-review-of-big-tech-companies-11563914235> [<https://perma.cc/7442-NH42>].

rejection or severe reduction of the Chicago School's influence on antitrust.<sup>11</sup> This "neo-antitrust" academic movement has been percolating for some time. Yet the movement earnestly emerged with Lina Khan's argument that modern antitrust doctrine, particularly in relation to platform markets, is incapable of properly constraining market power.<sup>12</sup>

Second, recent reports commissioned by foreign competition agencies and domestic institutes have addressed whether antitrust jurisprudence and practice can constrain "dominant" digital platforms.<sup>13</sup> Specifically, in the past year, there have been reports commissioned by the United Kingdom's Chancellor of the Exchequer and Secretary of State for Business, Energy, and Industrial Strategy (Furman Report);<sup>14</sup> the European Commission's (EC)

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11. See Lina M. Khan, *The End of Antitrust History Revisited*, 133 HARV. L. REV. 1655, 1656 n.7 (2020) (citing academics calling for a reduction in the Chicago School's influence). Some have called for a rejection of the consumer welfare standard, which is the current lodestar of federal antitrust laws and is implemented through various forms of legal rules. See Reiter v. Sonotone Corp., 442 U.S. 330, 343 (1979) ("Congress designed the Sherman Act as a 'consumer welfare prescription.'"). For a critique of the movement arguing for the replacement of the consumer welfare standard, see Joshua D. Wright et al., *Requiem for a Paradox: The Dubious Rise and Inevitable Fall of Hipster Antitrust*, 51 ARIZ. ST. L.J. 293, 295, 362–68. (2019).

12. Lina M. Khan, Note, *Amazon's Antitrust Paradox*, 126 YALE L.J. 710, 717 (2017) (arguing "that gauging real competition in the twenty-first century marketplace—especially in the case of online platforms—requires analyzing the underlying structure and dynamics of markets").

13. While the term "dominance" has no real legal meaning in the United States, it is increasingly being used to refer to a firm that has "monopoly power." Monopoly power does not have precise metes and bounds. See *Eastman Kodak Co. v. Image Tech. Servs., Inc.*, 504 U.S. 451, 481 (1992) ("Monopoly power under § 2 requires, of course, something greater than market power under § 1."). A general rule of thumb is that a firm with market shares above 50% in a well-defined relevant product and geographic market has monopoly power. *Monopolization Defined*, FED. TRADE COMM'N, <https://www.ftc.gov/tips-advice/competition-guidance/guide-antitrust-laws/single-firm-conduct/monopolization-defined> [<https://perma.cc/R2G8-EJL6>]. However, courts have properly bifurcated market shares from strict findings of "monopoly" power. See *W. Parcel Express v. UPS*, 190 F.3d 974, 975 (9th Cir. 1999) (finding that although a firm owns a dominate share in the market, it does not possess market power unless there are significant barriers to enter that market); see also *Harrison Aire, Inc. v. Aerostar Int'l, Inc.*, 423 F.3d 374, 381 (3d Cir. 2005). The term "dominance" has been largely imported from the European Commission, where it is principally associated with Article 102 of the Treaty on the Functioning of the European Union. In assessing whether a firm is dominant, the European Commission examines a number of factors, including market share where, "[i]f a company has a market share of less than 40%, it is unlikely to be dominant." *Competition, Antitrust Procedures in Abuse of Dominance*, EUR. COMM'N (July 2013), [https://ec.europa.eu/competition/n/publications/factsheets/antitrust\\_procedures\\_102\\_en.pdf](https://ec.europa.eu/competition/n/publications/factsheets/antitrust_procedures_102_en.pdf) [<https://perma.cc/NK2B-BWSZ>].

14. DIGIT. COMPETITION EXPERT PANEL, UNLOCKING DIGITAL COMPETITION (2019) [hereinafter FURMAN REPORT] [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/785547/unlocking\\_digital\\_competition\\_furman\\_review\\_web.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/785547/unlocking_digital_competition_furman_review_web.pdf) [<https://perma.cc/KK6Z-ZF36>]. The chair of the U.K. report is Professor Jason Furman, who was also the chair of President Obama's Council of Economic Advisors.

Directorate-General for Competition (Cr mer Report);<sup>15</sup> and the Australian Competition and Consumer Commission (ACCC Report).<sup>16</sup> Additionally, there have been reports from domestic institutes, such as the Stigler Center at the University of Chicago (Stigler Report).<sup>17</sup>

The predominant theme that emerges from these reform movements is that digital platforms are increasingly becoming “winner-take-all” or “winner-takes-most” markets in important areas of commerce: Google in online search, Facebook in social media, and Amazon in online shopping.<sup>18</sup> Critics assert that platforms have insulated themselves from competition through barriers to entry arising from network effects, big data, and economies of scale and scope.<sup>19</sup> The emerging presumption is that the resulting market power enables these platforms to behave in ways that are harmful to consumers, and existing antitrust laws are ill-equipped to prevent these harms.<sup>20</sup>

Yet what is generally missing amid the calls to either change antitrust presumptions or seek legislative solutions is a full consideration of the potential benefits of the specific practices in question. Relatedly, there is little self-examination in considering whether the proposed changes could give rise to problems of their own, potentially making the “cure” worse than the “disease.”

Consider, for example, the seemingly widespread condemnation of firms for preferencing their own content—such as when Google uses Google Maps in local search queries or when Amazon prominently ranks its private label

15. JACQUES CR MER ET AL., EUR. COMM’N, COMPETITION POLICY FOR THE DIGITAL ERA (2019) [hereinafter CR MER REPORT], <https://ec.europa.eu/competition/publications/report/s/kd0419345enn.pdf> [<https://perma.cc/X2TV-ES3K>].

16. AUSTL. COMPETITION & CONSUMER COMM’N, DIGITAL PLATFORMS INQUIRY (2019) [hereinafter ACCC REPORT], <https://www.accc.gov.au/system/files/Digital%20platforms%20inquiry%20-%20final%20report.pdf> [<https://perma.cc/KF8Y-3AQQ>].

17. STIGLER COMM. ON DIGIT. PLATFORMS, FINAL REPORT (2019) [hereinafter STIGLER REPORT], <https://research.chicagobooth.edu/-/media/research/stigler/pdfs/digital-platforms---committee-report---stigler-center.pdf> [<https://perma.cc/3NL4-ELZA>].

18. FURMAN REPORT, *supra* note 14, at 4 (“In many cases, digital markets are subject to ‘tipping’ in which a winner will take most of the market.”); STIGLER REPORT, *supra* note 17, at 8 (“[Digital platform] markets are prone to tipping; that is, they reach a point where the market will naturally tend towards a single, very dominant player . . . .”); *see also* Jonathan Tepper, Opinion, *Competition is Dying, and Taking Capitalism with It*, BLOOMBERG (Dec. 3, 2018, 3:00 PM), <https://www.bloomberg.com/opinion/articles/2018-11-25/the-myth-of-capitalism-exposed> [<https://perma.cc/ERX5-T7FZ>] (“Laws are outdated to deal with the extreme winner-takes-all dynamics online.”).

19. *See* FURMAN REPORT, *supra* note 14, at 2.

20. STIGLER REPORT, *supra* note 17, at 57; *see also* FURMAN REPORT, *supra* note 14, at 2 (“[C]ompetition policy will need to be updated to address the novel challenges posed by the digital economy.”); OECD, GOING DIGITAL IN A MULTILATERAL WORLD 7 (2018), <https://www.oecd.org/going-digital/C-MIN-2018-6-EN.pdf> [<https://perma.cc/N3AR-HVKL>] (“[C]ompetition frameworks designed for traditional products may not be suitable for a global digital economy.”).

products in search results.<sup>21</sup> Similarly, platforms are being condemned for preinstalling proprietary defaults and applications on mobile devices (e.g., Google Play on Android phones and Safari on Apple devices).<sup>22</sup> The implication is that large tech firms that either preference their own products or default to their own products harm consumers through anticompetitive conduct.<sup>23</sup> Yet there is scant evidence that these particular behaviors and policies are actually creating widespread inefficiencies and harms to consumers, which must be present to change the presumption regarding these common practices.<sup>24</sup> Rather, the focus has largely been on the impact on competitors and the lack of equal treatment of rivals.<sup>25</sup>

Thus, instead of calling for careful consideration of specific claims for a given market, recommendations have already moved to the policy proposal level.<sup>26</sup> These proposals can be broadly categorized as either (1) bolstering current antitrust laws to make them more favorable to plaintiffs, primarily through changes in predicates and presumptions, or (2) imposing new regulations that would ostensibly increase the level of competition in these markets, regardless of whether the firm in question can be shown to have engaged in anticompetitive conduct under existing antitrust laws.<sup>27</sup> This Article addresses the first category of reforms—namely, whether some of the proposed presumptions, as applied to large digital platforms, are based on sound economics and justify altering current antitrust doctrines.<sup>28</sup>

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21. See, e.g., STIGLER REPORT, *supra* note 17, at 8.

22. See *id.*

23. *Id.* (“Consumer harm is greatest when market power is combined with behavioral biases: Consumers tend to stick with default options.”).

24. See, e.g., *Cal. Dental Ass’n v. FTC*, 526 U.S. 756, 781 (1999) (“The object is to see whether the experience of the market has been so clear, or necessarily will be, that a confident conclusion about the principal tendency of a restriction will follow from a quick (or at least quicker) look, in place of a more sedulous one.”).

25. This approach has been rejected by the courts: “The antitrust laws . . . were enacted for ‘the protection of competition, not competitors.’” *Brunswick Corp. v. Pueblo Bowl-O-Mat, Inc.*, 429 U.S. 477, 488 (1977) (quoting *Brown Shoe Co. v. United States*, 370 U.S. 294, 320 (1962)).

26. See STIGLER REPORT, *supra* note 17, at 22.

27. See FURMAN REPORT, *supra* note 14, at 5.

28. If bolstering current antitrust laws lacks strong justification, then, *a fortiori*, implementing more interventionist regulatory solutions—to address perceived shortcomings in antitrust enforcement—lacks strong justification. There are clearly other justifications for regulation that are not related to antitrust enforcement per se. For the costs and considerations associated with regulation from a law and economics perspective, see generally THOMAS A. LAMBERT, *HOW TO REGULATE: A GUIDE FOR POLICYMAKERS* (2017). Also, it is not exactly clear how the various regulatory proposals for digital platforms would fit together with current antitrust laws; however, antitrust has a long history of coexisting with other industry regulation. For a discussion of the relative benefits and costs of using antitrust law to achieve policy objectives, as opposed to industry regulation, see Dennis W. Carlton & Randal C. Picker,

These recommendations are not being made in a vacuum. Recently, critics have argued that the DOJ and FTC are tolerating too many false negatives and allowing anticompetitive mergers to go through.<sup>29</sup> Research also shows that broad measures of industry concentration—though not market concentration—are increasing.<sup>30</sup> Additionally, critics point out that thus far, there has not been a major U.S. antitrust decision against digital platforms.<sup>31</sup> Even if agencies and courts accept these studies and criticisms at face value, they offer little guidance for specific antitrust claims.

To date, there has been no systematic response to the key presumptions driving the conclusions in influential digital reports. This Article examines each of the key premises underlying the analyses and proposals of critics who contend existing antitrust laws and policies are inadequate and need to be dramatically changed or updated through stronger or new presumptions. In particular, this Article examines how the nature and scope of network effects differ between online search and social media platforms. It also questions whether the use of data to improve the quality of a product is a form of

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*Antitrust and Regulation*, in *ECONOMIC REGULATION AND ITS REFORM: WHAT HAVE WE LEARNED?* 25 (Nancy L. Rose ed., 2014).

29. For the most celebrated study on merger enforcement, see JOHN KWOKA, *MERGERS, MERGER CONTROL, AND REMEDIES: A RETROSPECTIVE ANALYSIS OF U.S. POLICY* 158 (2014). See also JONATHAN BAKER, *THE ANTITRUST PARADIGM: RESTORING A COMPETITIVE ECONOMY* 15 (2019). More broadly, the error-cost framework is a type of decision-theory approach that weighs alternative legal solutions based on the relative frequency and associated costs of false positives and false negatives along with administrative costs. See, e.g., Frank H. Easterbrook, *The Limits of Antitrust*, 63 TEX. L. REV. 1, 3 (1984); Isaac Ehrlich & Richard A. Posner, *An Economic Analysis of Legal Rulemaking*, 3 J. LEGAL STUD. 257, 267–69 (1974).

30. E.g., COUNCIL OF ECON. ADVISERS, *ISSUE BRIEF: BENEFITS OF COMPETITION AND INDICATORS OF MARKET POWER* 4 (2016), [https://obamawhitehouse.archives.gov/sites/default/files/page/files/20160414\\_cea\\_competition\\_issue\\_brief.pdf](https://obamawhitehouse.archives.gov/sites/default/files/page/files/20160414_cea_competition_issue_brief.pdf) [<https://perma.cc/2A4P-M6JW>]; Gustavo Grullon et al., *Are US Industries Becoming More Concentrated?*, 23 REV. FIN. 697, 698 (2019); Jan De Loecker et al., *The Rise of Market Power and the Macroeconomic Implications*, 135 Q.J. ECON. 561, 563 (2020). Importantly, Professors Luke Froeb and Gregory Werden explain why increases in concentration in such broad aggregates need not bear any relationship to increases in concentration in relevant antitrust markets. Gregory J. Werden & Luke M. Froeb, *Don't Panic: A Guide to Claims of Increasing Concentration*, ANTITRUST, Fall 2018, at 74, 74.

31. The Apple e-Books case is a notable exception, but that case was based on allegations of collusion rather than on characteristics that differentiate digital markets per se. *United States v. Apple, Inc.*, 791 F.3d 290, 296 (2d Cir. 2015). In contrast, the EC has brought and won numerous high-profile antitrust cases, including cases against Google Search and Google Android in recent years. Importantly, these two decisions involved allegations of preferencing, vertical integration, and setting defaults. See European Commission Press Release IP/17/1784, *Antitrust: Commission Fines Google €2.42 Billion for Abusing Dominance as Search Engine by Giving Illegal Advantage to Own Comparison Shopping Service* (June 27, 2017) [hereinafter *Commission Fines Google €2.42 Billion*]; European Commission Press Release IP/18/4581, *Antitrust: Commission Fines Google €4.34 Billion for Illegal Practices Regarding Android Mobile Devices to Strengthen Dominance of Google's Search Engine* (July 17, 2018).



network effect. What emerges from this assessment, along with a review of some key research into network effects, is that network effects cannot simply be assumed to be a market failure. Rather, they are more appropriately assessed as a market feature that must be analyzed and understood for each particular market. Further, this Article explicitly develops a framework and model to assess platform defaults and guide reform discussion. It also examines whether self-preferencing and vertical integration by platforms—through private labeling—necessarily reduce consumer welfare. Finally, this Article examines the leading antitrust case involving platforms—the Supreme Court’s recent decision in *Ohio v. American Express Co.*,<sup>32</sup> which has been heavily criticized and used as proof that courts simply cannot get digital markets right.<sup>33</sup> As will be explained, the Court’s decision properly melded the rule of reason approach with economic learning on multisided platforms.

What emerges is that agencies and courts are better served, first and foremost, by attempting to understand how these economic characteristics explain firm behavior, market outcomes, and consequences for consumers.<sup>34</sup> For instance, economic concepts, such as network effects, should not be used in a perfunctory manner. Ultimately, there is an insufficient amount of evidence to suggest the existence of a systematic market failure that warrants a dramatic departure from current antitrust policies and practices. A greater danger is that false base premises will lead to improper policy decisions and generate harmful side effects that eventually harm the very people and processes these changes aim to protect.<sup>35</sup>

This is not to suggest that the current market outcomes in regard to Google, Facebook, and other digital platforms are perfectly efficient. Nor is it to suggest there is not a *possibility* of improving those outcomes by updating priors and changing presumptions. Importantly, however, this Article presumes that the current “norms” within antitrust law remain to allow firms to “extract” surplus from consumers when the firm has obtained its market power legitimately and on the merits—through “superior skill, foresight and industry.”<sup>36</sup> What is properly condemned by antitrust law is conduct that extends that market power—either within the same market or into adjacent

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32. 138 S. Ct. 2274 (2018).

33. See, e.g., STIGLER REPORT, *supra* note 17, at 91 (“[T]he Court is hostile to antitrust enforcement (at least in vertical and exclusion cases), does not understand multi-sided markets very well, and might be more influenced by ideological preconceptions than by evidence in the case or fact-finding by district court judges.”).

34. Professor Thibault Schrepel echoes this point. See Thibault Schrepel, *Antitrust Without Romance*, 13 N.Y.U. J.L. & LIBERTY 326, 327 (2020), <https://ssrn.com/abstract=3395001> [<https://perma.cc/XVC3-CZAN>] (“[T]he effectiveness of antitrust authorities should be enhanced by applying reason to antitrust law rather than fears, feelings, or sentiments.”).

35. See *id.* at 387–402 (defining the dangers of transforming current antitrust laws according to “moralistic” policy).

36. *United States v. Aluminum Co. of Am.*, 148 F.2d 416, 430 (2d Cir. 1945).

markets in a manner that is not based on the merits. This “extraction” versus “extension” framework is a useful paradigmatic description of the current antitrust regime.<sup>37</sup>

## II. DIGITAL PLATFORMS AND NETWORK EFFECTS

Antitrust reform advocates and digital reports almost universally take as their starting point an assertion that network effects lead platforms to “tip” toward one firm, resulting in monopoly.<sup>38</sup> Further, there is the view that “benefits, for an incumbent platform, of network externalities are due to the difficulty for users to coordinate migration to a new platform”<sup>39</sup> (i.e., that platform monopolists benefit from high barriers to entry due to switching costs). Ultimately, this leads to the conclusion that “dominant digital firms have strong incentives to engage in anti-competitive behaviour.”<sup>40</sup> This part assesses that foundational base premise.

### A. Network Effects and the “Winner-Takes-All” Presumption

In discussing network effects, Professors Michael Katz and Carl Shapiro state: “There are many products for which the utility that a user derives from consumption of the good increases with the number of other agents consuming the good.”<sup>41</sup> Canonical examples of products with network effects are telephones and fax machines. As more individuals and companies adopt these products, the benefits to all users (the “network” of users) increases.<sup>42</sup> This creates a positive feedback loop where having more users makes the network more valuable and desirable to each additional user.<sup>43</sup> Such effects are akin to “demand-side economies of scale” (i.e., the benefits of consumption increase as the network expands).<sup>44</sup>

A particular concern of the early economic literature on network effects was that markets with strong network effects could become “stuck” on a given

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37. Dennis W. Carlton & Ken Heyer, *Extraction vs. Extension: The Basis for Formulating Antitrust Policy Towards Single-Firm Conduct*, COMPETITION POL’Y INT’L, Autumn 2008, at 285, 285. It is worth noting that Professor Einer Elhauge has been critical of this paradigm based in part on its failure to incorporate wasteful *ex ante* costs to obtain these profits. See Einer Elhauge, *Tying, Bundled Discounts, and the Death of the Single Monopoly Profit Theory*, 123 HARV. L. REV. 397, 401 (2009).

38. STIGLER REPORT, *supra* note 17, at 39; FURMAN REPORT, *supra* note 14, at 57.

39. CRÉMER REPORT, *supra* note 15, at 22.

40. *Id.* at 3.

41. Michael L. Katz & Carl Shapiro, *Network Externalities, Competition, and Compatibility*, 75 AM. ECON. REV. 424, 424 (1985).

42. *See id.*

43. *See id.*

44. *See* STIGLER REPORT, *supra* note 17, at 37–38.

standard or product.<sup>45</sup> The idea is that even if a better, superior product (or standard) were to emerge, customers may stick with the large and inferior network they are currently on because there is a coordination problem that inhibits migration.<sup>46</sup> An individual customer might view the competing product (or standard) as being technologically superior, but switching can be harmful to that consumer unless others shift at around the same time. After all, who wants to be the only customer on the world's best and most advanced communication system that no one else uses? Unless users can somehow organize a universal (or very large) collective "switch"—something that is presumed to be exceedingly costly and unlikely—the incumbent network remains dominant.<sup>47</sup> Entry difficulties are further exacerbated when there are increasing returns to scale on the production side as well.<sup>48</sup> The concern, then, is that dislodging a first mover becomes extremely difficult.

Certainly, with positive feedback effects, there is a greater tendency for markets to "standardize" on a given product or platform compared to a market where network effects are nonexistent or weak.<sup>49</sup> The strength of this tendency will depend, however, on a number of factors that will be further explored in the context of online search and social network platforms in the following sections.

First and most obviously, it will depend on the strength of the network effect and whether the network effect is primarily responsible for the success of a product.<sup>50</sup> Second, "[c]onsumer heterogeneity and product differentiation tend to limit tipping and sustain multiple networks."<sup>51</sup> There are numerous examples of competing platforms coexisting, including console video game systems (PlayStation, Xbox, Nintendo), mobile operating systems (Android, Apple), desktop operating systems (Windows, MacOS, Linux), web browsers (Chrome, Safari, Edge, Brave), travel search engines (Expedia, Tripadvisor,

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45. For pioneering work on potential market inefficiencies from network effects, see generally Joseph Farrell & Garth Saloner, *Standardization, Compatibility, and Innovation*, 16 RAND J. ECON. 70 (1985); W. Brian Arthur, *Competing Technologies, Increasing Returns, and Lock-In by Historical Events*, 99 ECON. J. 116 (1989).

46. See Farrell & Saloner, *supra* note 45, at 82; Arthur, *supra* note 45, at 116, 127 ("But in the increasing returns case laissez-faire gives no guarantee that the 'superior' technology (in the long-run sense) will be the one that survives.").

47. See Farrell & Saloner, *supra* note 45, at 71 (explaining that "excess inertia" can impede the collective switch from an incumbent form of technology to a newer, perhaps superior version).

48. See Arthur, *supra* note 45, at 128 ("[I]ncreasing returns can cause the economy gradually to lock itself in to an outcome not necessarily superior to alternatives, not easily altered, and not entirely predictable in advance.").

49. Michael L. Katz & Carl Shapiro, *Systems Competition and Network Effects*, J. ECON. PERSPS., Spring 1994, at 93, 105–06.

50. See *id.*

51. Katz & Shapiro, *supra* note 49, at 106; see also Marc Rysman, *The Economics of Two-Sided Markets*, J. ECON. PERSPS., Summer 2009, at 125, 134.

Kayak, Skyscanner), and ride sharing applications (Uber, Lyft, Juno).<sup>52</sup> Third, “tipping is less likely if agents can easily use multiple standards.”<sup>53</sup> This could be due to relatively low switching, consumption, or production costs from using multiple products. Fourth and finally, the welfare implications of markets tipping to a dominant system, platform, or product are not always clear.<sup>54</sup> The intuition is that there are strong efficiencies from compatibility and interoperability, including from both demand-side and supply-side economies of scale.<sup>55</sup> The cost, however, results from losing variety and potentially being locked into an inferior standard or product. Relatedly, the economics literature has not settled the question regarding which type of market structure leads to greater rates of innovation (e.g., competition versus monopoly);<sup>56</sup> it is largely this question that will ultimately determine the welfare consequences of markets where a dominant firm primarily emerges from network effects.

Following the early theoretical work on network effects, Professors Stan Liebowitz and Stephen Margolis challenged the conventional view of market tipping and lock-in.<sup>57</sup> In a series of papers, they examined whether markets with network effects have a propensity to remain with inferior standards when faced with improved technologies.<sup>58</sup> The point was not to definitively prove

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52. See Rysman, *supra* note 51, at 134 (explaining that fixed costs in the video game industry has led to an “increased distribution across multiple game systems” and “a less-concentrated game system market”).

53. *Id.*

54. See Joseph Farrell & Garth Saloner, *Standardization and Variety*, 20 ECON. LETTERS 71, 73–74 (1985); Angélique Augereau et al., *Coordination Versus Differentiation in a Standards War: 56K Modems*, 37 RAND J. ECON. 887, 907 (2006). In discussing the 56K modem, one study observed that welfare would have been significantly improved if the various internet service providers (ISPs) standardized on a single platform, rather than on multiple 56K modem platforms. *Id.* at 888 (“[T]here was a benefit to coordinating ISPs and consumers on a single standard as quickly as possible, but market actors failed to quickly standardize.”).

55. A prime example of this is the continued importance of standard-setting organizations (SSOs), which play a role in developing, supporting, and establishing interoperability and performance standards for industries such as telecommunications, electronics, and the Internet. Fundamentally, SSOs are platforms that balance the interests of multiple groups, including those developing technologies and those looking to implement them. Joanna Tsai & Joshua D. Wright, *Standard Setting, Intellectual Property Rights, and the Role of Antitrust in Regulating Incomplete Contracts*, 80 ANTITRUST L.J. 157, 159 (2015).

56. See generally Jonathan B. Baker, *Beyond Schumpeter vs. Arrow: Antitrust Fosters Innovation*, 74 ANTITRUST L.J. 575, 577–86 (2007) (reviewing the economic literature on market structure and innovation).

57. S.J. Liebowitz & Stephen E. Margolis, *Path Dependence, Lock-In, and History*, 11 J.L. ECON. & ORG. 205 (1995) [hereinafter *Path Dependence*]; S.J. Liebowitz & Stephen E. Margolis, *The Fable of the Keys*, 33 J.L. & ECON. 1 (1990) [hereinafter *Fable of the Keys*].

58. *Fable of the Keys*, *supra* note 57, at 1 (“The economic literature on standards has focused recently on the possibility of market failure with respect to the choice of a standard. In

that network effects always lead to the efficient outcome.<sup>59</sup> Rather, they sought to challenge the presumption that network effects tend to lead to inefficient outcomes based only on untested case studies that allegedly demonstrated inefficiencies.<sup>60</sup> The authors first examined what was, at the time, a widely accepted example of the so-called “inefficient path dependency”: where the standard QWERTY keyboard in use today managed to prevail over an allegedly superior version—the Dvorak keyboard—because the latter was unable to overcome first-mover advantages and network effects.<sup>61</sup> After examining the history and economics of keyboards, they found that the continued use of the QWERTY keyboard is actually efficient.<sup>62</sup>

Liebowitz and Margolis also made an important distinction between “network effects” and “network externalities.”<sup>63</sup> While these terms are often used synonymously today, their distinction is highly relevant to the current antitrust debate concerning successful platforms and their alleged inefficiencies. Specifically, a market can have “network effects” without necessarily leading to market failure (i.e., “network externalities”).<sup>64</sup> In other words, the mere presence of network effects says nothing about their magnitude and whether they are principally responsible for a platform’s success—not to mention whether they hinder competitive entry and reduce social welfare. The lesson from Liebowitz and Margolis’s scholarship, along with the larger literature on network effects, is that concepts like network effects and lock-in should not be assumed a priori to cause market failures and

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its strongest form, the argument is essentially this: an established standard can persist over a challenger, even where all users prefer a world dominated by the challenger, if users are unable to coordinate their choices.”).

59. See S.J. Liebowitz & Stephen E. Margolis, *Network Externalities: An Uncommon Tragedy*, J. ECON. PERSPS., Spring 1994, at 133, 147 [hereinafter *Network Externalities*] (concluding that the Dvorak studies were flawed and incomplete).

60. STAN J. LIEBOWITZ & STEPHEN E. MARGOLIS, WINNERS, LOSERS & MICROSOFT: COMPETITION AND ANTITRUST IN HIGH TECHNOLOGY 240 (2d ed. 2001) (“[M]arket failure ought to be a very specific and very worldly claim. Policymakers shouldn’t go about correcting markets until they have concrete proof that markets have failed. The abstract possibility of market failure is an inadequate basis for the making of real-world policy.”).

61. See *Fable of the Keys*, *supra* note 57, at 7–8.

62. *Id.* at 2. In another study, the authors examined the competition between video home system (VHS) and Beta to become the standard for analog video recording, once again detailing how the actual evidence diverges from the conventional perception. See *Path Dependence*, *supra* note 57, at 218–19. In this case, Beta was the superior video cassette format but lost out to VHS due to the existence of indirect network effect advantages enjoyed by VHS. See *id.* The indirect network effect arose from the availability of movies and shows on a specific video format—including the rental market, which increased the demand for the video player and *vice versa*. See *id.* at 208. The Beta and VHS scenario is particularly illustrative because VHS overcame Beta’s first mover advantage of about two years in the United States. See *id.* at 221.

63. *Network Externalities*, *supra* note 59, at 135.

64. *Id.* (“The advantage of this definition over other possible definitions is that it corresponds with the common understanding of externality as an instance of market failure.”).

should not be used in a mechanical and superficial manner—particularly as they pertain to public policy.<sup>65</sup> Network effects certainly may lead to market failures, and if so, there are important questions to consider—including what the best solution is for that failure.

The following sections closely examine the nature of network effects for both online search and social media platforms to determine what outcomes network effects drive and to what extent they contribute to a platform's success. Further, they assess whether these network effects create an insurmountable barrier to entry that insulates inefficient monopolists from competitive pressures—in essence, whether there is an argument that systematic market failures are occurring and require a change in presumption regarding the relationship between digital platforms, network effects, and market power.

### *B. Network Effects and Online Search Platforms*

Online search engines like Google are multisided platforms that bring together two distinct groups: users and advertisers.<sup>66</sup> If there are direct network effects, the actual size of each group must directly affect the utility that each particular member of the group receives from participating in the activity.<sup>67</sup> These ideas can be formalized in the following manner.

Suppose the benefits that users derive from using a platform—that is, their utility function—is a function of the number of other users on the platform:  $U_{S_i} = f(S)$ , where  $U_{S_i}$  is the utility of individual  $S_i$  and  $S$  is the total number of users. If there are direct network effects, then this would imply that as the total number of users ( $S$ ) increases, the utility that individual ( $S_i$ ) derives from the platform also increases:  $dU_{S_i}/dS > 0$ .

For advertisers, the analogous idea is that their utility is a function of the number of other advertisers:  $U_{A_i} = f(A)$ , where  $U_{A_i}$  is the utility of advertiser  $A_i$  and  $A$  is the total number of advertisers. Again, direct network effects would imply that  $dU_{A_i}/dA > 0$ .

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65. See, e.g., Catherine Tucker, *What Have We Learned in the Last Decade? Network Effects and Market Power*, 32 ANTITRUST, Spring 2018, at 77, 77 (“[N]etwork effects are not the guarantor of market dominance that antitrust analysts had initially feared.”); Daniel F. Spulber, *Unlocking Technology: Antitrust and Innovation*, 4 J. COMPETITION L. & ECON. 915, 918 (2008) (“Despite being rarely observed, technology lock-in remains influential in competition policy.”)

66. See John M. Yun, *Understanding Google's Search Platform and the Implications for Antitrust Analyses*, 14 J. COMPETITION L. & ECON. 311, 315 (2018).

67. See Katz & Shapiro, *supra* note 41, at 96; Nicholas Economides & Lawrence J. White, *Networks and Compatibility: Implications for Antitrust*, 38 EUR. ECON. REV. 651, 652 (1994) (“[T]he externality affects directly the utility function of each customer.” (emphasis omitted)).

For users searching for content online, however, having a larger network of users does not *directly* increase the value that any particular user derives from searching.<sup>68</sup> There is no reason to expect a user to be anything other than indifferent as to whether other users happen to be searching on the same platform.<sup>69</sup> This is vastly different from a telephone, fax machine, or e-mail—where directly adding users offers positive value to the existing set of users.<sup>70</sup> On the advertiser side, adding more advertisers does not directly increase the value that a particular advertiser derives from the product.<sup>71</sup> In fact, there is likely a “crowding” effect, which is a negative direct network effect.<sup>72</sup> For example, more advertisers for the query “iPhone case” will bid up the price to advertise for that query.<sup>73</sup>

Rather, two things drive participation on the Google platform: (1) the quality and relevance of its content and (2) indirect network effects.<sup>74</sup> Regarding the former, the *raison d’être* and primary “glue” that makes an online search platform attractive is content—specifically, the quality and relevance of search results.<sup>75</sup> Will users easily find what they are looking for? As a result, from the users’ perspective, the key utility they obtain from a search platform is not a network effect at all.

Suppose that the dominant search engine does an outstanding job of providing relevant search results to users—better than the closest alternatives. In non-digital markets, this would be thought of as producing an especially desirable product.<sup>76</sup> Antitrust has tended not to object to market outcomes so

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68. The notion of “more users” can also mean more queries from the same set of users.

69. See Catherine Tucker, *Online Advertising and Antitrust: Network Effects, Switching Costs, and Data as an Essential Facility*, CPI ANTITRUST CHRON., Apr. 2019, at 2, 2 (“Same-sided network effects are unlikely to be that important in online advertising markets. Typically, consumers of content do not benefit from the presence of other consumers of content.”); Hal Varian, *Use and Abuse of Network Effects*, in TOWARDS A JUST SOCIETY: JOSEPH STIGLITZ AND TWENTY-FIRST CENTURY ECONOMICS 227, 230 (Martin Guzman ed., 2018) (“[T]here are no traditional network effects in search.”).

70. Katz & Shapiro, *supra* note 41, at 424. Not surprisingly, direct network effects are particularly strong in products intended to foster and facilitate communication with other members in the network.

71. See Yun, *supra* note 66, at 321.

72. *Id.*

73. See *id.* at 317.

74. See *id.* at 315–21.

75. See Michael R. Baye et al., *Search Engine Optimization: What Drives Organic Traffic to Retail Sites?*, 25 J. ECON. & MGMT. STRATEGY 6, 6 (2016) (“The lion’s share of retail traffic through search engines originates from organic (natural) rather than sponsored (paid) links.”).

76. See, e.g., Kelly Custer, *Designing Desirable Products: It’s Not Luck, It’s Strategy*, KNACK (July 17, 2019), <https://www.knackdesignstudio.com/post/designing-desirable-products-its-not-luck-its-strategy> [<https://perma.cc/GGB8-FV6D>].

generated (even if the result is high concentration)—and for good reason, as this directly implicates dynamic incentive effects.<sup>77</sup>

From the perspective of advertisers, network effects play a critical role in their participation, but it is through indirect network effects rather than direct ones.<sup>78</sup> This idea can be represented in the following manner for advertisers:  $U_{A_i} = f(S)$ , where indirect network effects imply  $dU_{A_i}/dS > 0$ . The idea is that the utility of an advertiser ( $U_{A_i}$ ) is positively affected by the number of users ( $S$ ).

Indirect network effects occur because more users increase an advertiser's benefit of being on the platform ( $dU_{A_i}/dS > 0$ ), which, in turn, will attract more advertisers.<sup>79</sup> Yet this effect is largely—although perhaps not completely—a one-way street, given that having more advertisers is not likely to materially affect the number of users:  $dU_{S_i}/dA = 0$ .<sup>80</sup> This is not to say that having relevant advertisements provides no value to consumers.<sup>81</sup> Although it seems fair to assert that the presence of advertisements is not the primary driver of consumer participation on search platforms. Indirect network effects are at the heart of advertisers' participation, not only on Google's search platform but also on all advertising-based platforms, including Facebook, newspapers, and radio stations.<sup>82</sup>

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77. See, e.g., Spulber, *supra* note 65, at 966 ("Private sector experimentation is particularly valuable in resolving uncertainties in discovering and developing new technologies. Antitrust policy that targets successful innovators threatens to reduce such experimentation.").

78. See, e.g., Tucker, *supra* note 69, at 3.

79. See Des Traynor, *Surviving and Thriving in Two-Sided Markets*, INTERCOM (Aug. 14, 2012), <https://www.intercom.com/blog/surviving-thriving-in-two-sided-markets> [<https://perma.cc/4HYJ-QZ86>].

80. According to one source, the average click-through rate for search advertisements on Google is 3.17%. Mark Irvine, *Google Ads Benchmarks for YOUR Industry [Updated!]*, WORDSTREAM: WORDSTREAM BLOG, (July 17, 2020), <https://www.wordstream.com/blog/ws/2016/02/29/google-adwords-industry-benchmarks> [<https://perma.cc/6E66-54G7>]. While this can vary depending on the type of query, even the category with the highest click-through rate—Dating & Personals—is at 6.05%. *Id.* Another source confirms this relatively low percentage: on both Google and Bing the percentage of clicks that are advertisements is at 6%. Danny Goodwin, *Organic v. Paid Search Results: Organic Wins 94% of the Time*, SEARCH ENGINE WATCH (Aug. 23, 2013), <https://www.searchenginewatch.com/2012/08/23/organic-vs-paid-search-results-organic-wins-94-of-time> [<https://perma.cc/9EQ3-NA8Y>].

81. For a large-scale field experiment on a search engine to determine the impact of more prominent advertisements on user engagement, see Navdeep S. Sahni & Charles Zhang, *Searching Advertising and Information Discovery: Are Consumers Averse to Sponsored Messages?* (Stan. Univ. Graduate Sch. of Bus., Rsch. Paper No. 3441786, 2019), <https://ssrn.com/abstract=3441786> [<https://perma.cc/3AM7-7DNG>]. The authors found no evidence that more prominent advertisement placement reduces usage, and found, on average, the number of searches increased 2.47% for the treatment group. *Id.* at 4.

82. Note that the specific type of user may affect advertiser participation differentially.



Given the above analysis, is it likely that online search markets will “tip” to a monopoly outcome because of network effects?<sup>83</sup> If so, all the work must be done by the indirect network effect that drives advertiser participation ( $dU_{A_i}/dS > 0$ ). On this point, because a larger user base induces more advertisers to participate, certainly having it facilitates monetization and, ultimately, the viability of a search platform.<sup>84</sup> Additionally, greater advertiser participation increases both the likelihood that a relevant advertisement can be shown for a given query and the revenues generated from a given advertisement auction. The driving force behind a platform’s success, however, comes from attracting users, and users are attracted through content.<sup>85</sup> If a competing platform offers more compelling content, then it would be expected to attract more users—and, with it, more advertisers and advertising revenue. Thus, an entrant’s ability to monetize is based neither on breaking the advertisers’ network effect nor on “coordinating” the advertisers to switch to its platform; rather, it is based on increased user traffic from quality content.<sup>86</sup> There are no network effects for users, however. Thus, in online search markets, incumbents have no inherent network effect advantage because the indirect network effects are unidirectional.<sup>87</sup> Consequently, neither direct nor indirect network effects can serve as a barrier to entry, given that neither contribute to the content that materially drives user traffic.<sup>88</sup>

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83. See Katz & Shapiro, *supra* note 51, 105–06.

84. Yun, *supra* note 66, at 321.

85. *Id.*

86. *Id.*

87. If this holds, there are a number of potential, testable implications based on comparing online search advertising margins with other digital and non-digital advertising margins—although an empirical study would need to carefully control for other factors that influence margins, including advertising effectiveness based on the differential level and quality of the intellectual property.

88. There is a larger question of what exactly constitutes a “barrier to entry”—particularly in the context of competition law. The tension in defining barriers to entry is that there are really two ways in which the term is generally discussed. As Professor Dennis Carlton states, “Trying to use ‘barriers to entry’ to refer to both the factors that influence the time it takes to reach a new equilibrium and to whether there are excess long-run profits is confusing.” Dennis W. Carlton, *Barriers to Entry*, in 1 ISSUES IN COMPETITION LAW AND POLICY 601, 606 (2008). It seems the label “barriers to entry” is being increasingly used for considerations that disallow instantaneous entry, such as the need to develop brand names and the existence of economies of scale and informational advantages. *Id.* at 604. In the context of competition policy, I prefer C.C. von Weizsäcker’s definition: “a barrier to entry is a cost of producing which must be borne by a firm which seeks to enter an industry but is not borne by firms already in the industry and which implies a distortion in the allocation of resources from the social point of view.” C.C. von Weizsäcker, *A Welfare Analysis of Barriers to Entry*, 11 BELL J. ECON. 399, 400 (1980) (emphasis added). For example, if economies of scale can increase overall welfare and we associate entry barriers with inefficiencies, then von Weizsäcker asks, “in which sense can we speak of a barrier to entry?” *Id.* at 401. Similarly, a barrier to entry in the context of digital

Of course, the digital reports have not limited their assessment of digital platforms to network effects.<sup>89</sup> There is also a recognition that economies of scale and scope potentially play a key role in a platform's success.<sup>90</sup> While the focus in this Article is on network effects, this presumption should also be closely examined.<sup>91</sup> It very well might be true, but again, the question is the magnitude of the effects and what level of output is required to take advantage of economies of scale and scope. Additionally, scale economies may differ depending on the specific platform.<sup>92</sup> In any event, large scale economies are something that antitrust law has traditionally had to deal with, and they are not unique to the current digital world.<sup>93</sup>

Further, the costs to users of moving from one search platform to another are exceedingly low. One need not purchase or assemble an additional product, nor does one need to incur significant costs to learn how to use a new search engine.<sup>94</sup> Search engines tend to operate similarly and present their results to users in a comparable manner. Consumer logins are not required to perform searches, nor is there a coordination problem of trying to get other users to switch since, as discussed above, there are no direct network effects. The absence of significant switching costs or network effect lock-in opens the door for entry—not only for other general search competitors but also for specialized, “vertical” search competitors.<sup>95</sup> For instance, in product searches,

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platforms is not the network effect itself but hinderances to being able to achieve network effects that are not based on competitive merit. *See* discussion *infra* Section II.C.

89. *See, e.g.*, ACCC REPORT, *supra* note 16, at 58.

90. Economies of scale occur when the average total cost decreases as output expands; economies of scope occur when the average total cost of jointly producing two or more products is lower than separately producing those products. CRÉMER REPORT, *supra* note 15, at 33 (“There are considerable barriers to entry and expansion for search platforms and social media platforms that entrench and reinforce Google and Facebook’s market power. These include barriers arising from same-side and cross-side network effects, branding, consumer inertia and switching costs, economies of scale and sunk costs.”); *id.* at 54 (“[T]he presence of strong incumbency advantage – due to network externalities, economies of scale and data access – changes the principles of enforcement of competition policy.”).

91. As mentioned at the outset, this Article focuses on network effects as justifications for new presumptions (or regulations) tend to focus more heavily on network effects over other characteristics of platforms.

92. STIGLER REPORT, *supra* note 17, at 36.

93. *See, e.g.*, Anne K. Bingaman, Assistant Att’y Gen., Antitrust Div., U.S. Dep’t of Just., Address Before the Commonwealth Club of California: Innovation and Antitrust (July 29, 1994), <https://www.justice.gov/atr/speech/innovation-and-antitrust> [https://perma.cc/3XDC-8K EP]; von Weizsäcker, *supra* note 88, at 399.

94. Aaron S. Edlin & Robert G. Harris, *The Role of Switching Costs in Antitrust Analysis: A Comparison of Microsoft and Google*, 15 YALE J.L. & TECH. 169, 197 (2013).

95. *See* Yun, *supra* note 66, at 314 (defining vertical search results as “results within a narrow category”).

Amazon has overtaken Google as the market leader.<sup>96</sup> As previously discussed, a key feature that limits the propensity of market tipping is product differentiation.<sup>97</sup> Thus, the idea of the “stickiness of market power” as it pertains to switching costs does not apply with as much force to search platforms—irrespective of their market size.<sup>98</sup>

### C. Data-Driven Network Effects

What about the argument that there is a different, third type of network effect caused by platforms’ use of large amounts of data?<sup>99</sup> The argument involves a “virtuous circle” of more users: more users mean more data; more data means better search results; better search results mean more users.<sup>100</sup> In other words, having more users benefits existing users through the platform’s access to and use of additional data to improve its product. These effects have been described as “data-driven indirect network effects.”<sup>101</sup> If sufficiently large and strong, might these create an unstoppable process whereby new

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96. Krista Garcia, *More Product Searches Start on Amazon: Google Is Losing its Grip on Valuable Search Data*, EMARKETER (Sept. 7, 2018), <https://www.emarketer.com/content/more-product-searches-start-on-amazon> [<https://perma.cc/JQ8W-RF3R>] (“A number of consumer surveys have shown that more US digital shoppers now start their searches on Amazon.”).

97. See Katz & Shapiro, *supra* note 41, at 106.

98. See Edlin & Harris, *supra* note 94, at 212–13. This is not to say that competing in online search is easy; there are tremendous resources and financial capital used in creating a superior search engine. See, e.g., Timothy W. Martin, *American Tech Firms Are Winning the R&D Spending Race with China*, WALL ST. J. (Oct. 30, 2018), <https://www.wsj.com/articles/american-tech-firms-are-winning-the-r-d-spending-race-with-china-1540873318> [<https://perma.cc/Q93U-57FA>]. The question of whether the resources needed to develop quality content should be considered a “barrier” returns to the larger question of how to define barriers to entry. See discussion *supra* note 88. According to the definition offered by von Weizsäcker, these resources would not be considered a barrier to entry because incumbents have no inherent advantage in developing their content and there are generally no inefficiencies from improving a product. See von Weizsäcker, *supra* note 88, at 400.

99. See, e.g., FURMAN REPORT, *supra* note 14, at 33.

100. See *id.* (“The mechanism through which data provide incumbent businesses with a competitive advantage is known as a feedback loop. . . . [U]ser feedback loops occur when companies collect data from users which they use to improve the quality of their product or service, which then draws in more users, creating a virtuous circle.”); ACCC REPORT, *supra* note 16, at 11 (“The multiple touch points that Google and Facebook each have with their users enable them to collect more user data, improve their services and attract more users and advertisers, creating a virtuous feedback loop.”); STIGLER REPORT *supra* note 17, at 40 (“A data advantage over rivals can enable a company to achieve a virtuous circle of critical economies of scale leading to network effects, and a competitive balance in its favor, leading to the gathering of yet more data.”).

101. Jens Prüfer & Christoph Schottmüller, *Competing with Big Data*, 68 J. INDUS. ECON. (forthcoming 2020) (manuscript at 5), <http://ssrn.com/abstract=2918726> [<https://perma.cc/C49M-7DGC>]; see also Cédric Argenteon & Jens Prüfer, *Search Engine Competition with Network Externalities*, 8 J. COMPETITION L. & ECON. 73, 76 (2012).

entrants cannot match the search quality of incumbents? And if so, is there a critical role for competition policy to play in addressing this “barrier”?

This theory of incumbent strength,<sup>102</sup> although intuitive, is incomplete. First, even if this were a complete and convincing argument, it is entirely premised on increasing quality to users (which increases users’ welfare).<sup>103</sup> This, in turn, increases the participation of advertisers (which increases advertisers’ welfare).<sup>104</sup> In other words, increasing product quality makes all participants on a platform better off—surely something that competition policy should be encouraging.<sup>105</sup> It is a remarkable twist of antitrust logic to suggest that a practice is ultimately harmful to social welfare (and thus demands a regulatory solution) simply because it improves a product too much and hinders entrants’ ability to compete on equal terms.<sup>106</sup> This harkens to C.C. von Weizsäcker’s work on barriers to entry, which can be adapted to the current debate: What is the point of defining barriers to entry if welfare-enhancing activities like improving a product and making it more relevant for users now constitute a “barrier to entry”?<sup>107</sup> Where does that lead? Innovation is a barrier to entry. Using machine learning and more data is a barrier to entry. Hiring talented, skilled individuals and organizing them in a manner to maximize their productivity is a barrier to entry. Developing a strong brand name and reputation is a barrier to entry. Having low marginal costs is a barrier to entry. Effectively, anything that grows one’s size or market share is a barrier to entry.<sup>108</sup> When used in this manner, the term “barrier to entry” becomes meaningless to guide competition policy; yet due to its historic and colloquial use, the term tends to connote an inability for competitors to enter and, consequently, results in a loss of welfare for consumers.<sup>109</sup>

102. See Prüfer & Schottmüller, *supra* note 101 (manuscript at 2).

103. *Id.* (manuscript at 1–2).

104. See Traynor, *supra* note 79.

105. See Argenton & Prüfer, *supra* note 101, at 100.

106. See FURMAN REPORT, *supra* note 14, at 33–34 (“Data can act as a barrier to entry in digital markets. A data-rich incumbent is able to cement its position by improving its service and making it more targeted for users, as well as making more money by better targeting its advertising. . . . The extent to which data are of central importance to the offer but inaccessible to competitors, in terms of volume, velocity or variety, may confer a form of unmatched advantage on the incumbent business, making successful rivalry less likely.”).

107. See von Weizsäcker, *supra* note 88, at 400.

108. See ACCC REPORT, *supra* note 16, at 11, 72–73, 76.

109. A well-cited example of improper condemnation of greater efficiency in antitrust is *United States v. Aluminum Co. of America (Alcoa)*, 148 F.2d 416, 431 (2d Cir. 1945) (“[Alcoa] insists that it never excluded competitors; but we can think of no more effective exclusion than progressively to embrace each new opportunity as it opened, and to face every newcomer with new capacity already geared into a great organization, having the advantage of experience, trade connections and the elite of personnel.”). While there have been efforts to revitalize the merits of the *Alcoa* decision from the lens of raising rivals’ costs, John Lopatka and Paul Godek reject

To the extent that data-driven network effects are considered a barrier to entry, it is important to consider that the end result of a high-quality product stems from the innovative efforts and attractive offerings of a seller.<sup>110</sup> In contrast, direct and indirect network effects supposedly come simply from being first and fortuitously obtaining a large base of subsequently “locked-in” customers. For producers to have the right incentives, they should be rewarded—not punished—for offering consumers high-quality products.

Second, returning to the data-driven network effect theory itself, the premise that having more data increases the quality of search results almost certainly holds; yet it is focused too narrowly on a single factor—in this case data—that improves platform quality.<sup>111</sup> A vector of other factors ( $y$ ) in addition to data ( $m$ ) influence the quality ( $q$ ) of search results:  $q = f(m, y)$ . These factors include the inherent quality of search algorithms,<sup>112</sup> the number of advertisements, page design, features (e.g., autocomplete), infrastructure design,<sup>113</sup> and search speed (i.e., “latency”).<sup>114</sup> It is an open question whether it is better to have more data or better models,<sup>115</sup> although clearly, the goal is to have both. Yet it points to an important reality: that one cannot simply *presume* that large platforms enjoy market success largely because of their size (in this case via data). Further, data likely has diminishing returns. It is an empirical question as to when and to what degree diminishing returns set

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this recharacterization. John E. Lopatka & Paul E. Godek, *Another Look at Alcoa: Raising Rivals' Costs Does Not Improve the View*, 35 J.L. & ECON. 311, 311 (1992).

110. See ACCC REPORT, *supra* note 16, at 72.

111. See Argenton & Prüfer, *supra* note 101, at 76 (focusing on access to search data as the determinative factor for success in a competitive digital market).

112. By all accounts, Google's own entry into search and its ability to displace the market leading incumbents, Yahoo Search and Alta Vista, were due to the superiority of its intellectual property—namely, the PageRank algorithm. See, e.g., Michael A. Salinger & Robert J. Levinson, *Economics and the FTC's Google Investigation*, 46 REV. INDUS. ORG. 25, 31–32 (2015) (“Because PageRank captured aspects of quality as well as relevance, Google generated results that searchers found far more useful than the results generated by AltaVista and the other general search engines that were available at the time.”). Argenton and Prüfer also acknowledge the importance of algorithms in their modeling. See Argenton & Prüfer, *supra* note 101, at 79.

113. By one account, Google's decision to develop its own software infrastructure (a.k.a. Google File System) gave it a long-term advantage over Yahoo, which outsourced to NetApp and was hampered by application-specific solutions rather than using a more flexible, global-application approach. See Mohit Aron, *Why Google Beat Yahoo in the War for the Internet*, TECHCRUNCH (May 22, 2016, 11:00 AM), <https://techcrunch.com/2016/05/22/why-google-beat-yahoo-in-the-war-for-the-internet> [<https://perma.cc/GPK4-N6SB>].

114. See Brin & Page, *supra* note 112, at 115.

115. As a point of illustration, the ImageNet Image Recognition competition is based on accurately classifying images using training data and an algorithm. Since 2010, the error rate for the winning entry dropped, from over 25% to well under 5% by 2016—even though the size of the training data was the same, which indicates that algorithms and computing power were responsible for the improvements in quality. See Peter Eckersley et al., *AI Progress Measurement*, EFF, <https://www.eff.org/ai/metrics>, [<https://perma.cc/YYV8-4UAT>].

in, and this might differ depending on the type of query and the quality of the algorithms. But there are indications that “big data” is not particularly scarce.<sup>116</sup> Rather, big data is the skill and intellectual property needed to translate data into something valuable that ultimately drives its utility.<sup>117</sup>

Third, this characterization of data-driven network effects is missing a key step: more data does not simply result in higher quality search results without cost—even if the data has not yet reached diminishing returns.<sup>118</sup> Consider the following model. Again, search quality is a function of the amount of data collected ( $m$ ) and other factors ( $y$ ):  $q = f(m, y)$ . Further, the amount of data collected is a function of the size of the user base ( $S$ ):  $q = f(m(S), y)$ .<sup>119</sup> The data-driven network effect idea can be represented as  $\partial q / \partial S = (\partial q / \partial m)(dm / dS) > 0$ . Thus, when platforms attract more users, this will increase the amount of data collected (i.e.,  $dm / dS > 0$ ). Further, with more data, the quality of the search results increases (i.e.,  $\partial q / \partial m > 0$ ); though with diminishing returns, the increase occurs at a decreasing rate, (i.e.,  $\partial^2 q / \partial m^2 < 0$ ). In totality, as the number of users increases, a “chain of events” begins, ultimately improving the quality of search results (i.e.,  $(\partial q / \partial m)(dm / dS) > 0$ ).

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116. See, e.g., Anja Lambrecht & Catherine Tucker, *Can Big Data Protect a Firm from Competition?*, CPI ANTITRUST CHRON., Jan. 2017, at 1, 2 (“This type of commercially available big data typically has broad reach and coverage, allowing many firms whose business does not usually generate big data to gain insights similar to those available to firms that own big data on a large number of customers. There are many examples for very big commercially available data sets.”).

117. See, e.g., Xavier Amatriain, *Mining Large Streams of User Data for Personalized Recommendations*, 14 SIGKDD EXPLS., Dec. 2012, at 37, 43 (“The previous discussion on models vs. data has recently become a favorite - and controversial - topic. The improvements enabled thanks to the availability of large volumes of data together with a certain Big Data ‘hype’ have driven many people to conclude that it is ‘all about the data’. [sic] But in most cases, data by itself does not help in making [Netflix’s] predictive models better.”). Amatriain shows that Netflix’s testing accuracy, under certain scenarios, hits its asymptotic level after just one million training examples. See *id.* at 44 fig.8. Another study indicates that, while diminishing returns does set in, there is still value from increasing use of big data; although, it is not clear that the level of data that even smaller platforms have is insufficient to obtain most of the returns. See Enric Junqué de Fortuny et al., *Predictive Modeling with Big Data*, 1 BIG DATA 215, 219 (2013) (“[F]or most of the datasets the performance keeps improving even when we sample more than millions of individuals for training the models. One should note, however, that the curves do seem to show some diminishing returns to scale.”). Focusing on search engines, Professors Lesley Chiou and Catherine Tucker found that large amounts of historical data may not be particularly useful for the relevancy of search results. Lesley Chiou & Catherine Tucker, *Search Engines and Data Retention: Implications for Privacy and Antitrust* 3 (Nat’l Bureau of Econ. Rsch., Working Paper No. 23815, 2017).

118. See Tucker, *supra* note 69, at 3.

119. This simple framework is focused on proprietary data collection as opposed to all types of data that could potentially be used to improve search quality—including third-party data.

Digging deeper, however, it appears this characterization is, again, unfinished. It is not whether an input, such as data, can improve search quality but *by how much* and *at what cost* it can do so.<sup>120</sup> The incorporation of a cost “step”—to transform raw data into actual improvements in search quality—is critical because it moves the idea of collecting more data away from a strict “network effect” to more of a “data opportunity.”<sup>121</sup> This data opportunity is a production opportunity based on residuals of consumption.<sup>122</sup> Firms that can take advantage of that opportunity and invest in innovation and quality rightly achieve a competitive advantage—yet, as with all investments, there is no certain return.<sup>123</sup>

#### *D. Network Effects and Social Media Platforms*

Social media, for example Facebook, is also a multisided platform that brings together users (*S*) and advertisers (*A*).<sup>124</sup> Again, the utility of both groups can be depicted in the following manner:

$$\begin{aligned}\text{Users:} & \quad U_{S_i} = f(S) \\ \text{Advertisers:} & \quad U_{A_i} = f(A).\end{aligned}$$

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120. See Alexander Krzepicki et al., *The Impulse to Condemn the Strange: Assessing Big Data in Antitrust*, CPI ANTITRUST CHRON., Feb. 2020, at 2, 4.

121. See *id.* at 3 (“[A] firm takes the data and transforms it into something that creates value in the form of lower costs, improved quality, and innovative new products. This stage involves the task of combining the data with other resources and inputs, such as intellectual property, skilled labor, and capital infrastructure. Firms will have differential advantages and skills in this stage.”).

122. See Varian, *supra* note 69, at 232 (“This is not really a network effect, direct or indirect. It is a supply side effect: more data allows the search engine to produce higher quality products which in turn attract more users. . . . Mere data by itself doesn’t confer a competitive advantage; that data has to be translated into information, knowledge, and action.”).

123. Otherwise, to use an *argumentum ad absurdum*, if we accept data-driven network effects, the next step is to argue for a “revenue-driven network effect,” where more users mean more advertising revenues, which mean more money to improve quality, which means more users. More generally, as Varian has noted, one could argue: “The higher the number of customers a business has, the higher the revenue of the business, revenue which can be reinvested in the maintenance and improvement of the business so as to attract more customers.” *Id.* at 233 (emphasis omitted). This would mean all a business needs to do is increase revenue and the business will take care of itself, which is, of course, opposed to manifest experience.

124. The nature of advertising is different on Facebook than it is on Google. Broadly speaking, online advertisements are differentiated along two dimensions: (1) how users are targeted and (2) how advertisements are visually formatted. Search advertisements target based principally on the keywords from user queries. Social media advertisements target based on context, keywords, and user profiles. Irrespective of the targeting mechanism, advertisements can have different visual formats including text, display, and video. Thus, users can have, for

Unlike on an online search platform, a social media user certainly derives greater utility when there are a greater number of other users ( $dU_{S_i}/dS > 0$ ).<sup>125</sup> Consequently, there is a direct network effect on the user side. Yet, similar to the case for an online search platform, advertisers do not benefit from having additional advertisers join the platform. In fact, the effect is likely negative ( $dU_{A_i}/dA \leq 0$ ). In terms of cross-group effects, similar to online search, more users increase the benefit to an advertiser from participating on the platform ( $dU_{A_i}/dS > 0$ ). Again, this effect is unidirectional, given that having more advertisers generally does not materially impact the number of users:  $dU_{S_i}/dA = 0$ .

Accordingly, there are similarities and differences between social media platforms (structured in a manner similar to Facebook) and online search platforms (structured in a manner similar to Google). Both rely on having a high volume of users that can be monetized through advertisements.<sup>126</sup> Social media is different, however, in that there is a direct network effect on the user side.<sup>127</sup> Therefore, while arguments regarding tipping and winner-take-all do not fit the characteristics of online search especially well, they do carry some weight when it comes to social media.<sup>128</sup> This has led many to conclude that Facebook's current leading position in social media is uncontestable.<sup>129</sup>

First, this argument is flawed in that it follows a "one size fits all" approach to network effects. For social media, the contours of the direct network effect are different in strength and scope compared to prior communication networks, such as the telephone, fax machine, and e-mail.<sup>130</sup>

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instance, a contextual-display advertisement or even a search-display advertisement. The convention, however, is to use "display advertisements" to refer to non-search advertisements. See Yun, *supra* note 66, at 319 n.33.

125. Although, there are also potential "herding effects" on social media (i.e., the desire to communicate with a certain subset of people). This can lead platforms to have certain governance and features that facilitate herding such as private groups or accounts. It can also lead to differentiated entry, marketing, or both (e.g., Snapchat with those under twenty-five years old). As the desire to be connected with certain groups get stronger, one would expect to see more differentiated platforms catering to specific groups.

126. See *id.* at 61.

127. See *id.* at 79.

128. See *id.* at 78–79.

129. See, e.g., FURMAN REPORT, *supra* note 14, at 37 ("Facebook's persistent dominance is supported by strong direct network effects."); ACCC REPORT, *supra* note 16, at 11 ("Yet access to data is not the sole barrier to entering these markets. For example, the social media market, dominated by Facebook's platforms, demonstrates strong network effects that are independent of the amount of user data Facebook collects. The value of Facebook to individual users depends on the participation of other users (particularly family and friends) and groups.").

130. See ACCC REPORT, *supra* note 16, at 67.



Second, a closer examination of numerous factors suggests that barriers to entry in social media fall quite short of insurmountable.<sup>131</sup>

In a prior era where the landline telephone system was the principal method of voice communication, network effects were rightly considered the central feature driving adoption and participation.<sup>132</sup> A telephone system is a standard that involves an immense amount of coordination, including substantial investments in hardware and infrastructure.<sup>133</sup> Not surprisingly, given the degree of lock-in, switching costs, and the need to coordinate such a switch, there was little in the way of alternative systems.<sup>134</sup>

The strength and scope of network effects on social media are materially different. Professor Catherine Tucker's research reveals that network effects on social media are "local" in that what affects the utility of users is a small set of other users—for example, friends, relatives, coworkers, and classmates—rather than the public at large.<sup>135</sup> In some respects, this point is true even for telephones, fax machines, and e-mail. For example, fax machines first grew in scale and viability in newsrooms and the military—rather than as a mass market product.<sup>136</sup> Fundamentally, a fax machine is still useful as long as there are two users who want to communicate with one another.<sup>137</sup> In

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131. See Krzepicki et al., *supra* note 120, at 2.

132. The concept of network effects in the economics literature began with models assessing potential equilibria in the telephone system. See Roland Artle & Christian Averous, *The Telephone System as a Public Good: Static and Dynamic Aspects*, 4 BELL J. ECON. & MGMT. SCI. 89 (1973); Jeffrey Rohlfs, *A Theory of Interdependent Demand for a Communications Service*, 5 BELL J. ECON. & MGMT. SCI. 16 (1974).

133. See Rohlfs, *supra* note 132, at 18.

134. At the time of Alexander Graham Bell's telephone innovation, the established means of communication was the telegraph system. While the multiple telegraph was being developed to potentially replace the telegraph, the superiority of the telephone system (the harmonic telegraphic) marked "the death of the multiple telegraph as well." *Telephone and Multiple Telegraph*, LIBR. OF CONG., <https://www.loc.gov/collections/alexander-graham-bell-papers/articles-and-essays/telephone-and-multiple-telegraph> [<https://perma.cc/HH2Z-8Y29>]. Nonetheless, this is another instance of innovation dynamically working with the telephone replacing the telegraph.

135. Tucker, *supra* note 69, at 2–3 ("In the few forums where there are same-sided network effects, such as social media websites, my research suggests that these type of network effects are quite local. This means that they depend only on the user's smaller friend-group and do not depend on the user base of the entire platform.").

136. *E.g.*, Keith Randall, *The Rise and Fall of the Fax Machine*, TEX. A&M TODAY (Aug. 6, 2015), <https://today.tamu.edu/2015/08/06/the-rise-and-fall-of-the-fax-machine> [<https://perma.cc/YJR6-BU9F>].

137. Even today, the fax machine is still frequently used in real estate firms, pharmacies, and the medical industry. See *id.*; Lloyd Minor, *Why Your Doctor's Office Still Depends on a Fax Machine*, WALL ST. J. (Sept. 19, 2019), <https://blogs.wsj.com/experts/2019/09/19/why-your-doctors-office-still-depends-on-a-fax-machine> [<https://perma.cc/V852-QNTP>]. Like the fax machine, digital communication platforms need only two users to be useful. STIGLER REPORT, *supra* note 17, at 38 n.51 ("To send a message to someone, a user only needs that single

essence, the value of a platform is more a function of *who* is on the platform instead of the sheer *number of people* on it.<sup>138</sup> Thus, coordinating migration to a new or alternative network is not necessarily a significant hinderance if the primary value from joining a network is derived from a relatively small group of people.<sup>139</sup>

Further, social media platforms have important characteristics that suggest barriers to entry are far from insurmountable and are significantly more modest than commonly asserted: products are highly differentiated;<sup>140</sup> switching costs are minimal;<sup>141</sup> infrastructure and start-up costs are low;<sup>142</sup> and advertisers (and, thus, monetization) follow users—not *vice versa*—thus significantly mitigating concerns regarding advertiser stickiness.<sup>143</sup> These characteristics are discussed below, and the subsequent section details how some of the empirical evidence is consistent with the testable implications that follow.

The first factor that facilitates entry is the high level of differentiation between social media products.<sup>144</sup> This is self-evident from examining some of the top social media sites: Facebook, Instagram (Facebook), Pinterest, Snapchat, LinkedIn, Twitter, and WhatsApp (Facebook).<sup>145</sup> An entrant might start with a basic product that fulfills a certain niche in the market and then proceed to add new features, expand into adjacent markets, or change its overall business strategy.<sup>146</sup> While social media is largely defined by the

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person to be on a particular messaging app, rather than everyone they would want to send a message to. This explains why many messaging applications can live alongside one another—WhatsApp, Snapchat, SMS, and Facebook Messenger all have significant customer bases.”).

138. Increases in the sheer number of users—analogue to the income effect in economics—also bring in more people in each subgroup.

139. Relatedly, there are diminishing returns to network effects. For instance, in discussing indirect network effects for videocassette recorders (VCRs), Liebowitz and Margolis stated:

[T]he fact that other people use the same sort of VCR that we use makes a tape rental market available to us, but the marginal benefits of increasing the number of households that own our kind of VCR are likely exhausted now that businesses that rent videotapes are about as prevalent as ones that sell milk.

*Network Externality*, *supra* note 59, at 140.

140. See Edison Rsch., *The Social Habit 2019*, EDISON RSCH.: BLOG (May 30, 2019), <https://www.edisonresearch.com/the-social-habit-2019> [https://perma.cc/W9RL-D3SZ] (summarizing the findings of a 2019 study of social media user habits and how those habits are influenced by differences between platforms).

141. See Tucker, *supra* note 65, at 78 (describing social media users quick switch from MySpace to Facebook).

142. See FURMAN REPORT, *supra* note 14, at 3.

143. See ACCC REPORT, *supra* note 16, at 79.

144. See Edison Rsch., *supra* note 140.

145. See *id.*

146. The story of Facebook itself is illustrative of this point. Facebook began as a platform for high school and college students to communicate with each other through public and private

presence of other users,<sup>147</sup> this is not the only factor that drives users to join and, importantly, to actively participate. Further, given that the level of discourse and interaction on social media is more visible and multifaceted relative to prior communication networks (e.g., the telephone and fax machine), the herding effects of users joining and interacting with specific groups incentivize platform differentiation.<sup>148</sup> In fact, differentiation is a central consideration when venture capitalists are looking to fund start-ups.<sup>149</sup> Even with the presence of direct and indirect network effects, both of which are present on Facebook's platform,<sup>150</sup> user participation levels still depend on the value that consumers derive from the product, which can include differentiated features like news feeds and other forms of platform curation.<sup>151</sup>

Due to the importance of differentiation, one ought not fall victim to a need to replicate fallacy based on the idea that in order to be successful, entry must occur at the same level, scope, and type as the current incumbent.<sup>152</sup> Because entrants generally cannot quickly match the number of users and data

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posts on each user's virtual "wall." Tucker, *supra* note 65, at 79. Over time, however, Facebook incorporated features that changed the nature of the platform. For instance, today, Facebook represents a source of news for two-thirds of users. Jeffrey Gottfried & Elisa Shearer, *News Use Across Social Media Platforms 2016*, PEW RSCH. CTR. (May 26, 2016), <https://www.journalism.org/2016/05/26/news-use-across-social-media-platforms-2016> [<https://perma.cc/QT96-PDDY>]. To some extent, the ACCC Report acknowledges that "same-side network effects may not preclude the entry of a niche or differentiated social media platform." ACCC REPORT, *supra* note 16, at 79. The ACCC Report continues: "[S]ame-side network effects do not preclude the entry of smaller rivals, such as Snapchat, which appeal to specific groups. If such rivals are able to expand the breadth of their appeal, they may provide a challenge to Facebook's dominance in the provision of social media services." *Id.* at 84.

147. See ACCC REPORT, *supra* note 16, at 41.

148. See *supra* note 125 and accompanying text.

149. In her Senate testimony, venture capitalist Patricia Nakache stated:

When evaluating a startup looking to compete directly against a large incumbent, [venture capitalists] will seek to understand whether the founder has a unique and important insight into the market which is driving the development of a differentiated product or service, whether she has crafted a marketing and sales strategy that will enable the startup to grow quickly, and whether the leadership team of the startup can execute nimbly against larger competitors.

*Competition in Digital Technology Markets: Examining Acquisitions of Nascent or Potential Competitors by Digital Platforms Before the S. Comm. on the Judiciary, Subcomm. on Antitrust, Competition Pol'y, & Consumer Rts.*, 116th Cong. 4 (2019) (written testimony of Patricia Nakache, General Partner, Trinity Ventures). Nakache also expressed the belief that "many young companies cannot realistically achieve the scale necessary to become standalone public companies, which means that often M&A is the most viable pathway for a startup." *Id.* at 5.

150. See ACCC REPORT, *supra* note 16, at 79.

151. For the importance of curation for platform engagement, see Anindya Ghose et al., *Designing Ranking Systems for Hotels on Travel Search Engines by Mining User-Generated and Crowd-Sourced Content*, 31 MKTG. SCI. 493, 493 (2012).

152. See, e.g., ACCC REPORT, *supra* note 16, at 9 ("The size of Facebook's audience is more than three times larger than the size of Snapchat's audience (the closest competitor to the Facebook platforms). This network effect creates a significant barrier to entry and expansion.").

generated by the most successful social media platforms, one might be led too readily to conclude that there are insurmountable barriers to entry created by network effects and economies of scale and scope.<sup>153</sup> Yet an examination of the actual entry experience of the current incumbents such as Facebook, Google, and Amazon belie this claim.<sup>154</sup> Generally, leading platforms entered the market with a differentiated product that evolved, was added to, and was improved over time.<sup>155</sup> In a similar way, it is faulty antitrust logic to suggest that since entrants cannot immediately replicate the size and scope of incumbents, entry will not occur, and consequently, firms will be unable to expand.<sup>156</sup>

Entry is also facilitated through low switching costs.<sup>157</sup> Unlike in the 1990s and in Microsoft or IBM's "Big Blue" era, technology has changed; consumers are no longer tied to specific proprietary hardware or operating systems.<sup>158</sup> They can now efficiently access and utilize alternative platforms without losing the benefits of training costs they have already incurred or applications they have invested in or may wish to choose from.<sup>159</sup> For instance, during the recent economic lockdown from COVID-19, videoconferencing applications were an important and significant beneficiary.<sup>160</sup> There is no doubt this growth was facilitated by the ability of nearly everyone to immediately join and interact regardless of their operating system or hardware.<sup>161</sup> This illustrates that these days, the only serious requirement for access to a new or competing platform is a network

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153. *See id.* at 58.

154. Darren S. Tucker & Hill B. Wellford, *Big Mistakes Regarding Big Data*, ANTITRUST SOURCE, Dec. 2014, at 1, 7.

155. *See id.* at 8.

156. *See id.* at 7 ("The fact that some established online firms collect a large volume of data from their customers or other sources does not mean that new entrants must have the same quantity or type of data in order to enter and compete effectively. . . . [L]ack of asset equivalence should not be a sufficient basis to define a barrier to entry.").

157. *See Tucker, supra* note 69, at 4.

158. For an early and non-technical discussion of the issues that lead to the *Microsoft* case, see Stuart Taylor Jr., *What to Do with the Microsoft Monster*, AM. LAW., Nov. 1993, at 72.

159. In other words, there is an absence of platform specific investments. *See Tucker, supra* note 65, at 77, 78 ("[P]latforms that exhibit network effects may be completely virtual. Nowhere is this shift more striking than in the world of purely digital platforms (such as social networks, ride-sharing applications, or digital marketplaces), which do not depend on any one type of hardware and, as a consequence, have low learning costs and require few direct investments from users.").

160. *See Lexi Sydow, Video Conferencing Apps Surge from Coronavirus Impact*, APP ANNIE (Mar. 30, 2020), <https://www.appannie.com/en/insights/market-data/video-conferencing-apps-surge-coronavirus> [https://perma.cc/4X4N-3XC2].

161. *See id.*

connection.<sup>162</sup> Thus, switching platforms merely comes down to setting up a new user account.<sup>163</sup>

If switching costs are low, a significant level of multi-homing should be expected. Multi-homing is the practice of using multiple platforms for a similar purpose over a given period of time.<sup>164</sup> Even the *Furman Report*, which is otherwise quite skeptical of the marketplace's ability to constrain large incumbent platforms, acknowledges that low switching costs can overcome network effects.<sup>165</sup> Entry is further facilitated by the relatively low infrastructure and start-up costs required of new entrants.<sup>166</sup> With the advent and ubiquity of cloud computing, new entrants no longer need to make large upfront capital investments in servers and software; rather, cloud computing can now scale with the business.<sup>167</sup>

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162. *See id.*

163. One might argue that there is a "legacy" of prior history and activity on a platform that prevents switching. While this is likely true at some level, actual market experience suggests social networks can build up and unravel quite quickly. *See* Tucker, *supra* note 65, at 78. ("[W]hat is striking is that one might have expected MySpace to exhibit switching costs, due to the time that users had invested in setting up and personalizing their profiles and establishing their networks. However, that 'sunk cost' was rendered negligible when MySpace users' friends migrated to Facebook.").

164. *See id.* 78–79.

165. *See* FURMAN REPORT, *supra* note 14, at 35 ("Network effects do not guarantee concentration, as they can be overcome where consumers and businesses have the freedom to either switch between services, or use multiple services simultaneously.").

166. The *Next Web* estimates that an Instagram-like application costs \$100,000 to \$300,000 to develop; a Twitter-like application costs \$50,000 to \$250,000 to develop; and a Facebook-like application costs \$500,000 to develop. Courtney Boyd Myers, *How Much Does It Cost to Build the World's Hottest Startups?*, NEXT WEB (Dec. 2, 2013), <https://thenextweb.com/dd/2013/12/02/much-cost-build-worlds-hottest-startups> [<https://perma.cc/KQ63-PWFK>]. In comparison, to start a craft brewery, the brewing equipment alone costs between \$100,000 and \$1 million. *See* Steve Nicastro, *Live Your Dream: How to Start a Craft Brewery*, MARKETWATCH (Mar. 24, 2017, 11:24 AM), <https://www.marketwatch.com/story/live-your-dream-how-to-start-a-craft-brewery-2017-03-24> [<https://perma.cc/B2JC-T7P4>]. Of course, the particular entry conditions will clearly depend on the specific market circumstances; however, there is no a priori reason to believe that entry costs are particularly high for online platforms. *See* Tucker & Wellford, *supra* note 154, at 8.

167. Related to the discussion of switching costs are regulatory proposals that mandate data portability between platforms, where the goal is to further reduce switching costs to facilitate the use of rival platforms. Some digital reports see the potential benefits from imposing data portability. *See, e.g.,* CRÉMER REPORT, *supra* note 15, at 8 ("[A] more stringent data portability regime can be imposed on a dominant firm in order to overcome particularly pronounced lock-in effects." (emphasis omitted)). Others have reservations. *See* ACCC REPORT, *supra* note 16, at 11 ("The ACCC considers that data portability is unlikely to have a significant effect on barriers to entry . . ."). While regulating portability has arguably worked in other areas (e.g., mobile phone number portability), there are reasons to be skeptical of its efficacy in social media. First, there is a lack of sound empirical evidence that data portability is actually hindering the use of alternate social media platforms. Second, there are clear privacy implications for a

While switching costs might be relatively low for users, perhaps they are higher for advertisers. This can create some degree of advertiser “stickiness” for platforms, which could impede the ability of advertisers to switch to alternative platforms.<sup>168</sup> If advertiser stickiness exists, this may give the incumbent some degree of market power.<sup>169</sup> It is certainly plausible that switching costs are higher for advertisers than for users.<sup>170</sup> Inevitably, some advertisers may need to sink significant resources into a given platform in order to maximize their return.

It is a key empirical question for any antitrust investigation involving two-sided platforms to determine the level of multi-homing on each side.<sup>171</sup> Yet it is worth emphasizing that the indirect network effect goes from users to advertisers.<sup>172</sup> As with search engines, advertisers go where users are.<sup>173</sup> If a platform can achieve a critical mass of certain types of users whom advertisers wish to target, this creates a powerful ability to monetize. Given this ability for consumers to switch easily, considerations of advertiser switching costs—to the extent they are higher than user switching costs—would appear to be distinctly secondary considerations in a competitive assessment.

#### *E. Evidence on the Ability of Entrants to Compete in Digital Markets*

If products are differentiated, switching costs are minimal, infrastructure and start-up costs are relatively low, and monetization follows users, then what observations are expected? Users and advertisers would use more than one social media platform (i.e., they would multi-home).<sup>174</sup> Even smaller

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user or business porting their social media data (including contacts and, for businesses, user reviews) from one platform to another—including questions of consent from their contacts and customers. Third, it is not entirely clear the value that users place on data from past social interactions—what seems more relevant are future interactions, which require the users’ groups of friends and family to actually migrate as well. Finally, the boundaries of such a regulation could easily expand into “interoperability,” introducing a new host of regulatory concerns. For more on the costs of regulating data portability. See, e.g., Peter Swire & Yianni Lagos, *Why the Right to Data Portability Likely Reduces Consumer Welfare: Antitrust and Privacy Critique*, 72 MD. L. REV. 335, 353–65 (2013).

168. See ACCC REPORT, *supra* note 16, at 96.

169. See *id.* at 95.

170. *Id.* at 96.

171. Tucker, *supra* note 65, at 78. I have not seen a systematic set of studies that examines the question of multi-homing on the part of advertisers. It would be particularly interesting to determine whether multi-homing statistics differ depending on the characteristics of each advertiser (e.g., spending levels) and the type of queries or content in which they advertise.

172. ACCC REPORT, *supra* note 16, at 63–64.

173. *Id.* at 64.

174. See *The State of Mobile 2019*, APP ANNIE (2019), <https://www.appannie.com/en/go/state-of-mobile-2019/> [<https://perma.cc/DK54-U9XY>] (finding that the average consumer has over 100 applications on their smartphone (slide 13)).

platforms would be expected to represent a threat to larger platforms.<sup>175</sup> Similarly, the size of a network itself would not be expected to determine the success or failure of a platform.<sup>176</sup>

As for the empirical data, user multi-homing is widespread.<sup>177</sup> The average consumer has over 100 applications on their smartphone, with about thirty to forty applications being used per month.<sup>178</sup> The most common services where multiple providers are used include online shopping (81%), travel planning and booking (72%), messaging (70%), social and sharing platforms (65%), web browsers (64%), and music streaming (61%).<sup>179</sup> For multi-homing to be an effective competitive constraint, it is not necessary that multiple accounts be used regularly. Rather, evidence of pervasive multi-homing suggests that the degree of market power is potentially overstated based solely on measuring market share.<sup>180</sup>

Smaller social networks are also creating rivalry for incumbents.<sup>181</sup> Snapchat is used more intensely per user than all other social media messaging applications in the United States, including Facebook, Instagram, Messenger, and Pinterest.<sup>182</sup> Among users aged twelve to seventeen, Snapchat is the market leader with 16.4 million users, while Instagram and Facebook are second and third with 12.8 million and 11.5 million, respectively.<sup>183</sup> Even for broader age ranges, among ages twelve to thirty-four, Snapchat went from 15% of Facebook's usage to virtually equal usage in just four years (from

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175. See Edison Rsch., *The Social Habit 2019*, EDISON RSCH. (May 2019) [hereinafter *The Social Habit*], <http://www.edisonresearch.com/wp-content/uploads/2019/05/The-Social-Habit-2019-from-Edison-Research.pdf> [https://perma.cc/27LP-NZFC] (slide 38).

176. Tucker, *supra* note 65, at 77. Another implication is that, if barriers to entry are actually low, then the quality adjusted price to advertise on Facebook should be relatively constant over time—all else equal. I only propose this test at a conceptual level because I have not seen a study directly address this question. The most likely reason it has not been addressed is that it is an incredibly difficult exercise to establish proper causality. One measure that could fold-in changing quality is a price such as cost per engagement, cost per lead, or cost per click. This could standardize quality changes over time. The difficulty is controlling for Facebook's costs of hosting and displaying advertising over time. Further, demand is also changing so the study would need to control for the number of advertisers who wish to advertise on social media, which, independent of monopoly power, would result in a higher price.

177. See *The State of Mobile 2019*, *supra* note 174 (slide 13).

178. *Id.*

179. See DELOITTE, *THE DATA LANDSCAPE: A REPORT FOR FACEBOOK 23* fig.23 (2017), <https://www2.deloitte.com/content/dam/Deloitte/uk/Documents/technology-media-telecommunications/deloitte-uk-tmt-the-data-landscape.pdf> [https://perma.cc/5WCX-TKCL].

180. See Tucker, *supra* note 65, at 78. On this point, conduct that is primarily intended to restrict the ability of consumers to multi-home should rightly receive antitrust scrutiny.

181. See Edison Rsch., *supra* note 140.

182. See *The State of Mobile 2019*, *supra* note 174 (slide 48).

183. *Facebook Is Tops with Everyone but Teens*, EMARKETER (Aug. 28, 2018), <https://www.emarketer.com/content/facebook-is-tops-with-everyone-but-teens> [https://perma.cc/8LHE-86X4].

2015 to 2019).<sup>184</sup> TikTok is a social media platform that was launched in China in 2016 and in the United States in 2017; TikTok now has over 1 billion active monthly users,<sup>185</sup> and at one point, it was the most downloaded application in the U.S. Apple Store for five consecutive quarters.<sup>186</sup>

Implicitly, those that are calling for greater regulatory controls over large platforms purchasing start-ups (based on a potential and nascent competition theory of harm) acknowledge that smaller platforms can quickly scale up and mature into major competitors to incumbents.<sup>187</sup> Facebook's purchase of Instagram illustrates this theory of harm. However, if Instagram was a potential threat to Facebook, smaller social networks in existence today could certainly be as well.<sup>188</sup> Unlike claims made about the unique threat Netscape arguably posed to Microsoft's dominance in the 1990s,<sup>189</sup> potential threats to large existing platforms do not seem to be particularly unique.

Further, if the absolute size of a user base does not dictate the success of a platform, then larger platforms would be expected to fail even with a large user base. This is precisely what has been observed. Many established platforms have lost their market leading positions: Friendster, Yahoo, MySpace, Internet Explorer, Firefox, Pandora, and iTunes.<sup>190</sup> Another

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184. See *The Social Habit*, *supra* note 175 (slide 26).

185. Georgia Wells et al., *TikTok's Videos Are Goofy. Its Strategy to Dominate Social Media Is Serious*, WALL ST. J. (June 29, 2019), <https://www.wsj.com/articles/tiktoks-videos-are-goofy-its-strategy-to-dominate-social-media-is-serious-11561780861> [<https://perma.cc/WHH4-Y3VQJ>]; Sherisee Pham, *The Company That Owns TikTok Now Has One Billion Users and Many Are Outside China*, CNN (June 20, 2019, 8:13 AM), <https://www.cnn.com/2019/06/20/tech/tiktok-bytedance-users/index.html> [<https://perma.cc/7W2F-ZM2M>].

186. Pham, *supra* note 185; see also Brandon Doyle, *TikTok Statistics – Updated October 2020*, WALLAROO (Oct. 6, 2020), <https://wallaroomedia.com/blog/social-media/tiktok-statistics> [<https://perma.cc/JS74-7RS9>].

187. See, e.g., ACCC REPORT, *supra* note 16, at 80.

188. See John M. Yun et al., *Comment of the Global Antitrust Institute, Australian Competition & Consumer Commission's Digital Platforms Inquiry, Preliminary Report*, 15 (Geo. Mason Univ. L. & Econ. Rsch. Paper Series, Paper No. 19-04, 2019), <https://ssrn.com/abstract=3321837> [<https://perma.cc/UN9K-AJLS>] (“Central to the narrative that strategic acquisitions have entrenched market power is Facebook’s acquisition of Instagram in 2012, from which some commentators have inferred that competition authorities are missing potential competition cases. At the time of the acquisition, Instagram had zero revenues and a handful of employees. Since Facebook’s acquisition, Instagram has grown from 30 million users to well over one billion. During the same period, Facebook grew from approximately 900 million users to over two billion users. This substantial expansion in users and output is hardly indicative of an anticompetitive outcome.”).

189. See Benjamin Klein, *The Microsoft Case: What Can a Dominant Firm Do to Defend Its Market Position?*, J. ECON. PERSPS., Spring 2001, at 45, 45.

190. See Tucker, *supra* note 65, at 78.



example is Google+, which launched in 2011 with a large built-in user base.<sup>191</sup> At that time, Google stated: “We’re transforming Google itself into a social destination at a level and scale that we’ve never attempted—orders of magnitude more investment, in terms of people, than any previous project.”<sup>192</sup> According to Massachusetts Institute of Technology economist Catherine Tucker, Google+ was primed for success.<sup>193</sup> Instead, Google+ ceased to operate as a consumer product on April 2, 2019.<sup>194</sup> Google acknowledged that Google+ “ha[d] low usage and engagement: 90% of Google+ user sessions are less than five seconds.”<sup>195</sup> Relevantly, even though Google+ enjoyed direct network effects with an initial “seed” of 90 million users,<sup>196</sup> it still failed. The clear lesson is that the relative and absolute size of a social network does not deliver market success.

In sum, social network platforms exhibit some characteristics that facilitate, rather than impede, entry. Of course, there are hindrances to instantaneously matching the size and scope of current market incumbents. This is not, however, evidence that barriers to entry are seriously impeding competition. Instantaneous large entry is costly and unusual in most non-digital markets as well.<sup>197</sup> Further, smaller platforms hoping to gradually gain further traction—or at least those that are well-positioned to do so should market leaders falter—have been able to survive alongside their more successful rivals.<sup>198</sup> Success and growth take time, yet there is no reason to take this as evidence of a systemic problem with a given market or industry, much less one that requires a new set of presumptions for digital platforms.

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191. See Vic Gundotra, *Introducing the Google+ Project: Real-Life Sharing, Rethought for the Web*, GOOGLE BLOG (June 28, 2011), <https://googleblog.blogspot.com/2011/06/introducing-google-project-real-life.html> [<https://perma.cc/8KPV-GEDE>]; Tucker, *supra* note 65, at 78.

192. Steven Levy, *Inside Google+ — How the Search Giant Plans to Go Social*, WIRED, (June 28, 2011, 1:10 PM), <https://www.wired.com/2011/06/inside-google-plus-social> [<https://perma.cc/L8S4-6N5D>].

193. See Tucker, *supra* note 65, at 78 (“Google Plus enjoyed the support of over 1,000 employees (including top engineers), as well as CEO support. In theory, Google Plus should have had network effects and consequent critical mass on its side. This is because it was able to ‘seed’ its initial social network with 90 million users through the integration of other Google services, such as YouTube, in its signup process.”).

194. *Shutting Down Google+ for Consumer (Personal) Accounts on April 2, 2019*, GOOGLE (Jan. 30, 2019), [https://support.google.com/plus/answer/9195133?hl=en&ref\\_topic=9259565](https://support.google.com/plus/answer/9195133?hl=en&ref_topic=9259565) [<https://perma.cc/2MZ2-E9EQ>].

195. Ben Smith, *Project Strobe: Protecting Your Data, Improving Our Third-Party APIs, and Sunseting Consumer Google+*, GOOGLE BLOG (Oct. 8, 2018), <https://www.blog.google/technology/safety-security/project-strobe> [<https://perma.cc/VNV7-B8UX>].

196. Tucker, *supra* note 65, at 78.

197. See, e.g., Gregory J. Werden, *Network Effects and Conditions of Entry: Lessons from the Microsoft Case*, 69 ANTITRUST L.J. 87, 92 (2001).

198. See Tucker, *supra* note 65, at 78.

### III. EXAMINING ALLEGEDLY ANTICOMPETITIVE CONDUCT FROM LEADING PLATFORMS

As discussed, a key pillar used to justify sweeping policy changes to current antitrust enforcement is the presumed role that network effects play in creating insurmountable barriers to digital market entry. Even if these claims were accurate, network effects are simply characteristics of platforms and do not represent actual conduct in and of themselves. Consequently, at least under existing antitrust enforcement, network effects cannot serve as a basis for finding an anticompetitive violation.<sup>199</sup> Therefore, some academic research and the digital reports offer a litany of *potential* types of misconduct that market power—protected by substantial network effects—might allow the firm to engage in.<sup>200</sup> The thinking here is that when a firm has so much market power and entry barriers are so high, one simply cannot afford to take chances and allow current antitrust presumptions to continue.<sup>201</sup>

Proving violations can be difficult; thus, it is better to change existing presumptions regarding the welfare effects of various platform practices to allow plaintiffs to meet their ultimate burden of persuasion more easily. This part examines two commonly alleged examples of dominant platforms abusing their market power: (1) giving preference to their own content through private label entry and promotion and (2) setting defaults. While the focus is on an evaluation of these two specific practices, the broader point is that antitrust laws are fully capable of addressing the various theories of harm involving platforms without the need to implement new presumptions.

#### A. *Is Preferencing One's Own Content a Competition Problem?*

Examples of preferencing include Google using its own map, rather than Apple Maps or MapQuest, to answer local business queries;<sup>202</sup> Google Android being defaulted to Google search over Bing;<sup>203</sup> and Amazon

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199. *See, e.g.,* United States v. Microsoft, 253 F.3d 34, 50, 84 (D.C. Cir. 2001) (per curiam). Further, there is certainly no basis, based on the current evidence, that courts should implement a presumption that network effects create barriers to entry and insulate monopoly power from competition.

200. *See, e.g.,* Khan, *supra* note 12, at 737–39 (highlighting a number of anticompetitive harms that the current antitrust system does not address).

201. *See id.* at 737.

202. *See* Adi Robertson, *Congress Takes Aim at Google Search in Antitrust Hearing*, THE VERGE (Mar. 10, 2020, 3:26 AM), <https://www.theverge.com/2020/3/10/21173077/congress-antitrust-google-search-klobuchar-bill-letter-monopoly>.

203. Google Complaint, *supra* note 10, at 42.

promoting its own private label brands over those of third-party merchants.<sup>204</sup> Numerous digital reports condemn preferencing as detrimental to competition.<sup>205</sup>

Given that preferencing is inherently about favoring one's own content and products over a rival's, this theory of harm has some degree of appeal for a platform that has substantial market share and perhaps market power. Thus, although some of the digital reports acknowledge (in passing) that the conduct can be potentially beneficial,<sup>206</sup> the ultimate conclusion remains one of condemnation.<sup>207</sup>

Is this judgment justified? Is preferencing one's own content likely to be a competition problem, and if so, under what circumstances?<sup>208</sup> The standard claim is that preferencing allows a platform with market power to steer users away from competing and rival products that rely on their platform to make sales—depriving them of the scale required to remain viable or fully efficient and thereby eliminating or seriously weakening competitors in a different, adjacent market.<sup>209</sup> The core idea is that because the platform is playing both

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204. We need not limit ourselves to platforms to consider the strength and importance of preferencing. Consider the Sears, Roebuck and Company's mail-order catalog—which was, in its heyday, the Amazon of its time—selling a variety of merchandise including its own branded products. There is little doubt that rival merchants would have benefited from the ability to be included in the catalog. Sears eventually lost its crown as the top retailer in the United States in 1991 to Walmart. See Sarah Pruitt, *When the Sears Catalog Sold Everything from Houses to Hubcaps*, HISTORY (Mar. 13, 2019), <https://www.history.com/news/sears-catalog-houses-hubcaps> [<https://perma.cc/CH9X-4KH4>].

205. See FURMAN REPORT, *supra* note 14, at 61 (“[T]he Panel considers to be unfair or unreasonable conduct . . . a platform that contains a search function giving an unfair advantage to its own services over its rivals in downstream markets through the ranking or presentation of results.”); CRÉMER REPORT, *supra* note 15, at 7 (“[S]elf-preferencing by a vertically integrated dominant digital platform can be abusive not only under the preconditions set out by the ‘essential facility’ doctrine, but also wherever it is likely to result in leveraging of market power and is not justified by a pro-competitive rationale.”).

206. See, e.g., CRÉMER REPORT, *supra* note 15, at 6 (explaining that “imposing far-reaching conduct rules on all platforms, irrespective of market power, could not be justified, given that many types of conduct—including potentially self-preferencing—may have pro-competitive effects.”). Yet the implication remains that self-preferencing coupled with market power is justifiably condemnable.

207. *See id.* at 7.

208. Our best precedent is likely the DOJ's *Microsoft* case in the late 1990s and early 2000s. The case involved, *inter alia*, Microsoft preferencing Internet Explorer—its own web browser—over Netscape on its desktop Windows operating system through various restrictive practices and settings, including making it difficult for users to change the default away from Internet Explorer or delete the program. See *United States v. Microsoft Corp.*, 253 F.3d 34, 45 (D.C. Cir. 2001) (*per curiam*).

209. See FURMAN REPORT, *supra* note 14, at 31.

the role of “host” as well as competitor, there is an antitrust conflict of interest with harmful consequences for competition and consumers.<sup>210</sup>

Concerns regarding preferencing and foreclosure (or raising rivals’ costs) are not new. These are often the leading theories of harm for vertical mergers (e.g., the DOJ’s case against AT&T-Time Warner).<sup>211</sup> The idea is that a vertically integrated firm will favor its own upstream input over those of rivals who depend on the downstream unit for distribution, which can lead to either full or partial foreclosure.<sup>212</sup> This potential for “input foreclosure” also played a leading role in Comcast-NBCU’s merger.<sup>213</sup> Vertical mergers, however, can also lead to significant benefits, including the elimination of double-marginalization.<sup>214</sup> Therefore, vertical mergers are considered under a “rule of reason” analysis, which involves fully weighing both the potential anticompetitive and procompetitive effects.<sup>215</sup>

The genesis for much of the recent attention given to vertical integration, preferencing, and platforms is Lina Khan’s widely cited article, *Amazon’s Antitrust Paradox*.<sup>216</sup> In it, she writes:

Amazon has responded to popular third-party products by producing them itself. Last year, a manufacturer that had been selling an aluminum laptop stand on Marketplace for more than a decade saw a similar stand appear at half the price. The manufacturer learned that the brand was AmazonBasics, the private line that Amazon has been developing since 2009 . . . .

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210. See CRÉMER REPORT, *supra* note 15, at 66 (“In cases of vertically integrated dominant digital platforms in markets with particularly high barriers to entry, and where the platform serves as an intermediation infrastructure of particular relevance, we propose that . . . [the platform] should bear the burden of proving that self-preferencing has no long-run exclusionary effects on product markets.”).

211. *United States v. AT&T Inc.*, 310 F. Supp. 3d 161, 164 (D.D.C. 2018).

212. Jonathan B. Baker, *Comcast/NBCU: The FCC Provides a Roadmap for Vertical Merger Analysis*, 25 ANTITRUST, Spring 2011, at 36, 37.

213. See *id.*

214. Francine Lafontaine & Margaret Slade, *Vertical Integration and Firm Boundaries: The Evidence*, 45 J. ECON. LITERATURE 629, 664 (2007); see also James C. Cooper et al., *Vertical Antitrust Policy as a Problem of Inference*, 23 INT’L J. INDUS. ORG. 639, 641 (2005).

215. See Thomas A. Piraino Jr., *An Antitrust Common Law for the Twenty-First Century*, 2009 UTAH L. REV. 635, 642.

216. Khan, *supra* note 12, at 710; see also David Streitfeld, *Amazon’s Antitrust Antagonist Has a Breakthrough Idea*, N.Y. TIMES (Sept. 7, 2018), <https://www.nytimes.com/2018/09/07/technology/monopoly-antitrust-lina-khan-amazon.html> [<https://perma.cc/9PC3-NP98>].

In using its Marketplace this way, Amazon increases sales while shedding risk. . . . The anticompetitive implications here seem clear: Amazon is exploiting the fact that some of its customers are also its rivals.<sup>217</sup>

This quote reveals that Amazon is itself a new entrant into various product markets—including laptop stands.<sup>218</sup> This quote further reveals that Amazon’s entry caused prices to fall dramatically and that Amazon’s private label entry “increase[d] sales while shedding risk.”<sup>219</sup> Greater output and lower prices are, of course, beneficial to consumers and to the economy as a whole, despite the fact that rivals may wish the entrant had stayed out. Nevertheless, the conclusion is that: “The anticompetitive implications here seem clear.”<sup>220</sup> While it is most certainly clear that Amazon and its customers are better off, it seems far less clear that any of this is anticompetitive.

While harm to rivals is a component of almost every anticompetitive theory of harm (e.g., foreclosure and predatory pricing), the ultimate arbiter is the impact on consumers.<sup>221</sup> Therefore, some caution must be exercised in overly focusing on the notion that rivals are harmed from a certain business practice; the claim that harm to rivals, in of itself, constitutes harm to the competitive process is one that was long ago—and properly—discarded by antitrust jurisprudence.<sup>222</sup> Firms in a free market do not possess a “right” to make sales at prices they might wish to charge.<sup>223</sup> It is not overstating to say that policies favoring competitors over competition turn antitrust policy on its head and impede, rather than protect, the competitive process.<sup>224</sup>

The purpose of federal antitrust laws is to safeguard the competitive process—not to dictate market outcomes or protect rivals.<sup>225</sup> In *Verizon Communications Inc. v. Law Offices of Curtis V. Trinko, LLP*, the Supreme Court stated:

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217. Khan, *supra* note 12, at 782–83.

218. My focus is on whether the entry itself is an antitrust concern. Whether Amazon entered by violating a rival’s intellectual property rights is a separate matter and consideration.

219. *See id.* at 781–82.

220. *Id.* at 783.

221. John B. Kirkwood & Robert H. Lande, *The Fundamental Goal of Antitrust: Protecting Consumers, Not Increasing Efficiency*, 84 NOTRE DAME L. REV. 191, 196 (2008).

222. *Id.* at 93–94.

223. *See* Werden, *supra* note 197, at 97–99.

224. Some digital reports are transparent in this goal. For a discussion of the need for “fairness” in terms of platform access for rivals, see FURMAN REPORT, *supra* note 14, at 5.

225. *See Brunswick Corp. v. Pueblo Bowl-O-Mat, Inc.*, 429 U.S. 477, 488, 489 (1977) (“[I]njury of the type the antitrust laws were intended to prevent . . . should reflect the anticompetitive effect either of the violation or of anticompetitive acts made possible by the violation.”).

Firms may acquire monopoly power by establishing an infrastructure that renders them uniquely suited to serve their customers. Compelling such firms to share the source of their advantage is in some tension with the underlying purpose of antitrust law, since it may lessen the incentive for the monopolist, the rival, or both to invest in those economically beneficial facilities.<sup>226</sup>

In *Trinko*, the Court was specifically addressing whether a firm with market power has a duty to deal with rivals.<sup>227</sup> The principles concerning a dominant firm's rights and obligations under antitrust law, however, would also seem to apply to dominant providers of platforms.

Can private label entry ever serve as a basis for a viable theory of harm? Entry, in of itself, is one of the hallmarks of a competitive market.<sup>228</sup> Entry that is coupled with exclusionary conduct, however, can violate antitrust laws when the exclusionary conduct has no procompetitive justification and when the attempt is simply to impair the competitive process.<sup>229</sup> This is the theory of harm that was advanced in *United States v. Microsoft* and is a plausible, viable theory.<sup>230</sup>

Some would argue that it is not so much Amazon's entry as it is Amazon's practice of promoting its own products over those of its rivals, which is akin to exclusionary conduct.<sup>231</sup> Certainly, to the extent that Amazon and other leading platforms more prominently display their own products, those products are more likely to be successful—all else being equal—since click rates are highly influenced by a product's position on the search results page.<sup>232</sup> In turn, more prominent placement of one product will necessarily push competing links further down the page, resulting in less traffic being captured by other firms.<sup>233</sup> Should this be enough to conclude that a platform entrant has impaired competition and is in violation of the antitrust laws?

The above theory precisely describes the FTC's two-year investigation into Google's practice of promoting its own "vertical search" results (e.g., a

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226. 540 U.S. 398, 407–08 (2004).

227. *Id.* at 401.

228. E.g., Christopher M. Grengs, *Verizon v. Trinko: From Post-Chicago Antitrust to Resource-Advantage Competition*, 2 J.L. ECON. & POL'Y 105, 107–08 (2006).

229. *United States v. Microsoft Corp.*, 253 F.3d 34, 58 (D.C. Cir. 2001) (per curiam).

230. *Id.* at 58.

231. Khan, *supra* note 12, at 803.

232. See, e.g., FURMAN REPORT, *supra* note 14, at 63–64.

233. In some respects, this idea of preferencing in search results is similar to the practice of grocery stores accepting "slotting fees" (i.e., payments from manufacturers to place products on the shelf). See FEDERAL TRADE COMM'N, *SLOTING ALLOWANCES IN THE RETAIL GROCERY INDUSTRY* 3–4 (2003), <https://www.ftc.gov/sites/default/files/documents/reports/use-slotting-allowances-retail-grocery-industry/slottingallowancerpt031114.pdf> [<https://perma.cc/GQ62-KVM5>].

map, shopping items with prices, and listing of local restaurants with reviews) within its “horizontal search” results page (i.e., the standard “blue links” associated with general search engines).<sup>234</sup> Ultimately, as with all vertical practices, the case involved weighing the potential exclusionary effects against potential procompetitive effects.<sup>235</sup> In 2013, the FTC closed its investigation and stated that “quantitative evidence the Commission examined are largely consistent with the conclusion that Google likely benefited consumers by prominently displaying its vertical content on its search results page.”<sup>236</sup> Several state attorneys general<sup>237</sup> and Canada also closed their investigations.<sup>238</sup> In 2015, after a multi-year investigation, the EC issued formal charges against Google, alleging search bias.<sup>239</sup> Additionally, in 2016, the EC further issued a supplementary Statement of Objections.<sup>240</sup> Finally, in 2017, the EC fined Google €2.42 billion for abuse of dominance in Google Shopping.<sup>241</sup>

Whether one agrees with the FTC’s or EC’s findings,<sup>242</sup> both investigations (as well as the earlier Microsoft litigation) demonstrate that agencies and courts have tackled this problem and are able to rule on it. These investigations and litigation are not easy to conduct.<sup>243</sup> They take time, and

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234. Yun, *supra* note 74, at 311, 314; Salinger & Levinson, *supra* note 112, at 31–32.

235. See Yun, *supra* note 74, at 313–14.

236. Statement of the Fed. Trade Comm’n, *In re Google Inc.*, FTC File No. 111-0163, at 2 (Jan. 3, 2013), [https://www.ftc.gov/sites/default/files/documents/public\\_statements/statement-commission-regarding-googles-search-practices/130103brillgooglesearchstmt.pdf](https://www.ftc.gov/sites/default/files/documents/public_statements/statement-commission-regarding-googles-search-practices/130103brillgooglesearchstmt.pdf) [<https://perma.cc/DZ8V-AZMD>].

237. Texas and Ohio closed their respective investigations in 2014. See Zach Miners, *Ohio Closes Google Antitrust Investigation*, PCWORLD (Feb. 9, 2015, 5:05 PM), <https://www.pcworld.com/article/2882072/ohio-closes-google-antitrust-investigation.html> [<https://perma.cc/6TQP-3Y7Q>].

238. Press Release, Competition Bureau, Gov’t of Canada, Competition Bureau Completes Extensive Investigation of Google (Apr. 19, 2016), <https://www.canada.ca/en/competition-bureau/news/2016/04/competition-bureau-completes-extensive-investigation-of-google.html> [<https://perma.cc/9GDD-4NBK>].

239. See European Commission Press Release IP/15/4780, Antitrust: Commission Sends Statement of Objections to Google on Comparison Shopping Service; Opens Separate Formal Investigation on Android (Apr. 15, 2015).

240. See European Commission Press Release IP/16/2532, Antitrust: Commission Takes Further Steps in Investigations Alleging Google’s Comparison Shopping and Advertising-Related Practices Breach EU Rules (July 14, 2016).

241. See Commission Fines Google €2.42 Billion, *supra* note 31.

242. For an assessment of the EC’s decision, see Christian Bergqvist, *The Google I Decision in a Nutshell* (Univ. Copenhagen Fac. Legal Stud. Rsch. Paper Series, Paper No. 2018-55, 2018), <https://ssrn.com/abstract=3090645> [<https://perma.cc/3ZE2-L52L>]. For a comparison with the U.S. case, see Christian Bergqvist & Jonathan Rubin, *Google and the Trans-Atlantic Antitrust Abyss* (Univ. Copenhagen Fac. Legal Stud. Rsch. Paper Series, Paper No. 2019-73, 2019), <https://ssrn.com/abstract=3354766> [<https://perma.cc/8UBS-JAGY>].

243. See *United States v. Microsoft Corp.*, 253 F.3d 34, 49 (2001).

their findings are not always crystal clear.<sup>244</sup> This undoubtedly causes some frustration on the part of third parties and outside observers, but it is in no small part due to the fact that the consequences of such conduct for consumers and for economic welfare are themselves often unclear or ambiguous. The question is whether a change in presumption regarding preferencing would yield better outcomes. While various digital reports advocate for a change in presumption, they are short of actual evidence that preferencing causes welfare losses.<sup>245</sup> As various commentaries of the FTC's case against Google have shown, there are strong procompetitive rationales for the conduct.<sup>246</sup>

### *B. Are Defaults and Pre-Installed Software Exclusionary?*

Another practice that academic scholarship and digital reports identify as a competition problem is that of digital platforms setting defaults.<sup>247</sup> Historically, the most prominent example was Microsoft setting Internet Explorer as the default web browser on its Windows operating system *and* not permitting original equipment manufacturers to remove or replace this default.<sup>248</sup> In Europe, after concluding that Microsoft improperly promoted its own web browser and media player, a remedy was imposed where Microsoft was prohibited from setting defaults.<sup>249</sup> Instead, users were presented with an initial option to select their preferred browser and media players.<sup>250</sup> These scenarios are the forerunners to today's thinking about defaults.

Borrowing from both the *Microsoft* remedies and the behavioral economics literature, digital reports and various scholars argue that defaults entrench market power and, consequently, are condemnable conduct.<sup>251</sup> They further argue that consumers should make an "active decision" in selecting their preferences on digital platforms rather than being presented to them as

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244. See STIGLER REPORT, *supra* note 17, at 31.

245. See CRÉMER REPORT, *supra* note 245, at 66–67.

246. See Salinger & Levinson, *supra* note 112, at 45.

247. For instance, the ACCC Report recommends the following reform:

Google should provide Australian users of Android devices with the same options being rolled out to existing Android users in Europe; that is, the ability to choose their default search engine and default internet browser from a number of options.

If Google does not introduce similar options for Australian Android users by six months from the date of the Report, the ACCC will submit to the Government that it should consider compelling Google to offer this choice.

ACCC REPORT, *supra* note 16, at 30.

248. See *Microsoft*, 253 F.3d at 60–61.

249. See European Commission Press Release IP/09/1941, Antitrust: Commission accepts Microsoft Commitments to Give Users Browser Choice (Dec. 16, 2009).

250. *Id.*

251. See, e.g., ACCC REPORT, *supra* note 16, at 8; Gabriel D. Carroll et al., *Optimal Defaults and Active Decisions*, 124 Q.J. ECON. 1639, 1640 (2009).



defaults.<sup>252</sup> The logic is that this will put competing products on equal footing by requiring consumers to make the initial choice instead of having a dominant platform make it for them.<sup>253</sup>

While this proposed fix is unquestionably about choice, it also affects convenience. Importantly, users value *both* convenience and choice.<sup>254</sup> Imposing a regulatory “active decision” for defaults elevates choice over convenience. In contrast, defaults elevate convenience over active choice while ultimately preserving choice via the ability to change the default—assuming, of course, that consumers are able to change the default without significant costs, which was arguably not the case in *Microsoft*. There is also a third possibility to have only one “option” (i.e., an “exclusive” setting that cannot be adjusted by the user). This third option elevates convenience at the total expense of choice. From a pure welfare perspective, the question is, Which of these designs is optimal?

These tradeoffs can be illustrated with a simple model. Suppose that consumers derive utility from a certain service ( $a$ ) (e.g., a search engine on a mobile phone); thus,  $U = U(a)$ . Further, assume that there are  $n$  possible options for  $a$ , and consumers are able to rank those options in order. Additionally, suppose there are  $T$  total consumers in the market. For the moment, assume there are just two options,  $n = 2$ . A certain percentage of consumers prefer option one ( $a_1$ ), which is denoted as  $\alpha$ , and a certain percentage prefers  $a_2$ , which is denoted as  $1 - \alpha$ . The default is set at  $a_1$ . Assume that the opportunity cost to change the default from  $a_1$  to  $a_2$  is  $c$ . Under this setup, if the default conforms to a consumer’s preferences, then  $U = U(a_1)$  and all costs have been minimized as no switching costs are incurred. If a consumer prefers the alternative to the default, then a cost of  $c$  is incurred to reach  $U = U(a_2)$ .

Given the above,  $\alpha T$  represents the number of consumers that prefer the default option ( $a_1$ ). This group incurs no cost to use the product. In contrast,  $(1 - \alpha)T$  represents the number of consumers that prefer  $a_2$ . The total social cost to have them move to their preferred option is  $(1 - \alpha)T * c$ .<sup>255</sup> Now, if there are no defaults and all consumers must make an active decision, then each consumer must incur some inconvenience cost ( $d$ ) (i.e., the need to go through a series of choices before using a device); thus, the

252. The term “active decision” is borrowed from Carroll et al., *supra* note 251, at 1639.

253. See ACCC REPORT, *supra* note 16, at 10–11.

254. See Carroll et al., *supra* note 251, at 1640.

255. Even if consumers do not “move” to their preferred option, we can consider this the social cost from a mismatch of preferences—although, this lack of switching would only occur if the differential in value between  $a_2$  and  $a_1$  is less than  $c$ . For this purpose, assume that each consumer’s preference for one of the two options is sufficiently strong that it is worth the switching cost.

total social cost from not having a default is  $T * d$ . It follows that the lack of default harms total welfare if  $(1 - \alpha)T * c < T * d$  or  $(1 - \alpha) < d/c$ . Therefore, as long as the percentage of users who want to change the default is less than the ratio of the two costs, moving to an active decision regime is more harmful. For example, assume that twenty percent of users prefer the non-default option ( $a_2$ ); thus,  $(1 - \alpha) = 0.20$ . Further assume that the cost of changing the default is \$1 in opportunity cost, and the opportunity cost of making an active decision is \$0.25. In this case, since  $0.20 < 0.25/1$ , having an active decision regime reduces total welfare. The intuition is that the active decision cost—even though it is one-fourth the cost of changing the default—is incurred over the entire user base, while the cost of changing the default is incurred only by those who do not prefer the default option of  $a_1$ . If the opportunity cost of an active decision falls to \$0.10, then the condition is not satisfied, and it is better—from a pure welfare perspective—to move to an active decision regime.

A number of implications emerge from this simple framework. First, costs matter. If changing the default is relatively costly, then this creates a great deal of inconvenience and could potentially result in living with a suboptimal product if the cost to switch is greater than the marginal benefit—even if that marginal benefit is positive. As switching costs decrease, however, the potential harm to consumers also decreases. Further, the more consumers generally prefer the default option, the more inefficient it is to force each of them to explicitly choose that option. Finally, the move to an active decision regime also depends on the number of active decisions a consumer must make. It is plausible that the marginal cost of making an active decision ( $d$ ) increases with the number of active decisions that must be made (e.g., a start-up process that requires ten active decisions as opposed to one).

Much of the condemnation of defaults derives from the behavioral economics literature that indicates consumers can be “nudged” into one choice or another based on defaults.<sup>256</sup> Depending on the degree of imperfect information, the idea that consumers can be nudged to one choice over another might very well be accurate for a set of consumers<sup>257</sup>—although it reveals nothing about whether the nudge is good or bad for welfare. Yet consumers presumably learn over time if they are satisfied with a particular product. This is where the level of switching costs becomes relevant. Additionally,

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256. See, e.g., RICHARD H. THALER & CASS R. SUNSTEIN, NUDGE: IMPROVING DECISIONS ABOUT HEALTH, WEALTH, AND HAPPINESS 6 (2008) (“[A]ny aspect of the choice architecture that alters people’s behavior in a predictable way without forbidding any options or significantly changing their economic incentives. To count as a mere nudge, the intervention must be easy and cheap to avoid. Nudges are not mandates. Putting the fruit at eye level counts as a nudge. Banning junk food does not.”).

257. *Id.* at 35.

assuming imperfect information to the degree that consumers are unable even to make a choice that is in their own best interest<sup>258</sup> regardless of their level of experience with a product, forcing manufacturers and consumers into using an active decision regime looks like the exact opposite of what would be beneficial to consumers.

Suppose it were determined that the cost of switching away from the default is ten times the cost of an active decision and there is a 50-50 split in preferences between the two options. According to the prior framework, moving to an active decision regime could maximize social welfare. Does it follow that antitrust laws should dictate that, in this case, defaults are anticompetitive? Again, returning to the extract versus extend paradigm, firms are under no obligation to maximize static social welfare.<sup>259</sup> Otherwise, pricing above marginal cost would be an antitrust violation.<sup>260</sup> Firms that set defaults might very well be nudging consumers to their own products, even if that product is deemed objectively inferior to an alternative product. If so, is this an impediment to competition or just another form of a firm's legitimate extension of its own market power? The difficulty of this question is that it involves assessments of relative quality, the potential efficiency justifications for setting defaults a certain way, and the "foreclosure" impact on rivals. For instance, does it matter that a leading platform had the same defaults when it first entered? It seems it should. Consequently, questions regarding defaults and their potential for anticompetitive harm must be made on a case-by-case basis with a detailed assessment of all relevant questions.

Another point worth emphasizing is that unless the ability to change the default exists in name only, as was the allegation in *Microsoft*,<sup>261</sup> or involves relatively low to nominal switching costs (even if they may be larger than making an active decision), the burden should be firmly on the plaintiff to demonstrate that consumers are systematically being harmed due to the foreclosure of competitive alternatives—even if most consumers do not in fact choose to switch to those alternatives.

Further, there are clear instances when defaults *are* socially optimal, such as when the relative costs of forcing consumers into a series of active decisions before using a product are high (i.e., the value of convenience is greater than the value of choice).<sup>262</sup> Additionally, even if most consumers prefer a rival's product that is not set as the default (e.g., if consumers overwhelmingly prefer Google Maps over Apple Maps on Apple's iPhones),

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258. See, e.g., Richard H. Thaler & Cass R. Sunstein, *Libertarian Paternalism*, 93 AM. ECON. REV. 175, 175 (2003) ("The false assumption is that people always (usually?) make choices that are in their best interest.").

259. See Carlton & Heyer, *supra* note 37, at 286.

260. See *id.* at 287–88.

261. *United States v. Microsoft*, 253 F.3d 34, 84–85 (D.C. Cir. 2001).

262. See, e.g., Carroll et al., *supra* note 251, at 1654–55.

firms are generally not under an obligation to promote a rival's product.<sup>263</sup> While this is—strictly speaking—a legal point, it is also an economic one: it is highly likely that dynamic incentives are negatively affected by the promotion of a rival's product.<sup>264</sup>

Finally, defaults are pervasive in virtually every platform and design—irrespective of the level of antitrust market power.<sup>265</sup> In contrast, active decision prompts are almost non-existent.<sup>266</sup> As Professor Richard Thaler has pointed out, “[d]efaults are ubiquitous and powerful. They are also unavoidable in the sense that for any node of a choice architecture system, there must be an associated rule that determines what happens to the decision maker if she does nothing.”<sup>267</sup> Further, defaults allow a platform to better control the consumer experience by allowing the firm to optimize the “setup” and creating some basic uniformity while, at the same time, ultimately providing users an ability to tailor the experience to a particular preference.<sup>268</sup>

For these reasons, sweeping bans on defaults that are employed by market leading platforms could conceivably reduce welfare. This reduction would arguably interfere with the normative purpose of antitrust laws. Defaults can have a strong efficiency justification, and the likelihood of an efficiency does not go away just because the firm involved happens also to be a platform with a lot of market power. Of course, if the conduct is coupled with other considerations, such as imposing exclusivity, tying, and other vertical controls, then the analysis should properly be expanded to incorporate these considerations.<sup>269</sup>

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263. See *Verizon Commc'ns Inc. v. L. Offs. of Curtis V. Trinko, LLP*, 540 U.S. 398, 411 (2004).

264. See, e.g., Thomas W. Hazlett & Anil Caliskan, *Natural Experiments in U.S. Broadband Regulation* 15 (Geo. Mason Univ. L. & Econ. Res. Paper Series, Paper No. 04, 2008) (“Cable modem services held nearly a two-to-one market share advantage when DSL carriers were most heavily obligated to provide ‘open access’ to competing ISPs. Once the FCC eliminated a key provision of that access regime . . . DSL subscribership increased dramatically. By year-end 2006, DSL subscribership was 65% higher – more than 9 million households – than it would have been under the linear trend established under ‘open access’ regulation.”).

265. See Richard H. Thaler et al., *Choice Architecture*, in *THE BEHAVIORAL FOUNDATIONS OF PUBLIC POLICY* 428 (2014).

266. See ACCC REPORT, *supra* note 16, at 10–11.

267. Thaler et al., *supra* note 265, at 430.

268. See *id.*

269. For instance, in *Microsoft*, Microsoft argued that other operating systems—for example, IBM's OS/2—also included a browser. The difference was that the plaintiff argued and the district court found that Microsoft's browser was “tied” and not simply included as the default. See *United States v. Microsoft*, 253 F.3d 34, 84 (D.C. Cir. 2001) (*per curiam*).

IV. CANARY IN THE COAL MINE? THE *OHIO V. AMERICAN EXPRESS* DECISION

Given the discussion from the prior two parts, there is clearly an overwhelming belief from a growing movement of academics, foreign competition authorities, and politicians that antitrust jurisprudence—particularly as it applies to the digital sector—needs serious reform. Again, this belief is built on a number of pillars. The first pillar, which was addressed in Part II above, is that digital platforms have unique characteristics, foundationally based on their network effects. The second pillar, which was addressed in Part III, is that self-preferencing and defaults are welfare-reducing and anticompetitive. A third pillar is that the U.S. legal system is currently incapable of effectively analyzing and ruling on complex cases involving digital platforms.<sup>270</sup>

The Supreme Court's recent decision in *Ohio v. American Express* (*Amex*) is presented by critics as an alleged inability of current antitrust jurisprudence to properly assess the intricacies of network effects and platform conduct.<sup>271</sup> Consequently, critics argue that antitrust law needs either to develop stronger anticompetitive presumptions regarding market power and specific practices or to move beyond antitrust law to regulatory solutions.<sup>272</sup> This final part assesses whether the Court in *Amex* understood the role of network effects and whether it properly applied an economic analysis and the rule of reason standard to the platform's challenged conduct.

American Express uses an antisteering provision in its agreement with merchants. When an American Express cardholder is about to purchase an Omega watch from a merchant, under its agreement with American Express, that merchant is prohibited from “steering” the cardholder to an alternate credit card such as Discover—although, the merchant can steer consumers to alternate payment methods such as cash, checks, or debit cards.<sup>273</sup> A merchant, for instance, would not be able to offer a one percent discount on the watch's purchase price in exchange for the cardholder using a Discover

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270. STIGLER REPORT, *supra* note 17, at 85.

271. See, e.g., Tim Wu, *The American Express Opinion, the Rule of Reason, and Tech Platforms*, 7 J. ANTITRUST ENF'T 117, 118 (2019); Michael L. Katz, *Platform Economics and Antitrust Enforcement: A Little Knowledge Is a Dangerous Thing*, 28 J. ECON. & MGMT. STRATEGY 138, 138 (2019); Dennis W. Carlton, *The Anticompetitive Effects of Vertical Most-Favored-Nation Restraints and the Error of Amex*, 2019 COLUM. BUS. L. REV. 93, 103; STIGLER REPORT, *supra* note 17, at 91.

272. See, e.g., CRÉMER REPORT, *supra* note 15, at 51–52.

273. The merchant can, however, steer consumers to alternate payment methods, such as cash, checks, or debit cards. See *Ohio v. Am. Express Co. (Amex)*, 138 S. Ct. 2274, 2283 (2018). Visa and MasterCard had similar antisteering provisions; however, they voluntarily revoked their provisions after being sued by the DOJ. See Chad Bray, *Visa, MasterCard Win Approval of Settlement in 'Anti-Steering' Case*, WALL ST. J. (July 20, 2011), <https://www.wsj.com/articles/5B10001424053111904233404576458081673213422> [<https://perma.cc/G32H-NE6J>].

card instead.<sup>274</sup> The reason a merchant has this incentive is that the swipe fee—the percentage of the retail price that the merchant must pay the credit card company—is higher for American Express (e.g., 6%) than it is for Discover (e.g., 3%).<sup>275</sup> By switching the cardholder to Discover, both the merchant and cardholder could end up keeping more money. Steering sounds like a great deal. Both the merchant and the cardholder are made better off—at least in the short term. Consequently, is the antisteering provision an anticompetitive attempt to improperly “restrain trade” and harm consumer welfare through a contract?

In a 5–4 vote, the Court ruled that American Express did not violate § 1 of the Sherman Act with its antisteering provision.<sup>276</sup> Writing for the majority, Justice Thomas concluded that the policy, which has been in place since the 1950s, does not “unreasonably restrain trade.”<sup>277</sup> The majority explained that the antisteering provision fosters the preservation of the American Express network, which is a differentiated product that caters to high-valued consumers with its premium customer service, cardholder benefits, and generous member rewards.<sup>278</sup> The goal of these features is to attract and retain these high-valued cardholders and to encourage their frequent use of the card. These high-valued cardholders, in turn, attract merchants to become part of the American Express network.<sup>279</sup>

American Express argued that when merchants steer cardholders away, they free ride on the company’s cardholder network.<sup>280</sup> The idea was that American Express spends a considerable amount of resources developing a desirable network of cardholders who gain benefits from using their cards.<sup>281</sup> Not surprisingly, these cardholders are attracted to merchants that accept the American Express card. Yet if the merchant switches cardholders at the point of sale, American Express is not able to benefit from driving greater traffic to

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274. *See Amex*, 138 S. Ct. at 2283.

275. *See id.* at 2282–83.

276. *Id.* at 2290. The antisteering provision is a form of a vertical restraint, which is an agreement between two firms on the same vertical supply chain. *Id.* at 2284. These restraints fall under a rule of reason analysis where potential anticompetitive harms are weighed against potential procompetitive benefits. *See Leegin Creative Leather Prods., Inc. v. PSKS, Inc.* 551 U.S. 877, 881–82 (2007); *Cont’l T.V., Inc. v. GTE Sylvania, Inc.*, 433 U.S. 36, 49 (1977).

277. *See Amex*, 138 S. Ct. at 2290.

278. *See id.* at 2282 (“In sum, Amex’s business model has stimulated competitive innovations in the credit-card market, increasing the volume of transactions and improving the quality of the services.”).

279. *Id.* (“Merchants place a higher value on these cardholders, and Amex uses this advantage to recruit merchants.”).

280. *See Brief for Respondents at 1, Amex*, 138 S. Ct. 2274 (2018) (No. 16-1454).

281. *See id.* Unlike Visa and MasterCard, who earn half of their revenues from cardholder interest payments, American Express earns the bulk of its revenue from swipe fees. *Id.*

the merchant.<sup>282</sup> While this practice of “steering” creates a potential short-run gain to merchants and cardholders, they are—in effect—imposing a negative externality on other merchants and cardholders.<sup>283</sup> Steering reduces the viability of the American Express network and, in particular, the ability of American Express to offer a premium product, which is what attracted cardholders to the network in the first place.<sup>284</sup> Further, merchants are free to not be a part of the American Express network if they do not agree with the antisteering term.<sup>285</sup>

The fact that American Express holds only a 26% share in the credit card market suggests that its alleged significant market power over merchants is questionable<sup>286</sup>—not to mention that there are other forms of payment that are not affected by the policy, including cash, checks, and debit cards.<sup>287</sup> To put this value into context, according to a report from members of the Federal Reserve System’s Cash Product Office, only 27% of consumers chose credit cards as their primary payment preference.<sup>288</sup> Consequently, doing a back-of-the-envelope calculation, only 7% of consumers prefer to use American Express as their primary payment method. It seems highly implausible that a policy that affects 7% of consumers could cause anticompetitive harm to merchants—given consumers have the *ex ante* choice to accept or reject the terms to join the network.

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282. *See id.* at 2283.

283. *See id.* at 2289 (suggesting that antisteering “agreements actually stem negative externalities in the credit-card market and promote interbrand competition”).

284. This description of the free-riding problem is focused on free-riding on the brand and not on other forms of potential free-riding described by Justice Breyer in his dissent in *Amex*. *Id.* at 2304 (Breyer, J., dissenting). Nor is free-riding used here as it is in Carlton, *supra* note 271, at 104. Brand free-riding is described in the Second Circuit’s opinion. *See United States v. Am. Express Co.*, 838 F.3d. 179, 204 (2d Cir. 2016).

285. *See Amex*, 138 S. Ct. at 2277–78 (discussing that a company (e.g., American Express) needs both cardholders and merchants using its network).

286. *See id.* at 2282. This is not to suggest that American Express does not have some degree of economic market power based on a differentiated product. This is presumably what allows American Express to charge a higher swipe fee. Yet this is different from establishing antitrust market power, which is based more on controlling a significant and relevant area of commerce. *See Benjamin Klein, Market Power in Antitrust: Economic Analysis After Kodak*, 3 SUP. CT. ECON. REV. 43, 73 (1993) (“Therefore, although most firms have some market power in the strict economic sense, most firms do not have market power in the sense relevant to antitrust because ‘when courts find a firm has market power, they must mean a substantial amount of market power.’”).

287. If merchants are able to switch customers to cash or credit, does this undermine American Express’s free-riding argument? It does to a degree; although steering to other credit cards presumably represents the more significant impact on free-riding.

288. *See WENDY MATHENY ET AL., CASH PROD. OFF. FED. RSRV. SYS., THE STATE OF CASH* 9 (2016), <https://www.frbsf.org/cash/files/FedNotes-The-State-of-Cash-Preliminary-Findings-2015-Diary-of-Consumer-Payment-Choice.pdf> [<https://perma.cc/X42F-HQ8U>].

Ultimately, although *Amex* was most directly concerned with American Express's antisteering provision, a broader legal issue concerned the burden that a plaintiff faces in a rule of reason case involving a two-sided platform.<sup>289</sup> The rule of reason analysis follows a three-step framework, where the standard of proof is a preponderance of the evidence with no presumption of legality or illegality.<sup>290</sup> Under step one, the plaintiff has a prima facie burden of producing evidence to show anticompetitive harm.<sup>291</sup> If anticompetitive harm is demonstrated, the burden of production shifts to the defendant under step two, during which the defendant must offer evidence of procompetitive efficiencies.<sup>292</sup> If such efficiencies are identified, step three shifts the burden of production back to the plaintiff to demonstrate that the procompetitive efficiencies either could be achieved through less restrictive alternatives or are significantly smaller than the demonstrated harms.<sup>293</sup>

In cases where the defendant operates a platform, the debate over how to apply the rule of reason boils down to when and where the defendant should properly account for potentially offsetting the efficiency effects that occur “on the other side” of the market.<sup>294</sup> Here, American Express's practice plausibly benefited its cardholders, even though merchants may have paid higher fees as a consequence. Specifically, is the step one prima facie burden—showing that the practice has generated anticompetitive effects—met by demonstrating welfare loss to just one side of a multi-sided platform (e.g., merchants)? Or does this step require a showing of net harm to competition after accounting for the benefits to cardholders? The question of which party properly faces the burden of showing that the benefits exceed the harms—and where in the rule of reason process this should take place—is critical.

The district court ruled that the plaintiffs in *Amex* met their prima facie burden by presenting sufficient evidence that merchants were paying a higher price due to higher swipe fees (compared to a counterfactual without the antisteering provision).<sup>295</sup> The Second Circuit reversed and found that the district court improperly, and too narrowly, focused on the harm to merchants when, for the plaintiffs to meet their prima facie burden, the court needed to

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289. See *Amex*, 138 S. Ct. at 2285–87 (discussing two-sided platforms).

290. *Id.* at 2284.

291. *Id.*; see *Brunswick Corp. v. Pueblo Bowl-O-Mat, Inc.*, 429 U.S. 477, 489 (1977) (“The injury should reflect the anticompetitive effect either of the violation or of anticompetitive acts made possible by the violation.”).

292. *Amex*, 138 S. Ct. at 2284.

293. *Id.* Implicitly, there is a “fourth step” where the court balances both the anticompetitive and procompetitive effects. See Michael A. Carrier, *The Four-Step Rule of Reason*, ANTITRUST, Spring 2019, at 50, 51.

294. See Herbert Hovenkamp, *Platforms and the Rule of Reason: The American Express Case*, 2019 COLUM. BUS. L. REV. 35, 71–75.

295. *United States v. Am. Express Co.*, 88 F. Supp. 3d 143, 151–52 (E.D.N.Y. 2015), *rev'd*, 838 F.3d 179 (2d Cir. 2016), *aff'd sub nom. Amex*, 138 S. Ct. at 2274.



consider the welfare of both merchants and cardholders (i.e., both sides of a two-sided platform).<sup>296</sup> The Supreme Court affirmed the Second Circuit's decision and found:

The plaintiffs have not carried their burden to prove anticompetitive effects in the relevant market. The plaintiffs stake their entire case on proving that American Express' agreements increase merchant fees. We find this argument unpersuasive. . . . Evidence of a price increase on one side of a two-sided transaction platform cannot by itself demonstrate an anticompetitive exercise of market power.<sup>297</sup>

Much has been written about *Amex*, and there is no shortage of vocal critics and defenders.<sup>298</sup> Critics assert that the Court did not understand network effects and platform economics and, more importantly, that the Court bungled the implementation of these economic concepts into a rule of reason framework, including who should bear the burden of showing the welfare benefits and harms.<sup>299</sup> However, to the contrary, the Court properly and reasonably fit the features of platform markets into a conceptually coherent methodology that aligns the rule of reason analysis with current economic learning.

Some scholars argue that platform markets, such as credit card networks, should be defined as two separate, relevant product markets: one for cardholders and one for merchants.<sup>300</sup> Further, while acknowledging the need to consider the interrelationship between the two sides, these scholars contend that since these are two separate markets, the *prima facie* burden is satisfied when anticompetitive harm is found on only one of these sides.<sup>301</sup>

Splitting a platform into two separate markets for the purpose of antitrust analysis, however, runs afoul of a simple reality: no platform maximizes profit over just one side.<sup>302</sup> Rather, profit maximization is determined through a joint

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296. *Amex*, 838 F.3d at 206–07.

297. *Amex*, 138 S. Ct. at 2287.

298. For criticisms of the decision, see *supra* note 271 and accompanying text. See also Hovenkamp, *supra* note 294, at 46–56. For defenders of the decision, see DAVID S. EVANS & RICHARD SCHMALENSEE, ANTITRUST ANALYSIS OF PLATFORM MARKETS: WHY THE SUPREME COURT GOT IT RIGHT IN *AMERICAN EXPRESS* 64 (2019); Joshua D. Wright & John M. Yun, *Burdens and Balancing in Multisided Markets: The First Principles Approach of Ohio v. American Express*, 54 REV. INDUS. ORG. 717 (2019).

299. See, e.g., Carlton, *supra* note 271, at 102–106.

300. See Michael Katz & Jonathan Sallet, *Multisided Platforms and Antitrust Enforcement*, 127 YALE L.J. 2142, 2144–45 (2018).

301. See *id.* at 2173–74.

302. One could argue that a firm producing complementary goods also does not maximize profit over just one good (e.g., a firm that manufactures both printers and ink). Yet this

consideration of both sides. A platform, by its very nature, balances the interests of multiple sides and structures its price and non-price terms to achieve this balance. Further, as the Court emphasized, credit card networks are “transaction platforms,”<sup>303</sup> which are platforms where both sides share a common level of output. This also illustrates that artificially bifurcating the two sides into separate competitive effects analyses does not align with how firms actually make decisions. Antitrust law must start from these economic realities and fit the administration of the rule of reason analysis around them.

Conceptually, perhaps one of the strongest criticisms of the Court’s approach is that it effectively eliminates step two of the rule of reason analysis—where the defendant bears the burden of justifying its conduct as procompetitive.<sup>304</sup> Instead, that burden is shifted to the plaintiff in step one during which, in order to meet its *prima facie* burden, the plaintiff must show that the net effect is negative.<sup>305</sup> This is an important criticism. Ultimately, the Court had to weigh two possible regimes. The first regime involves a framework where the *prima facie* burden is met simply with a price increase on one side.<sup>306</sup> The second regime, which was adopted by the Court, involves a framework where the plaintiff’s burden must not only include a one-sided price increase but also include “evidence of anticompetitive effects . . . such as reduced output, increased prices, or decreased quality.”<sup>307</sup> In other words, is a one-sided price increase actually and reliably evidence of anticompetitive harm? The integrated nature of the two sides does not support this proposition; consequently, the second regime better aligns with the economic realities of platforms. Importantly, Professors David Evans and Richard Schmalensee assert the following:

This is not a matter of burden-shifting. There is simply no way to know, especially in the case of a platform that provides a service that customers on each side consume jointly, whether a practice is anticompetitive without at least considering both types of customers and the overall competition among platforms. That analysis must,

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recognition proves the point. One cannot understand the pricing of printers without understanding the demand for ink and vice versa. The difference is that printers and ink are complementary products used by the same group of consumers. Thus, a given consumer will internalize the full benefits and costs of pricing decisions from a firm over both printers and ink products. This is not the case for a platform which is balancing the interests of two or more separate groups.

303. *Amex*, 138 S. Ct. 2274, 2280 (2018); *see also* Lapo Filistrucchi, *Two-Sided vs. Complementary Products*, CPI ANTITRUST CHRON., Sept. 2018, at 2, 4.

304. *See* Carlton, *supra* note 271, at 102.

305. *See id.*

306. *See Amex*, 138 S. Ct. at 2278.

307. *Id.* at 2284.

therefore, happen at the first stage of the rule of reason to assess whether the conduct is anticompetitive or not.<sup>308</sup>

Additionally, under a framework where the prima facie burden is met simply with a price increase on one side, this “distorts the assignment of burdens in the form of placing a thumb on the scale for plaintiffs in platform cases by redefining ‘competitive harm’ to mean any harm to any group of consumers.”<sup>309</sup> The reality is that such an alternate framework would result in no real ability of the defendant to offer procompetitive justifications in step two. Evans and Schmalensee, for example, observe:

First, it isn’t clear that the court could consider the other side-specific market in the second stage of the rule of reason inquiry. The trial court judge noted that pro-competitive benefits on the consumer side, in “a separate, though intertwined antitrust market,” could not be used to offset anti-competitive effects on the merchant side. Second, after finding that a practice is anti-competitive in the first stage, courts seldom give much weight to pro-competitive benefits in the second stage.<sup>310</sup>

Further, it is not entirely clear that the burden is actually higher for plaintiffs in step one—particularly for transaction platforms. For instance, output, which is shared by both sides of a transaction platform, could serve as a reliable guide to welfare effects. This focus on output is something that conforms with both the law and economics of assessing markets and market power.<sup>311</sup>

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308. EVANS & SCHMALENSEE, *supra* note 298, at 40.

309. Wright & Yun, *supra* note 298, at 727.

310. EVANS & SCHMALENSEE, *supra* note 298, at 27. Note that the argument that benefits from “a separate, though intertwined antitrust market” could not offset harm in the merchant market is a legal, not economic, argument.

311. See *Brooke Grp. Ltd. v. Brown & Williamson Tobacco Corp.*, 509 U.S. 209, 237 (1993) (“Where, as here, output is expanding at the same time prices are increasing, rising prices are equally consistent with growing product demand.”); *Leegin Creative Leather Prods., Inc. v. PSKS, Inc.*, 551 U.S. at 895–96 (holding that it is a mistake to rely on “pricing effects absent a further showing of anticompetitive conduct” and observing that “prices can be increased in the course of promoting procompetitive effects”). For more on the importance of output effects, see Thomas A. Lambert, *A Decision-Theoretic Rule of Reason for Minimum Resale Price Maintenance*, 55 ANTITRUST BULL. 167, 169 (2010); Wright & Yun, *supra* note 298, at 732–34. It is worth noting that Professor Michael Katz has shown scenarios where output expansion does not necessarily improve welfare. See Katz, *supra* note 271, at 146–47. Yet, as a general proposition, output expansion is a highly reliable metric for assessing improvements in consumer welfare. See, e.g., 2B PHILLIP E. AREEDA & HERBERT HOVENKAMP, ANTITRUST LAW ¶ 501, at 109 (4th ed. 2017) (“Market power is the ability to raise price profitably by restricting output.”).

In sum, the interrelationship between the various sides of a platform is critical.<sup>312</sup> Specifically, for a platform like American Express, changes in cardholders' terms have a material impact on the number of transactions that merchants will enjoy. These feedback effects between the two sides are central to assessing conduct on the platform. The rule of reason framework established by the Court in *Amex* properly assessed and incorporated the economic literature on platforms into an administrable, coherent approach by shifting the burden of production. Rather than increasing the burden on plaintiffs, it requires plaintiffs to do a *complete* analysis of the effects of a given conduct on the platform instead of on an unnatural and narrowly focused segment of an integrated market.<sup>313</sup>

## V. CONCLUSION

Presently, antitrust law is among its most unprecedented times where there is a chorus—albeit lacking complete consonance—from various stakeholders seeking significant antitrust reforms. This chorus is comprised of myriad groups of academics, politicians from across the political divide, and various digital reports.<sup>314</sup>

Ultimately, these calls for reform too often lack completeness and are too broad and general to form a reliable guide for agencies, courts, and legislatures. This is not to say questions regarding large platforms are completely and categorically settled. Network effects are certainly a key consideration in assessing certain digital markets, but it is important to understand precisely how and to what extent they are affecting these markets. Rather than being a presumptive source of market failure, network effects are more properly assessed as a market feature that must be accounted for in order to understand firm conduct. Similarly, there is a paucity of evidence

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312. See, e.g., David S. Evans, *Basic Principles for the Design of Antitrust Analysis for Multisided Platforms*, 7 J. ANTITRUST ENF'T 319, 326 (2019) (“What makes two-sided platforms different is that, not only are there two distinct types of customers, but the demand by those customers are interdependent, as are the prices they are charged, and their welfare is linked.”).

313. There is a question regarding whether an integrated competitive effects analysis necessarily involves defining an integrated relevant product market or whether an integrated effects analysis can still be performed with separate relevant product markets. While the logic follows most naturally with an integrated market, there is still an argument that an integrated effects analysis is still consistent with separate markets. See Wright & Yun, *supra* note 298, at 726–29.

314. This involvement of stakeholders outside of academia perhaps distinguishes the current antitrust reform movement from the reforms advanced in the 1970s, which was a “double helix” of influence and contributions from both the Chicago and Harvard Schools. See William E. Kovacic, *The Intellectual DNA of Modern U.S. Competition Law for Dominant Firm Conduct: The Chicago/Harvard Double Helix*, 2007 COLUM. BUS. L. REV. 1, 13–14.

demonstrating that the conduct of digital platforms is actually reducing welfare and harming consumers. Finally, a close reading of the Court's *Amex* decision reveals an opinion that carefully treads the economic literature on platforms and implements that learning into a coherent rule of reason framework.

The most radical claim being made today is perhaps the most controversial one: that current antitrust law and enforcement actually are sufficient to properly assess and adjudicate conduct involving digital platforms. Antitrust law has always had an evolutionary character that recognizes the need to adjust to new learnings.<sup>315</sup> This does not mean that the law is necessarily efficient or always moving in the right direction. Still, as long as antitrust law is tied to measures of economic efficiency and welfare and so long as it continues to carefully examine actual evidence rather than fall victim to unfounded presumptions, it provides a more reliable body of law for fostering innovation and economic progress than do the alternatives being proposed by its critics.

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315. See, e.g., *Appalachian Coals, Inc. v. United States*, 288 U.S. 344, 359–60 (1933) (“As a charter of freedom, the [Sherman Act] has a generality and adaptability comparable to that found to be desirable in constitutional provisions.”). In overturning per se condemnation of maximum resale price maintenance, Justice O’Connor wrote that “the general presumption that legislative changes should be left to Congress has less force with respect to the Sherman Act in light of the accepted view that Congress ‘expected the courts to give shape to the statute’s broad mandate by drawing on common-law tradition.’” *State Oil Co. v. Khan*, 522 U.S. 3, 20–21 (1997) (quoting *Nat’l Soc’y of Pro. Eng’rs v. United States*, 435 U.S. 679, 688 (1978)); see also D. Bruce Johnsen, *Wealth is Value*, 15 J. LEGAL STUD. 263, 286 (1986) (“The notion that adjudication is an iterative process designed to minimize the judiciary’s measurement costs by requiring only marginal decisions is therefore supported in the law of antitrust.”).