

**THE ESSENTIAL FACILITIES DOCTRINE IN THE DIGITAL ECONOMY:
DISPELLING PERSISTENT MYTHS**

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The antitrust “essential facilities” doctrine is reawakening. After decades of rejection and decline, the doctrine’s approach of granting access rights to facilities for which there is no reasonable alternative in the market has received several high-profile endorsements across the political spectrum. While courts have mainly applied the doctrine to physical infrastructure, its potential now lies in addressing the gatekeeping power of online platforms.

However, despite its recent endorsements, the doctrine’s criticisms linger. Many of the objections to the essential facilities doctrine are fueled by persistent myths and misconceptions, most prominently related to its economic justification, administrability, and propensity to entrench monopoly power. This Article lays out the case for the essential facilities doctrine in the digital economy and addresses the most common counterarguments that limit the doctrine’s potential to open digital markets.

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INTRODUCTION

The “essential facilities” doctrine¹ is on the cusp of a reawakening in American antitrust law.² The doctrine grants competitors the right to access essential facilities of monopolists to the extent that these competitors depend on the facilities and cannot reasonably duplicate them.³ This approach forced railroad companies and utility providers to share their infrastructure, for

¹ For a selection of literature on the essential facilities doctrine, see Zachary Abrahamson, *Essential Data*, 124 YALE L.J. 867 (2014); Phillip Areeda, *Essential Facilities: An Epithet in Need of Limiting Principles*, 58 ANTITRUST LAW JOURNAL 841 (1989); Michael Boudin, *Antitrust Doctrine and the Sway of Metaphor*, 75 GEO. L. J. 395, 397–403 (1986); Brett Frischmann & Spencer Weber Waller, *Revitalizing Essential Facilities*, 75 ANTITRUST LAW JOURNAL 1 (2008); David J. Gerber, *Rethinking the Monopolist’s Duty to Deal: A Legal and Economic Critique of the Doctrine of “Essential Facilities,”* 74 VA. L. REV. 1069 (1988); Keith N. Hylton, *Economic Rents and Essential Facilities*, 1991 BYU L. REV. 1243 (1991); Lina M. Khan, *The Separation of Platforms and Commerce*, 119 COLUM. L. REV. 973, 1027–30 (2019); Lina M. Khan, *Amazon’s Antitrust Paradox*, 126 YALE L.J. 710, 800–802 (2017); Marina Lao, *Search, Essential Facilities, and the Antitrust Duty to Deal*, 11 NORTHWESTERN JOURNAL OF TECHNOLOGY AND INTELLECTUAL PROPERTY 276 (2013); Abbott B. Lipsky & Gregory J. Sidak, *Essential Facilities*, 51 STAN. L. REV. 1187 (1999); Scott D. Makar, *The Essential Facility Doctrine and the Health Care Industry*, 21 FLA. ST. U. L. REV. 913 (1994); Robert Pitofsky et al., *The Essential Facilities Doctrine under U.S. Antitrust Law*, 70 ANTITRUST L.J. 443 (2002); James R. Ratner, *Should There Be an Essential Facility Doctrine*, 21 U.C. DAVIS L. REV. 327 (1988); David Reiffen & Andrew N. Kleit, *Terminal Railroad Revisited: Foreclosure of an Essential Facility or Simple Horizontal Monopoly?*, 33 J.L. & ECON. 419 (1990); John T. Soma et al., *The Essential Facilities Doctrine in the Deregulated Telecommunications Industry*, 13 BERKELEY TECH. L.J. 565, 580–605 (1998).

² Nikolas Guggenberger, *Good Times for Antitrust in the U.S.*, 70 WIRTSCHAFT UND WETTBEWERB 633 (2020); Nikolas Guggenberger, *Essential Platform Monopolies: Open Up, Then Undo*, PRO MARKET (Dec. 7, 2020), <https://promarket.org/2020/12/07/essential-facilities-regulation-platform-monopolies-google-apple-facebook/>. See H. Subcomm. on Antitrust, Com. and Admin. L. of the H. Com. on the Judiciary, *Investigation of Competition in Digital Markets: Majority Staff Report and Recommendations* 397–98 (Oct. 2020); Ken Buck, *The Third Way* 12–13 (Oct. 2020). Calls for a revival of the essential facilities have even reached the judiciary; Diane Wood, *The Old New (Or is It the New Old) Antitrust: “I’m Not Dead Yet!,”* 51 LOYOLA UNIV. CHI. L.J. 1, 5, 15–16 (2019).

³ *MCI Communications Corp. v. Am. Tel. & Tel. Co.*, 708 F.2d 1081, 1132–33 (7th Cir. 1983); Sandeep Vaheesan, *Reviving an Epithet: A New Way Forward for the Essential Facilities Doctrine*, 2010 UTAH L. REV. 911, 911 (2010).

example.⁴ After more than a generation of rejection and decline,⁵ the doctrine is gaining steam again, and rightly so.⁶ In fact, the concept might become the unexpected comeback kid of the inevitable reckoning with immense concentration in the economy generally⁷

⁴ United States v. Terminal Railroad Ass'n of St. Louis, 224 U.S. 383 (1912); Otter Tail Power Co. v. United States, 410 U.S. 366 (1973).

⁵ See Thomas B. Nachbar, *The Public Network*, 17 COMMLAW CONSPECTUS 67, 75 (2008).

⁶ For the development of the essential facilities doctrine, see *id.*; Frischmann & Waller, *supra* note 1, at 5–8; Gerber, *supra* note 1, at 1077–83; Hylton, *supra* note 1, at 1245–51; Marina Lao, *Networks, Access, and Essential Facilities: From Terminal Railroad to Microsoft Symposium: Evolution and Change in Antitrust Law*, 62 SMU L. REV. 557, 563–66 (2009); Lipsky & Sidak, *supra* note 1, at 1195–1211; Makar, *supra* note 1, at 914–18; David M. Podell, *The Evolution of the Essential Facilities Doctrine and Its Application to the Deregulation of the Natural Gas Industry*, 24 TULSA L.J. 605 (1989); Pitofsky et al., *supra* note 1, at 445–48; Soma et al., *supra* note 1, at 580–605; Vaheesan, *supra* note 3, at 918–55; Wood, *supra* note 2, at 6–15. For recent endorsements of the essential facilities doctrine pertaining to the digital economy, see Abrahamson, *supra* note 1; Khan, *Amazon's Antitrust Paradox*, *supra* note 1, at 800–802; Nikolas Guggenberger, *Essential Platforms*, 24 STAN. TECH. L. REV. 237 (2021); Lao, *supra*, at 575; Vaheesan, *supra* note 3, at 912–13; 955; 961–62 (specifically for intangible assets and in the technology sector). For a public utility model, see K. Sabeel Rahman, *The New Utilities: Private Power, Social Infrastructure, and the Revival of the Public Utility Concept*, 39 CARDOZO L. REV. 1621 (2018).

⁷ See Council of Economic Advisers, *Benefits of Competition and Indicators of Market Power* 4–7 (May 2016); THOMAS PHILIPPON, *THE GREAT REVERSAL: HOW AMERICA GAVE UP ON FREE MARKETS* (2019); David Autor et al., *The Fall of the Labor Share and the Rise of Superstar Firms*, 135 THE QUARTERLY JOURNAL OF ECONOMICS 645, 183 (May 2020); *id.* at 663–65; Matias Covarrubias et al., *From Good to Bad Concentration? US Industries over the Past 30 Years*, 34 NBER MACROECONOMICS ANNUAL 1 (Jan. 2020); Jason Furman & Peter Orszag, *A Firm-Level Perspective on the Role of Rents in the Rise in Inequality*, in *TOWARD A JUST SOCIETY: JOSEPH STIGLITZ AND TWENTY-FIRST CENTURY ECONOMICS* 19, 33–38 (Martin Guzman ed., 2018); Germán Gutiérrez & Thomas Philippon, *Declining Competition and Investment in the U.S.*, NBER Working Paper (Jul. 2017); Barak Orbach, *Anything, Anytime, Anywhere: Is Antitrust Ready for Flexible Market Arrangements?*, 20 THE ANTITRUST SOURCE 12 (Apr. 2021); Herbert J. Hovenkamp & Fiona Scott Morton, *Framing the Chicago School of Antitrust Analysis*, 168 U. PA. L. REV. 1843, 1852–53 (2021); Marshall Steinbaum & Maurice E. Stucke, *The Effective Competition Standard: A New Standard for Antitrust*, 87 U. CHI. L. REV. 595, 595, 601 (2020). *But see* C. Lanier Benkard et al., *Concentration in Product Markets*, NBER Working Paper No. 28745, 5 (May 2021) (finding decreasing concentration in more narrowly defined product markets).

and gatekeeper power⁸ in the digital economy specifically.⁹ The recent Democratic House report detailing the findings of its “Investigation of Competition in Digital Markets” and the Republican counterpart “Third Way” report both endorse access rights to essential facilities.¹⁰

Even the traditionally antitrust-skeptic business community seems out of lockstep, with smaller enterprises and their interest groups favoring more vigorous enforcement against dominant digital platforms as a way to level the playing field.¹¹ Nascent bipartisan support for the essential facilities doctrine combined with an opening in the business community creates a cocktail that can induce change even in an otherwise gridlocked legislature. Indeed, Sen. Mark R. Warner (D-VA) sponsored the bipartisan Augmenting Compatibility and Competition by Enabling Service Switching Act of 2019 (ACCESS Act of 2019) together with Sens. Josh Hawley (R-MO) and Richard Blumenthal (D-CT) to “promote competition and reduce consumer switching costs” among others by creating access rights and enabling interoperability between services.¹² In the

⁸ The gatekeeping power of technology platforms has many dimensions. See Julie E. Cohen, *Law for the Platform Economy*, 51 U.C. DAVIS L. REV. 133 (2017); Damien Geradin & Dimitrios Katsifis, *The Antitrust Case Against the Apple App Store*, J. COMPETITION L. & ECON. 2–3 (2021); Thomas Kadri, *Digital Gatekeepers*, 99 TEX. L. REV. 951 (2021); Kate Klonick, *The New Governors, The People, Rules, and Processes Governing Online Speech*, 131 HARV. L. REV. 1598 (2018); Przemysław Palka, *The World of Fifty (Interoperable) Facebooks*, 51 SETON HALL L. REV. 1193 (2021); Rory Van Loo, *The New Gatekeepers: Private Firms as Public Enforcers*, 106 VA. L. REV. 467 (2020); Rory Van Loo, *Federal Rules of Platform Procedure*, U. CHI. L. REV. (2020).

⁹ H. Subcomm. on Antitrust, Com. and Admin. L. of the H. Com. on the Judiciary, *supra* note 2, at 397–98; Buck, *supra* note 2, at 12–13; Guggenberger, *Good Times for Antitrust in the U.S.*, *supra* note 2; Guggenberger, *Essential Platform Monopolies: Open Up, Then Undo*, *supra* note 2.

¹⁰ H. Subcomm. on Antitrust, Com. and Admin. L. of the H. Com. on the Judiciary, *supra* note 2, at 397–98; Buck, *supra* note 2, at 12–13.

¹¹ Guggenberger, *Essential Platform Monopolies: Open Up, Then Undo*, *supra* note 2.

¹² Compatibility and Competition by Enabling Service Switching Act of 2019, S.2658, 116th Congress (2019). The bill builds on Sen. Mark R. Warner,

same vein, several bills have just been introduced as part of a bipartisan “Anti-Monopoly Agenda for A Stronger Online Economy: Opportunity, Innovation, Choice” in June 2021:¹³ the American Innovation and Choice Online Act, sponsored by Rep. David Cicilline (D-RI) and co-sponsored by Rep. Lance Gooden (R-TX), aimed at preventing discrimination and self-preferencing; and a new version of the Augmenting Compatibility and Competition by Enabling Service Switching Act of 2021 (ACCESS Act of 2021), sponsored by Rep. Mary Gay Scanlon (D-PA) and co-sponsored by Rep. Burgess Owens (R-UT), again focusing on access rights, interoperability, and data portability between services.¹⁴

Potential Policy Proposals for Regulation of Social Media and Technology Firms (2018),

https://www.ftc.gov/system/files/documents/public_comments/2018/08/ftc-2018-0048-d-0104-155263.pdf.

¹³ Press Release, *House Lawmakers Release Anti-Monopoly Agenda for “A Stronger Online Economy: Opportunity, Innovation, Choice,”* U.S. HOUSE JUDICIARY COMMITTEE,

<https://judiciary.house.gov/news/documentsingle.aspx?DocumentID=4591> (last visited Jun. 11, 2021). *See also* Shirin Ghaffary & Sara Morrison, *What You Need to Know about the House’s Opening Bid to Rein in Big Tech*, VOX (Jun. 11, 2021), <https://www.vox.com/recode/22529779/antitrust-bills-house-big-tech>; Cecilia Kang, *Lawmakers, Taking Aim at Big Tech, Push Sweeping Overhaul of Antitrust*, N.Y. TIMES (Jun. 11, 2021), <https://www.nytimes.com/2021/06/11/technology/big-tech-antitrust-bills.html>;

Margaret Harding McGill & Ashley Gold, *Congress Unveils Bills to Dismantle Tech Giants*, AXIOS (Jun. 21, 2021), <https://www.axios.com/congress-bills-dismantle-tech-giants-0d47feb9-f9a6-4a82-8719-100bcd549285.html>.

¹⁴ American Choice and Innovation Online Act, H.R.3816, 117th Cong. (2021); Augmenting Compatibility and Competition by Enabling Service Switching Act of 2021, H.R.3849, 117th Cong. (2021). Other bills introduced simultaneously include: the Platform Competition and Opportunity Act, sponsored by Rep. Hakeem Jeffries (NY-08) and co-sponsored by Rep. Ken Buck (R-CO), geared toward limiting acquisitions, Platform Competition and Opportunity Act of 2021, H.R.3826, 117th Cong. (2021); the Ending Platform Monopolies Act, sponsored by Rep. Pramila Jayapal (D-WA) and co-sponsored by Rep. Lance Gooden (R-TX) intended to eliminate conflicts of interest by functional separation, Ending Platform Monopolies Act, H.R.3825, 117th Cong. (2021); the Merger Filing Fee Modernization Act, “adjusting premerger filing fees, and increasing antitrust enforcement resources,” sponsored by Rep. Joe Neguse (D-CO) and co-sponsored by Rep. Victoria Spartz (R-IN) Merger Filing Fee Modernization Act of 2021, H.R.3843, 117th Cong. (2021).

These recent challenges to the conventional wisdom¹⁵ are remarkable, given how American courts had all but abandoned the notion of antitrust-based access rights. In 1977, the DC Circuit in *Hecht* became the first court in the U.S. to rely on the essential facilities doctrine by name.¹⁶ The DC Circuit found that “the District Court erred in failing to give [the plaintiff’s] requested [jury] instruction concerning the ‘essential facility’ doctrine” when assessing whether an exclusive contract between the operator of a football stadium in DC and a team violated Sections 1 and 2 of the Sherman Act for preventing competing teams from entering the market.¹⁷ The court clarified that a duty to deal arises when “duplication of the facility would be economically infeasible and if denial of its use inflicts a severe handicap on potential market entrants.”¹⁸ At the same time, resulting obligations find their limit where “sharing would be impractical or would inhibit the defendant’s ability to serve its customers adequately.”¹⁹ The appeals court reversed the judgment and remanded the case for a new trial with proper jury instructions.²⁰

The fact-specific and somewhat indirect articulation of the essential facility claim in *Hecht* was followed by *MCI*

¹⁵ For the term ‘conventional wisdom,’ see JOHN KENNETH GALBRAITH, *THE AFFLUENT SOCIETY* 6–16 (Houghton Mifflin 40th anniversary ed. 1998).

¹⁶ *Hecht v. Pro-Football, Inc.*, 570 F.2d 982, 992 (DC Cir. 1977).

¹⁷ *Id.*

¹⁸ *Id.*

¹⁹ *Id.* at 992–93. By affirming jury instructions on the essential facility theory, Judge Wilkey in *Hecht* also implicitly defined conditions for liability under the essential facilities doctrine. *Id.* at 993. (“*Hecht* requested an instruction that if the jury found (1) that use of RFK stadium was essential to the operation of a professional football team in Washington; (2) that such stadium facilities could not practicably be duplicated by potential competitors; (3) that another team could use RFK stadium in the Redskins’ absence without interfering with the Redskins’ use; and (4) that the restrictive covenant in the lease prevented equitable sharing of the stadium by potential competitors, then the jury must find the restrictive covenant to constitute a contract in unreasonable restraint of trade, in violation of Sherman Act §§ 1 and 3. This instruction was substantially correct and failure to give it was prejudicial error.” (footnotes omitted)).

²⁰ *Hecht v. Pro-Football, Inc.*, 570 F.2d at 998–99.

Communications, in which the Seventh Circuit famously established a generalized four-prong test for access requests: (1) control of the essential facility by a monopolist; (2) a competitor's inability practically or reasonably to duplicate the essential facility; (3) the denial of the use of the facility to a competitor; and (4) the feasibility of providing the facility.²¹

On substance, *MCI Communications* featured a refusal to deal by the telecom incumbent AT&T, which “refused to interconnect MCI with the local distribution facilities.”²² In its reasoning, the court leans on existing case law and specifically references *Hecht*.²³ A later Seventh Circuit decision clarified that the fourth prong incorporates all legitimate business justifications for denial of access.²⁴

Although not invoked explicitly by courts until the 1970s, the logic underlying the essential facilities doctrine dates back to 1912, when the Supreme Court defined access rights to critical infrastructure as an alternative to horizontal breakup of a bottleneck, in application of the Sherman Act.²⁵ In *Terminal Railroad Association*, the Court found that a conglomerate of railroad companies had monopolized all crossings over the Mississippi River by accumulating two bridges and a ferry company.²⁶ Rejecting the government’s requested relief of divestiture, the Court ordered the Terminal Railroad Association to grant competitors access to its

²¹ *MCI Communications Corp. v. Am. Tel. & Tel. Co.*, 708 F.2d 1081, 1132–33 (7th Cir. 1983).

²² *Id.* at 1132.

²³ *Id.*

²⁴ *Illinois ex rel. Burris v. Panhandle E. Pipeline Co.*, 935 F.2d 1469, 1483 (7th Cir. 1991).

²⁵ *United States v. Terminal Railroad Ass’n of St. Louis*, 224 U.S. 383, 383, 409–12 (1912); Abrahamson, *supra* note 1, at 869; Frischmann & Waller, *supra* note 1, at 6; Guggenberger, *supra* note 6; Lao, *supra* note 1, at 288; Pitofsky et al., *supra* note 1, at 445; Ratner, *supra* note 1, at 327; Reiffen & Kleit, *supra* note 1, at 419.

²⁶ *Terminal Railroad Ass’n*, 224 U.S. at 409–12; Guggenberger, *supra* note 6; Reiffen & Kleit, *supra* note 1, at 419–20.

facilities on fair terms.²⁷ Over the following decades, courts applied the ideas expressed in *Terminal Railroad Association* to various types of industries and bottlenecks, from news organizations²⁸ to public utility companies,²⁹ ski resorts,³⁰ and many others.³¹

Beginning in the 1970s, however, the Chicago School of antitrust, a movement in legal academia dedicated to neo-classical economic reasoning,³² had gained far-reaching recognition and influence.³³ Their arguments mainly reflected a popular preference for market mechanisms³⁴ unimpeded by government or judicial action.³⁵ The movement focused almost solely on maximizing

²⁷ Specifically, the Court directed the association to develop fair terms directly with its competitors, using the threat of divestiture to incentivize the Railroad Association to reach a fair agreement. *Terminal Railroad Ass'n*, 224 U.S. at 409–13.

²⁸ *Associated Press v. United States*, 326 U.S. 1 (1945); *Lorain Journal v. U.S.*, 342 U.S. 143 (1951).

²⁹ *Otter Tail Power Co. v. United States*, 410 U.S. 366 (1973).

³⁰ *Aspen Skiing Co. v. Aspen Highlands Skiing Corp.*, 472 U.S. 585 (1985). The Court did not see the need to expressly rely on the essential facilities doctrine, at 611 n.44. *But see* at 611 n.44 (“Given our conclusion that the evidence amply supports the verdict under the instructions as given by the trial court, we find it unnecessary to consider the possible relevance of the ‘essential facilities’ doctrine, or the somewhat hypothetical question whether nonexclusionary conduct could ever constitute an abuse of monopoly power if motivated by an anticompetitive purpose. If, as we have assumed, no monopolist monopolizes unconscious of what he is doing, that case is unlikely to arise.”). However, the Supreme Court did uphold the trial court’s jury instructions. *Id.* at 596–97, 600. On this distinction, see Areeda, *supra* note 1, at 848–49.

³¹ Guggenberger, *supra* note 6; Khan, *The Separation of Platforms and Commerce*, *supra* note 1, at 1027–28. *See also* Hylton, *supra* note 1, at 1267–82 (categorizing the case law by its underlying setting and economic logic).

³² *See* ROBERT H. BORK, *THE ANTITRUST PARADOX: A POLICY AT WAR WITH ITSELF* 79–89 (Basic Books 1978); Anu Bradford et al., *The Chicago School’s Limited Influence on International Antitrust*, 87 U. CHI. L. REV. 297, 303–9 (2020); Ariel Katz, *The Chicago School and the Forgotten Political Dimension of Antitrust Law*, 87 U. CHI. L. REV. 413, 414–15 (2020); Hovenkamp & Morton, *supra* note 7.

³³ Richard A. Posner, *The Chicago School of Antitrust Analysis*, 127 U. PA. L. REV. 925, 932 (1979) (“The Chicago school has largely prevailed with respect to its basic point: that the proper lens for viewing antitrust problems is price theory.”); Steinbaum & Stucke, *supra* note 7, at 597–98.

³⁴ Note that any resemblance of modern market mechanisms requires state planning and government provisioning in the form of laws and enforcement structures.

³⁵ Patrice Bougette et al., *When Economics Met Antitrust: The Second Chicago*

rewards for dynamic innovation, without regard to protecting competition in adjacent or future markets that might see entry³⁶—an antithesis to the essential facilities doctrine.³⁷ The slightly more moderate Harvard school of antitrust³⁸ offered its own scathing critique of the essential facilities doctrine, including on the legal and administrative dimension of the doctrine.³⁹ Together, the Chicago and Harvard Schools’ stances against the essential facilities doctrine formed what William Kovacic called a “double helix.”⁴⁰ Courts internalized the double helix’s tenor and followed suit.⁴¹ Over the course of the 1990s, appellate courts raised the bar for essential

School and the Economization of Antitrust Law, 16 ENTERPRISE & SOCIETY 313, 313–17, 335–37 (Jun. 2015); Katz, *supra* note 32, at 414–15.

³⁶ See Richard A. Posner, *Antitrust in the New Economy*, 68 ANTITRUST LAW JOURNAL 925, 929–30 (2001).

³⁷ See Guggenberger, *supra* note 6; Daniel Spulber & Christopher Yoo, *Antitrust, the Internet, and the Economics of Networks*, in THE OXFORD HANDBOOK OF INTERNATIONAL ANTITRUST ECONOMICS, VOLUME 1, 12–13, 15–17 (Roger D. Blair & D. Daniel Sokol eds., Oxford University Press 2014).

³⁸ Rebecca Haw Allensworth, *The Influence of the Areeda-Hovenkamp Treatise in the Lower Courts and What It Means for Institutional Reform in Antitrust*, 100 IOWA L. REV. 1919 (2015) (“[D]espite this early interest in wedding economic principles to antitrust law, most of the Chicago School’s ideas were too far afield from existing antitrust law—and perhaps too politically extreme—for easy judicial adoption. Enter the Areeda–Turner treatise, which grafted economic thinking onto existing antitrust doctrine in a way that was both more moderate and more workable than the scholarly proposals offered by professors like Bork and Posner.”); Hovenkamp & Scott Morton, *supra* note 7, at 29–31; Timothy J. Muris & Johnathan E. Nuechterlein, *Chicago and Its Discontents*, 87 U. CHI. L. REV. 495, 513–15 (2020); Posner, *supra* note 33, at 933–48 (“[E]ven in the most important area where distinctive ‘Harvard’ and ‘Chicago’ approaches remain discernible, the process of convergence is well under way.”).

³⁹ See Areeda, *supra* note 1; Phillip Areeda, *Monopolization, Mergers, and Markets: A Century Past and the Future*, 75 CAL. L. REV. 959, 965 (1987). See also William E. Kovacic, *The Chicago Obsession in the Interpretation of US Antitrust History*, 87 U. CHI. L. REV. 459, 485 n.122 (2020) (“I doubt that Areeda and Turner essentially accepted and restated Chicago School positions. I share the assessment of Professors William Page and Daniel Crane that, compared to the Chicago School, Areeda and Turner applied a distinctive, institution- and process-based perspective to the analysis of antitrust rules and policymaking.” [references omitted]).

⁴⁰ 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, 64–71 (2007).

⁴¹ *Id.* See also Katz, *supra* note 32, at 414.

facilities claims.⁴² In 2004, Justice Scalia, writing for the Supreme Court, finally declared of the essential facilities doctrine: “We have never recognized such a doctrine, and we find no need either to recognize it or to repudiate it here.”⁴³ In so doing, the Court did not formally overrule its precedent, but practically barred essential facilities claims moving forward.⁴⁴

The world is a different place today than it was in 2004. The financial crisis evaporated any illusions of ethical constraint of top management and demonstrated the need for substantive regulation, oversight, and enforcement. Meanwhile, academic and public discourse have widely recognized increasing levels of economic concentration as cause for concern.⁴⁵ This trend has proven especially pronounced in the digital economy.⁴⁶ Gatekeepers like

⁴² Guggenberger, *supra* note 6.

⁴³ *Verizon Communications Inc. v. Law Offices of Curtis V. Trinko, LLP*, 540 U.S. 398, 411 (2004) (citations omitted).

⁴⁴ Frischmann & Waller, *supra* note 1, at 3, 8–10; Khan, *The Separation of Platforms and Commerce*, *supra* note 1, at 1027–29.

⁴⁵ Council of Economic Advisers, *supra* note 7, at 4–7; PHILIPPON, *supra* note 7; Autor et al., *supra* note 7, at 183; *id.* at 663–65; Covarrubias et al., *supra* note 7; Jan De Loecker et al., *The Rise of Market Power and the Macroeconomic Implications*, 135 THE QUARTERLY JOURNAL OF ECONOMICS 561, 574–605 (May 2020) (observing rising market power based on increasing markups and average profits); Furman & Orszag, *supra* note 7, at 33–38; Gutiérrez & Philippon, *supra* note 7; Marc Jarsulic, *Antitrust Enforcement for the 21st Century*, 64 THE ANTITRUST BULLETIN 514 (2019); Hovenkamp & Morton, *supra* note 7, at 1852–53; Orbach, *supra* note 7, at 12; Steinbaum & Stucke, *supra* note 7, at 595, 601; Joseph E. Stiglitz, *America Has a Monopoly Problem—and It’s Huge*, THE NATION (Oct. 23, 2017), <https://www.thenation.com/article/archive/america-has-a-monopoly-problem-and-its-huge/>; Zia Qureshi, *The Rise of Corporate Market Power*, BROOKINGS (May 21, 2019), <https://www.brookings.edu/blog/up-front/2019/05/21/the-rise-of-corporate-market-power/>. *But see* Benkard et al., *supra* note 7, at 5 (finding decreasing concentration in more narrowly defined product markets). *But see* Maureen K. Ohlhausen, *The Criterion Journal on Innovation Does the U.S. Economy Lack Competition?*, 1 CRITERION 47, 50 (2016) (“I believe that The Economist, the CEA, and others draw flawed conclusions by extrapolating the existence of monopoly power from industry concentration and accounting profits. In other words, they trace a causal relationship—from consolidation to market power to supracompetitive rents.”).

⁴⁶ *See, e.g.*, Council of Economic Advisers, *supra* note 7, at 3, 6; JULIE E. COHEN, BETWEEN TRUTH AND POWER: THE LEGAL CONSTRUCTIONS OF INFORMATIONAL CAPITALISM 16, 207 (2019); Kenneth A. Bamberger & Orly Lobel, *Platform*

Google, Amazon, Facebook, and Apple wield unprecedented power to exclude rivals from the marketplaces they control.⁴⁷ Consequently, academics have begun to question the mainstream antitrust consensus and are leading the charge for stricter antitrust enforcement.⁴⁸ Countless scandals and inadequate reactions have changed public perception and diminished the political capital of the tech giants.⁴⁹ Despite that new climate and the bipartisan political opening, reviving, renewing, and expanding the essential facilities doctrine remains an uphill battle. The federal judiciary has moved further to the right and Big Tech will fiercely fight any notion of comprehensive access rights or regulatory disruption of its

Market Power, 32 BERKELEY TECH. L.J. 1051, 1067–71 (2017); Leila Davis & Özgür Orhangazi, *Competition and Monopoly in the U.S. Economy: What Do the Industrial Concentration Data Show?*, 25 COMPETITION & CHANGE 3, 13–14 (Jan. 2021) (clarifying that higher concentration does not necessarily imply less competition, at 17–18); Sara Calligaris et al., *Mark-Ups in the Digital Era*, OECD Science, Technology and Industry Working Papers, No. 2018/10, 13–18 (Apr. 2018) (focusing on mark-ups); Jacques Crémer et al., *Competition Policy for the Digital Era* 12–13, 23 (Directorate-General for Competition 2019); Geradin & Katsifis, *supra* note 8, at 2; Mordecai Kurz, *On the Formation of Capital and Wealth: IT, Monopoly Power and Rising Inequality*, No. ID 3014361 (Jun. 2017) (linking technological progress, market power, and inequality); Jarsulic, *supra* note 45; Karim Foda and Nirav Patel, *Competition Challenges in the Digital Economy*, BROOKINGS INSTIT. (Jun. 28, 2018), <https://www.brookings.edu/blog/up-front/2018/06/28/competition-challenges-in-the-digital-economy/>.

⁴⁷ See Guggenberger, *supra* note 6.

⁴⁸ TIM WU, *THE CURSE OF BIGNESS: ANTITRUST IN THE NEW GILDED AGE* (Columbia Global Reports 2018); Khan, *The Separation of Platforms and Commerce*, *supra* note 1; Khan, *Amazon's Antitrust Paradox*, *supra* note 1; Lina Khan, *The New Brandeis Movement: America's Antimonopoly Debate*, 9 JOURNAL OF EUROPEAN COMPETITION LAW & PRACTICE 131 (2018).

⁴⁹ Directly related to competition policy, see Dana Mattioli, *Amazon Scooped Up Data From Its Own Sellers to Launch Competing Products*, WALL ST. J. (Apr. 24, 2020), <https://www.wsj.com/articles/amazon-scooped-up-data-from-its-own-sellers-to-launch-competing-products-11587650015>; Tripp Mickle, *Apple Dominates App Store Search Results, Thwarting Competitors*, WALL ST. J. (Jul. 23, 2019), <https://www.wsj.com/articles/apple-dominates-app-store-search-results-thwarting-competitors-11563897221>. See generally Nicholas Confessore, *Cambridge Analytica and Facebook: The Scandal and the Fallout So Far*, N.Y. TIMES (Apr. 4, 2018), <https://www.nytimes.com/2018/04/04/us/politics/cambridge-analytica-scandal-fallout.html>; Alexandra Stevenson, *Facebook Admits It Was Used to Incite Violence in Myanmar*, N.Y. TIMES (Nov. 6, 2018), <https://www.nytimes.com/2018/11/06/technology/myanmar-facebook.html>.

monopolies.

In light of foreseeable debates about the merits of the essential facilities doctrine, I aim to dispel some of the myths that brought about the doctrine's decline and whose perpetuation still stand in the way of its revival. I focus on some of the most discussed economic and administrative criticisms that are likely to (re)emerge. First, I lay out the case for the essential facilities doctrine in the digital economy and demonstrate how it could be applied to incumbent platforms. Second, I address the misguided objection that a monopolist lacks the incentive to expand into adjacent markets—especially in digital markets. Third, I examine the allegation that a monopolist necessarily benefits from creating and maintaining a competitive secondary market. Fourth, I focus on concerns about the administrability and the consistency of the essential facilities doctrine in practice as well as potential error costs. And finally, I discuss the extent to which the essential facilities doctrine might entrench private economic and political power instead of mitigating it.

I. THE CASE FOR THE ESSENTIAL FACILITIES DOCTRINE IN THE DIGITAL ECONOMY

Economic concentration has increased across industries in the U.S. over the past decades.⁵⁰ This development has become especially evident in the digital economy.⁵¹ Just a few platforms

⁵⁰ Council of Economic Advisers, *supra* note 7, at 4–7; PHILIPPON, *supra* note 7; Autor et al., *supra* note 7, at 183; *id.* at 663–65; Covarrubias et al., *supra* note 7; Furman & Orszag, *supra* note 7, at 33–38; Gutiérrez & Philippon, *supra* note 7; Hovenkamp & Scott Morton, *supra* note 7, at 1852–53; Steinbaum & Stucke, *supra* note 7, at 595, 601. But see Benkard et al., *supra* note 7, at 5 (finding decreasing concentration in more narrowly defined product markets).

⁵¹ See, e.g., Council of Economic Advisers, *supra* note 7, at 3, 6; COHEN, *supra* note 46, at 16, 207; Davis & Orhangazi, *supra* note 46, at 13–14 (clarifying that higher concentration does not necessarily imply less competition, at 17–18); Bamberger & Lobel, *supra* note 46, at 1067–71; Calligaris et al., *supra* note 46,

dominate the landscape: in e-commerce, there is Amazon; there are two relevant app stores, Apple's and Google's; Facebook has a firm grip on social media; and Google has become synonymous with online search.⁵² Several factors contribute to the enormous concentration and afford the digital platforms with gatekeeping power.⁵³ Network effects, the disproportionate value added to networks by additional marginal connections and transactions the platforms enables, and the characteristics of data and algorithms have amplified the broader effects of the regulatory restraint and antitrust apathy of the recent decades.⁵⁴ Market entry barriers stemming mainly from network effects shield dominant platforms from nascent competition and allow them to exclude rivals or reap monopoly rents.⁵⁵ In other work, I have laid out a case to revive, renew, and expand the essential facilities doctrine as part of a

at 13–18 (focusing on mark-ups); Crémer et al., *supra* note 46, at 12–13, 23; Patel, *supra* note 46.

⁵² See Geradin & Katsifis, *supra* note 8, at 8–10; Guggenberger, *supra* note 6; Khan, *The Separation of Platforms and Commerce*, *supra* note 1, at 984–1007; Steven C. Salop, *Dominant Digital Platforms: Is Antitrust Up to the Task?*, 130 YALE L.J. FORUM 563, 564–65 (2021); Guggenberger, *Essential Platform Monopolies: Open Up, Then Undo*, *supra* note 2.

⁵³ Guggenberger, *supra* note 6.

⁵⁴ Crémer et al., *supra* note 46, at 23–29; Guggenberger, *supra* note 6, at 277–87; Jarsulic, *supra* note 45, at 520–27.

⁵⁵ See Daniel A. Akerberg & Gautam Gowrisankaran, *Quantifying Equilibrium Network Externalities in the ACH Banking Industry*, 37 RAND J. ECON. 738, 738, 760 (2006); Keith N. Hylton, *Digital Platforms and Antitrust Law Symposium*, 98 NEB. L. REV. 272, 275 n.9 (2019) (discussing the sources of economies of scale in the platform economy); Jeffrey Rohlfs, *A Theory of Interdependent Demand for a Communications Service*, 5 THE BELL JOURNAL OF ECONOMICS AND MANAGEMENT SCIENCE 16, 19 ([Wiley, RAND Corporation] 1974); CARL SHAPIRO & HAL R. VARIAN, INFORMATION RULES: A STRATEGIC GUIDE TO THE NETWORK ECONOMY 184 (1999) (“Network externalities make it virtually impossible for a small network to thrive. But every new network has to start from scratch. The challenge to companies seeking to introduce new but incompatible technology into the market is to build network size by overcoming the collective switching costs—that is, the combined switching costs of all users.”); Ulrich Witt, *“Lock-in” vs. “Critical Masses” — Industrial Change under Network Externalities*, 15 INT'L J. INDUS. ORG. 753, 771 (1997) (seeing the potential to overcome lock-in effects, but emphasizing the “the capacity to pass a ‘critical mass’ threshold or, more precisely, to attract a critical number of potential adopters who then make an adoption decision.”).

comprehensive agenda to address gatekeeping power and economic concentration, with a focus on the digital economy.⁵⁶ Here, I mainly focus on the practical application of the doctrine and rely on app stores as the main example of gatekeeping platforms.⁵⁷

Where the market does not provide reasonable alternatives to essential facilities, goods, or services, access rights can open markets and enable follow-on innovation. This is the logic behind the 1912 Supreme Court ruling in *Terminal Railroad Association*.⁵⁸ On the internet, large platforms occupy positions in the economy comparable to the railroads of the late nineteenth and early twentieth century.⁵⁹ They control today's bottlenecks. And just as access rights have opened railroad infrastructure and other critical chokepoints to downstream competition, enabling follow-on innovation, a revived, renewed, and expanded essential facilities doctrine can deliver exactly that for the digital economy: thriving open markets for online merchants, app developers, and content providers.

The online game developer Epic relies on the essential facilities doctrine in its recent complaint against Apple.⁶⁰ Epic argues that Apple's terms of service and deplatforming of Epic's

⁵⁶ Guggenberger, *supra* note 6.

⁵⁷ See Geradin & Katsifis, *supra* note 8 (comprehensive account of the EU competition law case against the Apple App Store); Hylton, *supra* note 55, at 295–96 (discussing the implications of *Ohio v. Am. Express*).

⁵⁸ *United States v. Terminal Railroad Ass'n of St. Louis*, 224 U.S. 383, 409–13 (1912).

⁵⁹ *Online Platforms and Market Power, Part 6: Examining the Dominance of Amazon, Apple, Facebook, and Google: Hearing Before the Subcomm. on Antitrust, Com., and Adm. L. of the H. Comm. on the Judiciary* (Jul. 29, 2020); Guggenberger, *supra* note 6. Somewhat skeptical about the adequacy of the related tendency to “to shoehorn a wide variety of social concerns about search engines into the economic language of antitrust policy,” Frank Pasquale, *Dominant Search Engines: An Essential Cultural & Political Facility*, in *THE NEXT DIGITAL DECADE* 402 (Berin Szoka & Adam Marcus eds., TechFreedom 2010).

⁶⁰ Complaint at 48–49, *Epic Games, Inc. v Apple, Inc.*, 13. Aug. 2020 (N.D. Cal.). See also Geradin & Katsifis, *supra* note 8, at 5–7.

popular online game, Fortnite, are retaliatory against Epic offering alternative direct payment methods that circumvent the app store's fee structures, and alleges that this reaction violates Section 2 of the Sherman Act as specified by the essential facilities doctrine.⁶¹ Several state legislatures have introduced bills that would establish rights for app developers against the app store providers.⁶² Nevertheless, the essential facilities doctrine and access rights more broadly have not been applied to digital platforms in the U.S. so far. That lack of regulatory and judicial practice raises questions of how to apply the doctrine to digital platforms and how to expand on it.

Take the Apple app store as an example and let us apply the standards formalized by the Seventh Circuit in *MCI Communications*.⁶³ First, Apple would need to be considered a monopolist controlling the app store as an essential facility.⁶⁴ That requires a market analysis; Epic's complaint asserts the existence of a distinct "iOS App Distribution Market," which is entirely in

⁶¹ Complaint at 48–49, *Epic Games, Inc. v Apple, Inc.*, 13. Aug. 2020. See also Nikolas Guggenberger, *The Epic Battle for the Soul of Antitrust*, VERFASSUNGSBLOG (Sep. 2, 2020), <https://verfassungsblog.de/the-epic-battle-for-the-soul-of-antitrust/>; Nick Statt, *Apple Will Reduce App Store Cut to 15 Percent for Most Developers Starting January 1st*, VERGE (Nov. 18, 2020), <https://www.theverge.com/2020/11/18/21572302/apple-app-store-small-business-program-commission-cut-15-percent-reduction>; Andrew Webster, *Epic Offers New Direct Payment in Fortnite on IOS and Android to Get around App Store Fees*, VERGE, <https://www.theverge.com/2020/8/13/21366259/epic-fortnite-vbucks-mega-drop-discount-iphone-android> (last visited Aug. 14, 2020). For the relevance of in-app payments and the broader context, see Geradin & Katsifis, *supra* note 8, at 14–33.

⁶² Leah Nylen, *Apple, Google App Store Fights Move to the States*, POLITICO (Mar. 3, 2021), <https://www.politico.com/news/2021/03/03/apple-google-app-store-fights-move-to-the-states-473388>; Matt Stoller & Pat Garofalo, *States Are Right to Rebel Against Big Tech*, N.Y. TIMES (Mar. 18, 2021), <https://www.nytimes.com/2021/03/18/opinion/apple-google-app-monopoly.html>.

⁶³ *MCI Communications Corp. v. Am. Tel. & Tel. Co.*, 708 F.2d 1081, 1132–33 (7th Cir. 1983) (“[1] control of the essential facility by a monopolist; [2] a competitor's inability practically or reasonably to duplicate the essential facility; [3] the denial of the use of the facility to a competitor; and [4] the feasibility of providing the facility.”).

⁶⁴ See Makar, *supra* note 1, at 920–21; Soma et al., *supra* note 1, at 594–99.

Apple's hands.⁶⁵ And in fact, there are further valid arguments to support that claim, including the OS-specific programming of the applications combined with the exclusive access to Apple iOS customers through the Apple app store, mentioned in the complaint.⁶⁶ Sideloaded apps through means other than those provided by the app store provides no viable alternative, as it requires advanced programming skills that go far beyond the average user's capabilities.⁶⁷ In the same vein, Damien Geradin and Dimitrios Katsifis argue that 5-10% increases in price—a commonly relied upon metric to measure the substitutability of products—would motivate neither users nor app developers to switch platforms from Apple to Android.⁶⁸

The two relevant app stores do not provide sufficient substitutes for many developers, because users tend to “single home.” That is, many users only buy into one of the OS ecosystems, either Apple's or Google's.⁶⁹ First, the added value of certain applications, especially those enabling transactions, communication, or other interactions among their users, is mainly defined by the network effects they enable.⁷⁰ Think of messaging, e-commerce, and multiplayer gaming apps. To create sufficient utility and be successful in the marketplace, these applications need

⁶⁵ Complaint at 16–19, *Epic Games, Inc. v Apple, Inc.*, 13. Aug. 2020. *But see* Sven B. Völcker & Daniel Baker, *Why There Is No Antitrust Case against Apple's App Store: A Response to Geradin & Katsifis*, No. ID 3660896, 47–60 (Jul. 2020).

⁶⁶ Complaint at 16–17, *Epic Games, Inc. v Apple, Inc.*, 13. Aug. 2020.

⁶⁷ Geradin & Katsifis, *supra* note 8, at 11–12.

⁶⁸ *Id.* at 35–37. *But see* Völcker & Baker, *supra* note 65, at 47–60.

⁶⁹ A survey by Akman suggests that 40 % of U.S. consumer had relied on more than one app store with the preceding 12 months. Yet, the survey lacks a definition of app stores and the data about the mean number of app stores used by consumers (2.37) shows that the category must have been (understood to be) larger than two (Google's Play Store and Apple's App Store), see Pinar Akman, *A Web of Paradoxes: Empirical Evidence on Online Platform Users and Implications for Competition and Regulation in Digital Markets* 11–12 (Mar. 29, 2021), <https://papers.ssrn.com/abstract=3835280>.

⁷⁰ Geradin & Katsifis, *supra* note 8, at 37.

to have the ability to (potentially) reach all smart phone users.⁷¹ Reaching only Apple iOS or only Google Android users does generally not provide a viable business option.⁷² Second, for certain applications, a significant part of the potential customer base will have bought into one specific apps store. Apple provides a high-priced premium product with an emphasis on style and a certain brand image.⁷³ That inevitably shapes Apple's customer base: better-off users who appreciate the Apple style.⁷⁴ Where there are strong correlations in the customer base of certain types of apps—control app for premium electric vehicles or upscale fitness devices come to mind—the Apple ecosystems becomes the only relevant route to market for the developers.⁷⁵

⁷¹ *Id.*

⁷² *Id.* A potential counter example is Clubhouse, which initially launched its services only on Apple iOS, presumably capitalizing on a notion of exclusivity. But even the vastly successful company pivoted and very recently added an Android version after the number of downloads on Apple iOS had fallen, see Cristina Criddle, *Clubhouse Launches on Android as App Downloads Collapse*, BBC NEWS (May 10, 2021), <https://www.bbc.com/news/technology-57058516>; Kim Lyons, *Clubhouse Comes to Android after More than a Year of IOS Exclusivity*, VERGE, <https://www.theverge.com/2021/5/9/22424399/clubhouse-android-app-release-date-news-features> (last visited May 13, 2021); Manish Singh, *Clubhouse Finally Arrives on Android*, TECHCRUNCH (May 9, 2021), <https://social.techcrunch.com/2021/05/09/clubhouse-android-app-launch/>; Damien Wilde, *Clubhouse for Android Hands-on: Late to the Party*, 9TO5GOOGLE (May 12, 2021), <https://9to5google.com/2021/05/12/clubhouse-for-android-hands-on-late-conversation-starter-video/>.

⁷³ Zachary Karabell, *Apple Is Ditching the Mass Market and Focusing on Rich People*, WIRED (Mar. 11, 2018), <https://www.wired.com/story/apple-abandons-mass-market-as-iphone-turns-luxury/>.

⁷⁴ Cooper Smith, *iPhone vs. Android Users: The Differences Revealed*, HUFFPOST (Aug. 16, 2011), https://www.huffpost.com/entry/iphone-vs-android-users_n_928275; comScore, *The U.S. Mobile App Report* (Aug. 14, 2014), <https://www.comscore.com/Insights/Infographics/iPhone-Users-Earn-Higher-Income-Engage-More-on-Apps-than-Android-Users>; Slickdeals, *iPhone Users Spend \$101 Every Month on Tech Purchases, Nearly Double of Android Users, According to a Survey Conducted by Slickdeals*, CISION PR NEWSWIRE (2018-10-30), <https://www.prnewswire.com/news-releases/iphone-users-spend-101-every-month-on-tech-purchases-nearly-double-of-android-users-according-to-a-survey-conducted-by-slickdeals-300739582.html>; Robert Williams, *Survey: iPhone Owners Spend More, Have Higher Incomes than Android Users*, MARKETING DIVE (Oct. 31, 2018), <https://www.marketingdive.com/news/survey-iphone-owners-spend-more-have-higher-incomes-than-android-users/541008/>.

⁷⁵ Guggenberger, *supra* note 6.

To fulfill the second prong of the essential facilities doctrine, app developers must be practically or reasonably unable to duplicate the app store's infrastructure.⁷⁶ Due not only to network effects but also to the connection of the app stores with the operating systems and Apple's hardware—or licensing and tying arrangements in the case of Google⁷⁷—that inability stands to reason.⁷⁸ The Italian Competition Authority recently fined Google for denying the app JuicePass, by Enel X Italia, access to and interoperability with Android Auto, for example.⁷⁹ And even the largest app developers, like Facebook and Amazon, cannot escape from the app stores' gatekeeping power.⁸⁰

The third condition for an essential facilities claim as defined by *MCI Communications* requires that the platform denies a

⁷⁶ See Makar, *supra* note 1, at 922; Soma et al., *supra* note 1, at 599–601.

⁷⁷ See Complaint, United States v. Google, LLC, 20. Oct. 2020 (D. D.C.) (No. 1:20-cv-03010-APM).

⁷⁸ Geradin & Katsifis, *supra* note 8, at 38.

⁷⁹ Autorità garante della concorrenza e del mercato, Press Release, A529 - ICA: Google Fined over 100 Million for Abuse of Dominant Position, <https://en.agcm.it/en/media/press-releases/2021/5/A529> (last visited May 27, 2021). See Pablo Ibáñez Colomo, *The Italian Competition Authority in Enel v Google: Will Bronner and Magill Survive Common Carrier Antitrust?*, CHILLIN'COMPETITION (May 27, 2021), <https://chillingcompetition.com/2021/05/27/the-italian-competition-authority-in-enel-v-google-will-bronner-and-magill-survive-common-carrier-antitrust/>. Note that the enforcement action is based on an abuse of market power, as referenced in Consolidated Version of the Treaty on the Functioning of the European Union art. 102, 2012 O.J. (C 326) 47. For an application of the EU limitations on exploitive behavior, see Geradin & Katsifis, *supra* note 8, at 38–56. For the main difference between the EU's prohibition of abusing market power and U.S. doctrine based on Sec. 2 of the Sherman Act, see Areeda, *supra* note 1, at 846–47.

⁸⁰ See Mike Isaac & Jack Nicas, *Breaking Point: How Mark Zuckerberg and Tim Cook Became Foes*, N.Y. TIMES (Apr. 26, 2021), <https://www.nytimes.com/2021/04/26/technology/mark-zuckerberg-tim-cook-facebook-apple.html> (stressing the mutual dependence: “The situation was complicated as Facebook and Apple also became mutually dependent. The iPhone was a key device for people to use Facebook’s mobile app. And Facebook’s apps — which later also included Instagram and the messaging service WhatsApp — have been some of the most downloaded programs from Apple’s App Store;” and clarifying Apple’s gatekeeping position: “It really spoke to the power of Apple controlling the operating system,” said Brian Wieser, president of business intelligence at GroupM, an advertising industry firm. ‘Facebook isn’t in control of its own destiny.’”).

competitor the use of the facility.⁸¹ The distinction between an outright denial of use and inappropriate conditions frequently is impossible to draw. Again, take Epic’s complaint against Apple.⁸² The deplatforming of a developer or their apps, as with Epic and its game Fortnite,⁸³ can be seen as an outright denial of use. At the same time, Fortnite’s deplatforming⁸⁴ is directly tied to Epic’s decision not to comply with the conditions for access that Apple demanded, namely to refrain from offering alternative direct methods of payment for in-app purchases. Either way, the essential facilities doctrine remains applicable because “[a]greeing to deal on unreasonable terms is merely a type of refusal to deal.”⁸⁵ Regulatory or judicial scrutiny therefore may need to reach beyond the question of an outright denial of use and consider the conditions under which the use is offered, the terms of service of the platform. This extension inevitably raises the question of what defines acceptable, fair, or equal access conditions to essential incumbent platforms, like the app stores—including acceptable returns on investment, and, thus, prices.⁸⁶

Before going into further details, it seems crucial to clarify two general issues relating to the access conditions an essential facility owes its competitors. First, antitrust-based access rights do not compel the incumbent to open their facility free of charge.⁸⁷ In

⁸¹ MCI Communications Corp. v. Am. Tel. & Tel. Co., 708 F.2d 1081, 1132–33 (7th Cir. 1983).

⁸² See Complaint, Epic Games, Inc. v Apple, Inc., 13. Aug. 2020 (N.D. Cal.).

⁸³ See *id.*

⁸⁴ Apple initially also deplatformed Epic’s developer tool, Unreal Engine, which is arguably not immediately connected to the fact that Epic offered an alternative means of payment within the online game Fortnite, except that the tool is also offered by Epic, before the Northern District of California, in a temporary restraining order obliged Apple to readmit Unreal Engine, Order at 8, Epic Games, Inc. v Apple, Inc., No. 4:20-cv-05640, Doc. 48 (N.D. Cal. 2020).

⁸⁵ Fishman v. Estate of Wirtz, 807 F.2d 520, 541 (7th Cir. 1986).

⁸⁶ On setting appropriate returns on investment and prices and associated challenges see Gerber, *supra* note 1, at 1107–10.

⁸⁷ Lao, *supra* note 1, at 307–8.

fact, the obligation to do so would be counterproductive, as it would undermine the ability of the operator to continue the service, not to mention expand its capacity to accommodate increasing demand. Rather, the essential facilities doctrine leaves room for compensation of the services, which includes an appropriate return on investment. Put differently, charging merchants, app developers, or content providers for the listing and ancillary services does not in itself constitute a relevant denial of use.

Second, consider the debate over so-called search neutrality, a direct extension of the network neutrality discourse⁸⁸ to the then-dominant feature of the application layer, general search engines.⁸⁹ In reaction to what had been perceived as discriminatory and exclusive conduct by search engines—similar or identical conduct as is criticized today⁹⁰—scholars and policy makers proposed compelling Google (and potentially others) to treat and list online content and source links in a neutral manner.⁹¹ At least neutrality in a technical sense of non-differentiation would, of course, render search engine rather useless, or at least would significantly constrain their functionality.⁹² Even objectivity appears problematic to

⁸⁸ James Grimmelmann, *Some Skepticism About Search Neutrality*, in THE NEXT DIGITAL DECADE 435, 437 (Berin Szoka & Adam Marcus eds., TechFreedom 2010). See generally NIKOLAS GUGGENBERGER, NETZNEUTRALITÄT: LEITBILD UND MISSBRAUCHSAUFSICHT (2015); BARBARA VAN SCHEWICK, INTERNET ARCHITECTURE AND INNOVATION (2010); Brett M. Frischmann & Barbara van Schewick, *Network Neutrality and the Economics of an Information Superhighway: A Reply to Professor Yoo*, 47 JURIMETRICS 383 (2007); Barbara van Schewick, *Network Neutrality and Quality of Service: What a Nondiscrimination Rule Should Look Like*, 67 STAN. L. REV. 1 (2015).

⁸⁹ See Grimmelmann, *supra* note 88; D. A. Crane, *Search Neutrality and Referral Dominance*, 8 JOURNAL OF COMPETITION LAW AND ECONOMICS 459 (2012); Daniel A. Crane, *Search Neutrality as an Antitrust Principle*, 19 GEO. MASON L. REV. 1199 (2012); Lao, *supra* note 1.

⁹⁰ Guggenberger, *supra* note 6; Khan, *The Separation of Platforms and Commerce*, *supra* note 1, at 997–99.

⁹¹ In fact, many different neutrality principles were proposed see Grimmelmann, *supra* note 88, at 438.

⁹² *Id.* at 442–43. See also Lao, *supra* note 1, at 279.

enforce.⁹³ A similar logic applies to any ranking or sorting mechanisms that organize information on e-commerce platforms, in app stores, and on social media, albeit to a potentially lesser extent.⁹⁴ Yet the essential facilities doctrine does not require that kind of indiscriminate treatment. Rather, the doctrine establishes a normative notion of non-discrimination and fair access conditions, which rest on a combination of the denial of use and the forth prong, “feasibility of providing the facility.”⁹⁵ Distinguishing the two categories remains fuzzy, but is also not central to the doctrine’s application, aside from conventional allocations of the burden of proof.⁹⁶

The fourth and final condition for liability under the essential facilities doctrine opens the assessment to an array of potential justifications, including legitimate business reasons that go beyond the mere profit maximization or desire to exclude rivals.⁹⁷ First, consider potential objections to the admission of apps. There might be security or privacy concerns as well as objections to the content

⁹³ Grimmelmann, *supra* note 88, at 443–45; D.A. Crane, *supra* note 89, at 466–67.

⁹⁴ On social media, a first-in-first-out principle that displays contributions by the date and time of their entry remains more easily conceivable: Twitter, for example, gives users the opportunity to display the latest Tweets first in their feed. That said, the feed remains moderated by Twitter for compliance with its content moderation policy. Also, advertisements in the form of promoted Tweets follow a separate logic—to mention only two obvious deviations from first-in-first-out beyond users’ control.

⁹⁵ MCI Communications Corp. v. Am. Tel. & Tel. Co., 708 F.2d 1081, 1132–33 (7th Cir. 1983).

⁹⁶ Soma et al., *supra* note 1, at 604. See also Gerber, *supra* note 1, at 1081–82.

⁹⁷ Aspen Skiing Co. v. Aspen Highlands Skiing Corp., 472 U.S. 585, 608–11 (1985) (albeit not within the framework of the essential facilities doctrine, but analogous); Hecht v. Pro-Football, Inc., 570 F.2d 982, 996 (DC Cir. 1977) (not formalized as part of the essential facilities doctrine, but considered under the headline “Unreasonable Restraint of Trade”); Fishman v. Estate of Wirtz, 807 F.2d 520, 540–41 (7th Cir. 1986); Illinois ex rel. Burris v. Panhandle E. Pipeline Co., 935 F.2d 1469, 1482–83 (7th Cir. 1991); City of Anaheim v. S. California Edison Co., 955 F.2d 1373, 1379–81 (9th Cir. 1992); Areeda, *supra* note 1, at 850–51; Gerber, *supra* note 1, at 1076–77; Lipsky & Sidak, *supra* note 1, at 1209–10; Makar, *supra* note 1, at 925–27; Pitofsky et al., *supra* note 1, at 452; Soma et al., *supra* note 1, at 602–5.

and features of the applications, for example.⁹⁸ Security and privacy concerns may relate to technical deficiencies or business practices. Objections to the content and features of applications may be based on the lack of precautions against hate crimes, incitements of violence, the (mental) health impacts on users, and the protection of children, to name just a few. And in fact, Apple and Google cited Parler's insufficient content moderation as cause for the app's delisting in January 2021, following the violent storming of the Capitol building in Washington D.C.⁹⁹

In principle, all these objections lend themselves to legitimate denials of use. The difficulty lies in assessing their merits: the distinction between legitimate concerns about the apps' features and their impacts, on the one hand, and the exclusion of competitors,

⁹⁸ See Areeda, *supra* note 1, at 850 (“Legitimate business purpose at the micro level focuses on the circumstances of the particular case. For example, if AT&T had been able to show that connecting MCI would have dangerously increased the electricity load such that a consumer picking up the phone would be electrocuted, I am quite certain AT&T would have prevailed.”); Gus Hurwitz, *Digital Duty to Deal, Data Portability, and Interoperability*, in THE GLOBAL ANTITRUST INSTITUTE REPORT ON THE DIGITAL ECONOMY 769, 1054–55 (Joshua D. Wright & Douglas H. Ginsburg eds., Global Antitrust Institute 2020).

⁹⁹ Ashley Gold & Shawna Chen, *Google Suspends Parler from App Store after Deadly U.S. Capitol Violence*, AXIOS (Jan. 9, 2021), <https://www.axios.com/capitol-mob-parler-google-ban-826d808d-3e06-4468-a7c6-6157557818b3.html>; Ryan Mac & John Paczkowski, *Apple Has Threatened To Ban Parler From The App Store*, BUZZFEED NEWS (Jan. 28, 2021), <https://www.buzzfeednews.com/article/ryanmac/apple-threatens-ban-parler>; Jay Peters & Kim Lyons, *Apple Removes Parler from the App Store*, VERGE (Jan. 9, 2021), <https://www.theverge.com/2021/1/9/22221730/apple-removes-suspends-bans-parler-app-store> (concerning the Google Play Store: “Parler has not upheld its commitment to moderate and remove harmful or dangerous content encouraging violence and illegal activity, and is not in compliance with the App Store Review Guidelines.”); Jay Peters, *Google Pulls Parler from Play Store for Fostering Calls to Violence*, VERGE (Jan. 8, 2021), <https://www.theverge.com/2021/1/8/22221648/google-suspends-bans-parler-play-store> (concerning the Apple App Store: “We’re aware of continued posting in the Parler app that seeks to incite ongoing violence in the US. We recognize that there can be reasonable debate about content policies and that it can be difficult for apps to immediately remove all violative content, but for us to distribute an app through Google Play, we do require that apps implement robust moderation for egregious content. In light of this ongoing and urgent public safety threat, we are suspending the app’s listings from the Play Store until it addresses these issues.”).

on the other, is blurry. While there are plenty of clear-cut cases, broad and unspecified conditions for justifications can invite incumbents to disguise their anti-competitive behavior as necessary curation and user protection. The recent—and, at times, somewhat strange—discussions at trial court in *Epic v. Apple* range from alleged pornographic content to the appropriate attire for fantasy fruit characters in online games highlight the difficulties.¹⁰⁰ A relevant question then becomes: which layer in the communication infrastructure is best equipped to make which kinds of content moderation decisions? And irrespective of at which layer the decisions occur, they might not all need the same range for discretion. Put differently, content curation does not need to be treated as an all-or-nothing choice; as we move down within the communication architecture from content through top-layer applications to networks and physical infrastructure, the content-based discretion for admission decision should generally, and can gradually, decrease. In effect, the essential facilities doctrine rests on standards, and assessing the merits of justifying a denial of use is the most obvious example of that character. The resulting flexibility inevitably comes with uncertainties and increased decision costs in individual cases¹⁰¹: challenges which I discuss in more detail in Part IV.

Second, app store operators rank their applications. They offer search functions and volunteer suggestions to users—comparable to the algorithmically curated results that general

¹⁰⁰ Adi Robertson, *Apple is Using Itch.Io's 'Offensive and Sexualized' Games as a Cudgel against Epic*, VERGE, <https://www.theverge.com/2021/5/7/22425759/epic-apple-trial-app-store-itch-io-offensive-sexualized-unspeakable-games-day-5> (last visited May 26, 2021); Adi Robertson, *Epic and Apple Are Now Fighting over a Naked Banana*, VERGE, <https://www.theverge.com/2021/5/10/22429267/epic-v-apple-fortnite-app-store-trial-peely-day-6> (last visited May 25, 2021).

¹⁰¹ See Louis Kaplow, *Rules versus Standards: An Economic Analysis*, 42 DUKE L.J. 557 (1992).

purpose search engines provide. Rankings in the app store significantly impact app download counts and, thus, commercial success. Audiobooks.com's downloads, for example, decreased by 25%, when Apple down-ranked the app.¹⁰² As technical neutrality in the sense of non-differentiation is no viable option for a search functionality, normative non-discrimination requirements on the one hand and algorithmic governance and oversight on the other provide promising remedies, though. The most basic version of a non-discrimination requirement is preventing self-preferencing, the preferential treatment of the facility's own downstream market services by the facility. And there is ample evidence that the iOS App Store, in fact, engages in that practice and up-ranks its own application offers.¹⁰³ Again, it will frequently be difficult to identify anticompetitive ranking practices and distinguish them from quality-based sorting in accordance with anticipated user preferences or legitimate business interests.

Positively defining fair access and ranking conditions would prove more complex but would also provide a more reliable remedy for downstream competitors.¹⁰⁴ The definition of the conditions for fair access and ranking practices and the likely inevitable ongoing monitoring of those obligations would realistically require a dedicated digital regulator. To be effective, traditional approaches to administrative practice and oversight would need to be

¹⁰² Mickle, *supra* note 49.

¹⁰³ Guggenberger, *supra* note 6.

¹⁰⁴ For comprehensive identification of potentially unfair practices employed by the Apple App Store in light of Consolidated Version of the Treaty on the Functioning of the European Union art. 102, 2012 O.J. (C 326) 47 see Geradin & Katsifis, *supra* note 8, at 44–56. But see Heike Schweitzer, *The Art to Make Gatekeeper Positions Contestable and the Challenge to Know What is Fair: A Discussion of the Digital Markets Act Proposal*, ZEITSCHRIFT FÜR EUROPÄISCHES PRIVATRECHT (forthcoming 2021) (discussing the challenges to define the concept of fairness properly: “the DMA’s ‘fairness’ goal is a black box”); Hurwitz, *supra* note 98, at 1039 (“The lesson of this history is simply that it is far easier to establish that there is a ‘duty to deal’ than it is to define what that duty actually entails.”).

overhauled to make way for more suitable forms of public algorithmic governance.¹⁰⁵ While several suggestions for more effective oversight in the information age offer promising visions, the process of defining “what a regulatory state optimized for the era of informational capitalism ought to look like,” admittedly remains in its infancy.¹⁰⁶ Joshua Kroll, Joanna Huey, Solon Barocas, Edward Felton Joel Reidenberg, David Robinson, and Harlan Yu, for example, laid out approaches to assessing algorithmic processes, enabling effective auditing, and promoting fairness.¹⁰⁷ Rory Van Loo delineates the necessary characteristics of a digital regulator and provides the vital institutional context.¹⁰⁸ In the end, substantive definitions of fairness and their implementation remain inherently political questions, the answers to which will critically shape the role of intermediaries and, with them, the digital economy as a whole.

As I have laid out elsewhere, reviving the essential facilities doctrine and applying it to digital platforms in its conventional gestalt—by providing downstream competitors access to the platform and mandating vertical interoperability—remains insufficient.¹⁰⁹ In a second step, horizontal interoperability requirements—allowing competitors in the primary market to reach

¹⁰⁵ COHEN, *supra* note 46, at 200–01 (“[I]f protections against discrimination, fraud, manipulation, and election interference are to be preserved in the era of infoglut, regulators will need to engage more directly with practices of data-driven, algorithmic intermediation and their uses and abuses.”); Paul Ohm, *Regulating at Scale*, 2 GEO. L. TECH. REV. 546, 553–56 (2018) (suggesting that we should embrace supra-linear regulation throughout the lifecycle of a company, not only at the rough ‘go or don’t go’ circuit-breaker style regulation of antitrust law” to address problems and harms associated with scale).

¹⁰⁶ COHEN, *supra* note 46, at 200. *See also id.*, n.103 (further references).

¹⁰⁷ Joshua A. Kroll et al., *Accountable Algorithms*, 165 U. PA. L. REV. 633, 643–57, 660–74 (2016).

¹⁰⁸ Rory Van Loo, *Rise of the Digital Regulator*, 66 DUKE L.J. 1267, 1310–17 (2017); Rory Van Loo, *Digital Market Perfection*, 117 MICH. L. REV. 815, 874–82 (2019).

¹⁰⁹ Guggenberger, *supra* note 6.

the incumbent's user base—can and must mitigate the platforms' ability to leverage the market entry barriers stemming from network effects.¹¹⁰ Nascent e-commerce platforms could reach buyers on Amazon Marketplace and new app stores could provide their services to Apple iOS or Android users.¹¹¹ This remedy would contribute to reestablishing competition in the primary market and sustainably curtail monopoly rent extraction based on network effects¹¹²—the latter of which antitrust doctrine generally does not recognize as a violation of the Sherman Act.¹¹³ Prior to the Supreme Court's de-facto abandonment of the essential facilities doctrine in *Trinko*, the plaintiff had to establish that the refusal of access (or the discriminatory treatment) was unreasonable; the burden then shifted

¹¹⁰ *Id.* at 317–24. On interoperability as a remedy revitalize competition, see also H. Subcomm. on Antitrust, Com. and Admin. L. of the H. Com. on the Judiciary, *supra* note 2, at 384–86; Competition & Mkts. Auth., *Online Platforms and Digital Advertising: Market Study Final Report* 370–74 (2020); Crémer et al., *supra* note 46, at 37–38, 51, 58–60 (distinguishing “protocol interoperability, data interoperability, and full protocol interoperability.”); Michael Kades & Fiona M. Scott Morton, *Interoperability as a Competition Remedy for Digital Networks* (Sep. 2020); Kadri, *supra* note 8, at 993–99; Mike Masnick, *Protocols, Not Platforms: A Technological Approach to Free Speech*, KNIGHT FIRST AMENDMENT INSTITUTE (Aug. 29, 2019), <https://knightcolumbia.org/content/protocols-not-platforms-a-technological-approach-to-free-speech>; Cory Doctorow, *Adversarial Interoperability: Reviving an Elegant Weapon From a More Civilized Age to Slay Today's Monopolies*, ELECTRONIC FRONTIER FOUNDATION, <https://www.eff.org/deeplinks/2019/06/adversarial-interoperability-reviving-elegant-weapon-more-civilized-age-slay> (last visited May 2, 2021); Palka, *supra* note 8.

¹¹¹ Guggenberger, *supra* note 6.

¹¹² On the extent of and potential for Apple App Store's monopoly rent extraction, see Geradin & Katsifis, *supra* note 8, at 38–44. While requiring horizontal interoperability goes beyond the conventional understanding of access rights, the Court has arguably relied on a somewhat similar logic in *Aspen Skiing Co. v. Aspen Highlands Skiing Corp.*, 472 U.S. 585 (1985). There, the Justices prevented a dominant skiing resort from terminating a collaboration with a direct competitor in the form of selling joint All Aspen-tickets. The joint tickets enabled the smaller competitor to sell access to the lift entire lift infrastructure concerned. Yet, the Court did not see the need to rely on the essential facilities doctrine, *Id.* at 611 n.44.

¹¹³ Areeda, *supra* note 1, at 846–47 (“It is no violation of Section 2 for a monopolist to charge a monopoly price. If the monopoly was not improperly obtained or maintained, then exploiting the monopoly-to charge whatever monopoly price the market will bear-does not violate the statute.”).

to the incumbent as it related to the justification for the refusal to deal.¹¹⁴ The platforms' reliance on opaque and proprietary algorithms for rankings can turn this mechanism into a very high bar, one plaintiffs would hardly be able to overcome. Easing the burden of proof¹¹⁵ or introducing regulatory disclosure obligations relating to the criteria underlying the ranking of applications may help—similar to the disclosure of metrics defining credit scores.

To be clear, the access rights and fair dealing requirements present only one potential response to the harms of economic concentration and gatekeeping power. Other remedies, including horizontal break-ups,¹¹⁶ vertical or functional separation,¹¹⁷ mandatory interoperability,¹¹⁸ heightened merger scrutiny,¹¹⁹ public utility frameworks or digital public infrastructure,¹²⁰ data

¹¹⁴ Soma et al., *supra* note 1, at 604.

¹¹⁵ Guggenberger, *supra* note 6. See also Crémer et al., *supra* note 46, at 51–52 (suggesting a “presumption in favour of a duty to ensure interoperability” in certain cases); Guggenberger, *supra* note 6; Stigler Center, *Committee for the Study of Digital Platforms Market Structure and Antitrust Subcommittee Report* 98 (2019). *But see* Joshua D. Wright & Murat C. Mungan, *The Easterbrook Theorem: An Application to Digital Markets*, 130 YALE L.J. FORUM 622, 625, 636–44 (2021) (“We take that assumption—that the beneficial impact of procompetitive behavior is greater than the harmful impact of anticompetitive behavior—and provide a novel analysis to show that the optimal standard of proof in the antitrust context is greater than ‘preponderance of evidence.’”).

¹¹⁶ Rory Van Loo, *In Defense of Breakups: Administering a “Radical” Remedy*, forthcoming CORNELL L. REV. (Aug. 2020); ZEPHYR TEACHOUT, *BREAK ‘EM UP: RECOVERING OUR FREEDOM FROM BIG AG, BIG TECH, AND BIG MONEY* (2020).

¹¹⁷ Khan, *The Separation of Platforms and Commerce*, *supra* note 1; Elizabeth Warren, *Here’s How We Can Break up Big Tech*, MEDIUM (Mar. 8, 2019), <https://medium.com/@teamwarren/heres-how-we-can-break-up-big-tech-9ad9e0da324c>.

¹¹⁸ H. Subcomm. on Antitrust, Com. and Admin. L. of the H. Com. on the Judiciary, *supra* note 2, at 384–86; Competition & Mkts. Auth., *supra* note 110, at 370–74; Crémer et al., *supra* note 46, at 51, 58–60 (distinguishing “protocol interoperability, data interoperability, and full protocol interoperability.”); Kades & Scott Morton, *supra* note 110; Kadri, *supra* note 8, at 993–99; Masnick, *supra* note 110; Doctorow, *supra* note 110; Palka, *supra* note 8.

¹¹⁹ C. Scott Hemphill & Tim Wu, *Nascent Competitors*, 168 U. PA. L. REV. 1879 (2020).

¹²⁰ See Rahman, *supra* note 6; K. Sabeel Rahman, *Regulating Informational Infrastructure: Internet Platforms as the New Public Utilities*, 2 GEO. L. TECH. REV. 234 (2018); Ethan Zuckerman, *The Case for Digital Public Infrastructure*, KNIGHT FIRST AMENDMENT INSTITUTE (Jan. 17, 2020), <https://knightcolumbia.org/content/the-case-for-digital-public-infrastructure>.

sharing and information disclosure mandates,¹²¹ and more substantial privacy protection can all contribute to reestablishing or protecting competition and innovation online.¹²² And depending on the circumstances, one or several of these remedies may be preferable to or should be combined with access rights. For example, where horizontal break-ups promise to reestablish *and sustain* competition, they tend to outshine behavioral remedies like access rights that require more supervision and fall short of eliminating conflicts of interests and concentrations of economic and political power. In a similar vein, public and democratically controlled infrastructure may contribute a more equitable provisioning of resources and more inclusive participation than access rights to private facilities could. Also, where access rights do promise the best or only way forward, antitrust law is by no means the only possible source. Vertical and horizontal access rights can be defined in sector-specific legislation and regulation. They can root in general anti-discrimination frameworks or specific consent decrees. Likewise, expanded forms of collective bargaining, potentially based on a revised understanding of economic coordination rights,¹²³ could underwrite access rights. Institutionally, all three branches of government, at the federal and the state level, as well as civil society can contribute to the substantive definition of access rights and their terms.

¹²¹ See Claudia Biancotti & Paolo Ciocca, *Opening Internet Monopolies to Competition with Data Sharing Mandates*, Peterson Institute for Int'l Economics (Peterson Inst. for Int'l Econ. 2019); Oscar Borgogno & Giuseppe Colangelo, *The Data Sharing Paradox: BigTechs in Finance*, forthcoming EUROPEAN COMPETITION JOURNAL (2020); Hylton, *supra* note 55, at 286–87; Vikas Kathuria & Jure Globocnik, *Exclusionary Conduct in Data-Driven Markets: Limitations of Data Sharing Remedy*, JOURNAL OF ANTITRUST ENFORCEMENT (Jan. 2020); Rory Van Loo, *Helping Buyers Beware: The Need for Supervision of Big Retail*, 163 U. PA. L. REV. 1311, 1386–92 (2015); Van Loo, *Digital Market Perfection*, *supra* note 108, at 873.

¹²² For a more detailed overview see Guggenberger, *supra* note 6.

¹²³ See Sanjukta Paul, *Antitrust as Allocator of Coordination Rights*, 67 UCLA L. REV. 378 (2020).

All that said, a revived, renewed, and expanded essential facilities doctrine with its general-purpose access rights serves a crucial purpose in a comprehensive pro-competitive policy toolkit.¹²⁴ Most importantly, the flexible doctrine can step in where sector-specific regulation remains absent or underdeveloped. So far, the digital economy and specifically online platforms provide the most prominent example. Especially where reviving competition is not practicably feasible (natural monopolies), incompatible with public policy (urban planning and parallel infrastructure), or at least in the current market environment likely not sustainable (strong network effects that likely drive reconsolidation), access rights might be the only realistically available remedy, particularly in the short term. They directly limit the extraction of monopoly rents and immediately enables follow-on innovation.¹²⁵ Finally, access rights or similar approaches have received endorsements across the political spectrum, which increases the chances of their practical implementation relative to other remedies¹²⁶—admittedly an argument of somewhat ambiguous value, as it might play into a self-fulfilling prophecy.

In following parts of this Article, I focus mainly on federal antitrust law as a source of access rights when addressing some of the most prominent counterarguments. That said, the argumentation nearly entirely extends to access rights derived from different sources—questions of legal certainty might be an exception. And some of the featured counterarguments, specifically those resting on

¹²⁴ Guggenberger, *supra* note 6.

¹²⁵ *Id.*

¹²⁶ H. Subcomm. on Antitrust, Com. and Admin. L. of the H. Com. on the Judiciary, *supra* note 2, at 397–98; Buck, *supra* note 2, at 12–13. In December 2020, the European Commission proposed the Digital Markets Act, a regulatory approach that, in effect, resembles a ex-ante, statutory, and detailed version of the idea behind the essential facilities doctrine see Proposal for a Regulation of the European Parliament and of the Council on contestable and fair markets in the digital sector (Digital Markets Act), COM(2020) 842 final (Dec. 15, 2020).

alleged lacking interests in monopolizations of adjacent or downstream markets,¹²⁷ even apply to a broader set of pro-competitive legal remedies and policy interventions, namely vertical or functional separation regimes.¹²⁸

II. AN EXCEPTION TURNED RULE: THE SINGLE MONOPOLY RENT THEOREM

Few economic concepts have shaped American vertical monopolization enforcement as profoundly as the so-called single monopoly rent theorem.¹²⁹ At a fundamental level, the theorem contends that a monopolist generally lacks incentives to leverage its power in one market to monopolize a downstream or adjacent market that depends on inputs from the monopolist.¹³⁰ Robert Bork, one of the most prominent figures of the Chicago School movement, argued that a firm could only reap monopoly profits once—hence the name of the theorem.¹³¹ If a firm holds monopoly power at one stage of a vertical supply chain or for a necessary component of a combined product, he argued, it will extract all monopoly rents in the entire market anyway.¹³² The theorem is intuitive and, stated in the abstract and the most simple setting, true: where there is only a single monopoly rent, it can indeed only be captured once. The relevant question is whether the theorem’s assumptions broadly hold

¹²⁷ See sections II, III.

¹²⁸ See Khan, *The Separation of Platforms and Commerce*, *supra* note 1, at 1087–93.

¹²⁹ Einer Elhauge, *Tying, Bundled Discounts, And the Death of the Single Monopoly Profit Theory*, 123 HARV. L. REV. 397, 399–400 (2009). The theory is also referred to as the one monopoly rent theorem, see VAN SCHEWICK, *INTERNET ARCHITECTURE AND INNOVATION*, *supra* note 88, at 222.

¹³⁰ See Posner, *supra* note 33, at 927, 937; Lao, *supra* note 6, at 587–89.

¹³¹ BORK, *supra* note 32, at 140–41, 372–75. See JONATHAN B. BAKER, *THE ANTITRUST PARADIGM: RESTORING A COMPETITIVE ECONOMY* 85–86 (2019); Reiffen & Kleit, *supra* note 1, at 420; see also Gerber, *supra* note 1, at 1084–85; Posner, *supra* note 33, at 927–29.

¹³² BORK, *supra* note 32, at 140–41, 372–75; see also BAKER, *supra* note 131, at 85; Gerber, *supra* note 1, at 1084–85; Posner, *supra* note 33, at 927–29; Reiffen & Kleit, *supra* note 1, at 420.

in the real world or whether they apply only in limited circumstances.¹³³ Only if the theorem's assumptions are broadly observed should it guide our normative preferences for default rules in antitrust enforcement. The following discussion shows that what critics of the essential facilities doctrine portray as a general rule or, at least, default starting point,¹³⁴ is in fact only a theoretical exception—especially in today's digital economy.¹³⁵

To explain the mechanism behind the single monopoly rent theorem, let us consider the classic example of nuts and bolts.¹³⁶ Assume that, for whatever reason, nuts are supplied by a monopolist and bolts by a competitive market. The monopolist can charge supracompetitive prices for the nuts; the producers of bolts only a competitive price equal to the marginal cost of bolt production. The overall price of nuts and bolts sold to consumers is limited by their willingness to pay, the demand curve for the combined product. In this example, the monopolist of nuts is able to reap the entire monopoly rent directly and cannot increase her profits by monopolizing the market for bolts.¹³⁷ This is because producers of bolts already sell at marginal costs and the overall price of the combined product is limited by consumers' willingness to pay. Thus, assuming profit-maximizing behavior,¹³⁸ the nut monopolist has no incentive to monopolize the adjacent market.¹³⁹ As a result, there is no need for antitrust law to prevent a further monopolization

¹³³ See Elhauge, *supra* note 129, at 400–401; Khan, *The Separation of Platforms and Commerce*, *supra* note 1, at 1094.

¹³⁴ See Gerber, *supra* note 1, at 1085 (recognizing exceptions, at 1087–92); Reiffen & Kleit, *supra* note 1, at 420–25.

¹³⁵ BAKER, *supra* note 131, at 85–86; Elhauge, *supra* note 129, at 400–401; Khan, *The Separation of Platforms and Commerce*, *supra* note 1, at 1093–94.

¹³⁶ See VAN SCHEWICK, INTERNET ARCHITECTURE AND INNOVATION, *supra* note 88, at 223; Gerber, *supra* note 1, at 1084–85; Elhauge, *supra* note 129, at 403; Lao, *supra* note 6, at 587 n.249.

¹³⁷ See BORK, *supra* note 32, at 372–75; VAN SCHEWICK, *supra* note 88, at 222; Elhauge, *supra* note 129, at 403; Reiffen & Kleit, *supra* note 1, at 421–22.

¹³⁸ See Reiffen & Kleit, *supra* note 1, at 420. I will discuss this limitation below.

¹³⁹ *Id.*; see VAN SCHEWICK, *supra* note 88, at 222.

of the market—at least not with respect to exclusionary behavior.¹⁴⁰ The same level of monopoly rent extraction remains possible with or without vertical enforcement.

The hypothesis rests on several assumptions.¹⁴¹ First, the monopoly power must be absolute; as Johnathan Baker writes, the theorem only holds if a monopolist “has literally no rivals and faces no potential entrants, and if buyers have literally no alternative to the monopolist’s products.”¹⁴² Second, complementary products or services in adjacent markets must enter the consumer market in fixed ratios, just like nuts and bolts.¹⁴³ If input ratios of the combined product are flexible, the monopolist may indeed face incentives to discriminate because they cannot capture the entire monopoly rent in the first instance.¹⁴⁴ Third, the adjacent market must be perfectly competitive.¹⁴⁵ Even proponents of restrained approaches to antitrust enforcement acknowledge these assumptions as conditions for the validity of the single monopoly rent theorem.¹⁴⁶ Contention arises over the typicality of conditions that define the boundaries between exceptional circumstances and policy guiding regularity.¹⁴⁷ While neoclassical approaches translate conclusions of the single monopoly rent theorem into default assumptions for enforcement actions,¹⁴⁸ newer evidence-based thinking rightly characterizes the theorem’s insights as an outlier, applicable in only a small handful

¹⁴⁰ See Posner, *supra* note 33, at 927.

¹⁴¹ VAN SCHEWICK, *supra* note 88, at 222; Elhauge, *supra* note 129, at 400–401, 403–4; Lao, *supra* note 6, at 588.

¹⁴² BAKER, *supra* note 131, at 85–86.

¹⁴³ Posner, *supra* note 33, at 927, 937; Lao, *supra* note 6, at 588; Reiffen & Kleit, *supra* note 1, at 420.

¹⁴⁴ Posner, *supra* note 33, at 937.

¹⁴⁵ VAN SCHEWICK, *supra* note 88, at 222; Benjamin E. Hermalin & Michael L. Katz, *Product Differentiation through Exclusivity: Is There a One-Market-Power-Rent Theorem?*, 22 J. ECON. & MGMT. STRATEGY 1, 3 (2013).

¹⁴⁶ BAKER, *supra* note 131, at 85–86. See also Posner, *supra* note 33, at 937.

¹⁴⁷ BAKER, *supra* note 131, at 85–86. See also Elhauge, *supra* note 129, at 400–401; Posner, *supra* note 33, at 937.

¹⁴⁸ BAKER, *supra* note 131, at 85.

of empirical settings. Its qualifying assumptions and exceptions have been shown to be so attenuated¹⁴⁹ that the model represents the exception, not the rule, when describing monopolist incentives to monopolize adjacent markets.¹⁵⁰

Barbara van Schewick identifies four exceptions to the single monopoly rent theorem in which a monopolist cannot extract the entire monopoly rent that are particularly pertinent to the internet: (1) “rate regulation in the primary market”; (2) “the primary good is not necessary for some uses of the complementary good”; (3) “the complementary product is a source of outside revenue (such as advertising revenue or sales commissions)”; and (4) “only the monopolist’s complementary product is a source of outside revenue.”¹⁵¹ While van Schewick primarily focuses on the relationship between internet service providers and content generation, her findings translate well to incentive structures that govern the relationship between digital platforms and commerce on these platforms, as Lina Khan has demonstrated.¹⁵²

At least for now, digital platforms face little sector-specific regulation and no price regulation in particular, rendering the first exception obsolete.¹⁵³ The second exception concerns the necessity of the primary good for use of the secondary good. To illustrate, consider Amazon.¹⁵⁴ It mainly facilitates the sale of physical and virtual goods. For both types of products, the platform service is not strictly necessary, even if it is deemed essential for the purpose of

¹⁴⁹ See VAN SCHEWICK, *supra* note 88, at 225–82.

¹⁵⁰ BAKER, *supra* note 131, at 85–86; Elhauge, *supra* note 129, at 400–401; Lao, *supra* note 6, at 588.

¹⁵¹ VAN SCHEWICK, *supra* note 88, at 226 (The author notes that the “the fourth exception [...] is a variant of the third.”). See Gerber, *supra* note 1, at 1087–88; Reiffen & Kleit, *supra* note 1, at 422.

¹⁵² Khan, *The Separation of Platforms and Commerce*, *supra* note 1, at 1092–98.

¹⁵³ *Id.* at 1030.

¹⁵⁴ Here and elsewhere the examples assume that the facilities or services are, in fact, essential. The focus of this Essay lies on the counter arguments against the application of the essential facilities doctrine.

the essential facilities doctrine. Amazon's (own and third-party) inventory of physical merchandise could also be sold through a variety of traditional brick and mortar stores, from grocery stores to sports outlets and home improvement retailers.¹⁵⁵ And while Amazon sells e-books in its proprietary Kindle format, creating a necessary nexus between the platform and this version of the e-book, the same content can be read in a different format on other e-book readers. So, again, the complementarity services and products do not necessarily need to be consumed together.¹⁵⁶ Thus, Amazon and similarly situated platforms have an incentive to monopolize secondary markets like those for retail goods and e-book content because they cannot extract full monopoly rents from their market power over the platform services alone.¹⁵⁷ For this reason, the single monopoly rent theorem typically does not hold for digital platforms and cannot provide a compelling reason to weaken antitrust enforcement.

The third exception to the single monopoly rent theorem occurs where "some of the revenue in the complementarity market

¹⁵⁵ This assumes that the means of distribution, here e-commerce, create a separate and distinct market for otherwise identical goods. If one were to assume that the means of distribution does not define the product market, the exception centered around an incomplete monopolization of the primary market would be pertinent.

¹⁵⁶ This assumes that e-books in the Kindle format frame a product market distinct from other e-book formats that can be read by other e-book readers. If one were to assume that the file format and the ability to read the content on a certain device does not define the product market, the exception centered around an incomplete monopolization of the primary market would be pertinent.

¹⁵⁷ The same logic applies to Google as a search engine: As search engines provide information about and links to third-party websites, they create connections between search services and third-party content. Yet, internet users can, at least theoretically, access the third-party content through means other than a search engine, for example a direct URL or a link on a separate webpage. The more popular a website, the more likely it is that users directly navigate to that site instead of through a search engine. On mobile devices, users are even more likely to connect with content providers directly, as they rely more on apps than search engines. Google's practice of providing "direct answers" (*see infra* Section I.A.3.) to optimize traffic and engagement on its sites is an example of the monopolization of an adjacent market, whose products do not necessarily strictly require the primary good.

comes from outside sources.”¹⁵⁸ Take the ubiquitous practice of advertisement-funded digital content, on which Barbara van Schewick bases large parts of her argument.¹⁵⁹ Google links to sites and its mobile app store hosts apps that are themselves advertisement-funded, forming their own two-sided markets. In these situations, the monopolist in the underlying primary market (search or app stores), as a practical matter, cannot necessarily extract the entire monopoly rent without also monopolizing the adjacent market (advertising).¹⁶⁰ The fourth exception substantially overlaps with the third.

Additionally, the characteristics of data—and specifically data exhaust, generated by observing incidental user behavior—provide an independent basis for the profitability of exclusionary conduct in adjacent markets.¹⁶¹ When users interact with digital services, they inevitably reveal rich information about themselves and others. Arguably, the surveillance of our casual behavior reveals the most valuable information: the pictures we like, the friends we interact with, and especially, the places we visit reveal our preferences and allow for predictions of future behavior. Google understood the enormous value of this data exhaust early on and capitalized on information it collected.¹⁶² Initially, no one, not even Google, could have assessed and quantified the true value of data exhaust.¹⁶³ Now, however, the astronomical expected value of such

¹⁵⁸ VAN SCHEWICK, *INTERNET ARCHITECTURE AND INNOVATION*, *supra* note 88, at 232.

¹⁵⁹ *Id.* at 232–35.

¹⁶⁰ See Khan, *The Separation of Platforms and Commerce*, *supra* note 1, at 1096–97.

¹⁶¹ See *id.* at 1097.

¹⁶² See generally Douglas C. Schmidt, *Google Data Collection*, DIGITAL CONTENT NEXT (Aug. 15, 2018), <https://digitalcontentnext.org/wp-content/uploads/2018/08/DCN-Google-Data-Collection-Paper.pdf>.

¹⁶³ Hylton, *supra* note 55, at 276 (“It is interesting to note that for many years after Google entered the market, observers wondered how the service would become a source of revenue—that is, how search could be monetized.”).

data suffices to incent vast collections, even where no present use is apparent. The monopolization of an adjacent or complementary market enables a monopolist to collect data created by activities in that market.¹⁶⁴

Google's range of products, including Gmail, maps, and calendar, allow the company to collect data that would otherwise have been collected by third parties.¹⁶⁵ For several reasons, Google cannot adequately substitute its activities in secondary markets with monetary rent extraction in the market for search. First, markets cannot adequately estimate the potential value of data extraction in secondary markets, a requirement for a monopolist seeking to charge prices that extract the full monopoly rent in the primary market without squashing the complementary market. Second, the value of the collected data might be higher to a monopolist that can combine it with already-extensive databases than it is for an independent actor on the complementarity market. In a recent paper, Dirk Bergemann, Alessandro Bonatti, and Tan Gan have shown and modeled "how the social dimension of data magnifies the value of individual data."¹⁶⁶ The same mechanism can define the relationship between the platform and its downstream competitors. This phenomenon reflects a form of synergy that only the monopolist in the primary market can exploit. Third, data collected through consumer activities in the secondary market serve as a source of information that can improve the primary service or good. Google, for example, uses insights from Gmail, maps, or calendar to improve its search engine. The same is true for the relationship between Android and its applications. Fourth, the monopolist might have collected data in the primary market that can be monetized in the

¹⁶⁴ Khan, *The Separation of Platforms and Commerce*, *supra* note 1, at 1097.

¹⁶⁵ *Id.*

¹⁶⁶ Dirk Bergemann et al., *The Economics of Social Data* (Feb. 2, 2021), <https://econpapers.repec.org/paper/cwlewdpp/2203.htm>.

complementary market. While the monopolist could theoretically license data storage and analytics to independent actors in the complementary market, such sharing might not be desirable in practice, as it might disclose sensitive trade secrets or require protective mechanisms that increase transaction costs.¹⁶⁷

Finally, the single monopoly rent theorem does not account for inevitable agency costs and misaligned incentives within the firm.¹⁶⁸ To be more precise, managers at all levels of the firm face incentives to increase the size of the firm beyond its profit-maximizing scope.¹⁶⁹ Even carefully designed compensation schemes cannot neutralize the appeal of bigness. Social status and power tend to increase with the size of the operation, not only with the operation's profits.¹⁷⁰ Invitations to Davos and Jackson Hole, private audiences with high-ranking government officials, and interview requests are only the most visible perks of bigness and power. Even if the one monopoly rent theorem's assumptions were to apply and there was indeed no added value in monopolizing the monopolist's adjacent or complementary market, firm managers

¹⁶⁷ VAN SCHEWICK, INTERNET ARCHITECTURE AND INNOVATION, *supra* note 88, at 233–34.

¹⁶⁸ See Reiffen & Kleit, *supra* note 1, at 420. (“In the fixed proportions case, a monopolist at any level of production can realize the entire monopoly profit. The monopolist accomplishes this by charging a price that, when added to the competitive markups at other stages, yields the monopoly price for the final output. So whether a monopolist is vertically integrated or not, it has no incentive to foreclose or discriminate against other firms.” (citations omitted)). This argument might come as a surprise. After all, antitrust law generally disregards intra-firm arrangements. The firm exemption shields intrafirm collaboration from antitrust liability. Likewise, intra-firm arrangements do not shield the company from antitrust liability that it would otherwise of the face. In short, antitrust law treats the firm as its smallest unit subject to legal scrutiny. So, why should the single monopoly rent theorem account for sub-firm level incentive structures? Because unlike antitrust doctrine, the theorem is explanatory, not normative. It sets out to provide a reason why enforcers should, in certain situations, not be concerned about exclusionary behavior. And for that conclusion, it matters more how firms actually behave and less how they would behave if they were a monolith with perfectly aligned incentive structures.

¹⁶⁹ See generally Andrei Shleifer & Robert W. Vishny, *Management Entrenchment*, 25 J. FIN. ECON. 123 (1989).

¹⁷⁰ *Id.*

might well pursue exclusionary measures, as it benefits them personally. So while antitrust law via the firm exemption generally treats the firm as the most granular unit and ignores potential internal conflicts of interest,¹⁷¹ the one monopoly rent theorem cannot employ the same willful ignorance as an empirical matter.

To conclude, after deducting all the exceptions from the so-called single monopoly theorem, there is not much left—especially in data-driven platform markets. Rather than guidance for default enforcement rules, the theorem describes a theoretical exception with little practical application. To pick up on a more general observation by Tim Wu about Chicago School concepts, the theorem does not model reality, but simply reflect doctrine.¹⁷² It is high time to adjust our assumptions to reflect the “actual market realities,” as the Supreme Court commonly urges.¹⁷³ In effect, we should abandon the single monopoly rent theorem as an analytical starting point.¹⁷⁴

¹⁷¹ See Paul, *supra* note 123.

¹⁷² Tim Wu, *Ohio v American Express - The American Express Opinion, the Rule of Reason, and Tech Platforms*, 7 J. ANTITRUST ENFORCEMENT 104, 117–18 (2019) (“There is some irony in this trend: there was a time, at its height during the 1970s and 1980s, that critics charged the antitrust with too much pro-government bias and an indifference to realities of economy.”) In 1979, Richard Posner, a representative of the Chicago School, applauded the shift from “observations” and a “particularistic and non-theoretical character of the field” to “economic theory” and “premises of rational profit maximization,” which he claimed had later been proven correct, “partly as result of the growing sophistication of economic analysis,” see Posner, *supra* note 33, at 931–32. (“The powerful simplifications of economic theory—rationality, profit maximization, the downward-sloping demand curve—were discarded, or at least downplayed, in favor of microscopic examination of the idiosyncrasies of particular markets.”). See also Orbach, *supra* note 7, at 12 (pointing at the “formalistic rationales” in recent case law).

¹⁷³ *Eastman Kodak Co. v. Image Technical Services, Inc.*, 504 U.S. 451, 466–67 (1992) (“Legal presumptions that rest on formalistic distinctions rather than actual market realities are generally disfavored in antitrust law.”); *Ohio v. Am. Express Co.*, 2018 138 S. Ct. 2274, 10–11.

¹⁷⁴ Similar misconceptions have generated skepticism of courts’ tendency to focus on wholesale markets; see Lipsky & Sidak, *supra* note 1, at 1214–15. Abbott Lipsky and Gregory Sidak lament that a focus on the wholesale level fails to account for competitive pressures from alternative means of distribution or

III. A THEORY THAT DOES NOT HOLD IN THE LONG RUN: INTERNALIZING COMPLEMENTARY EFFICIENCIES THEOREM

Beyond the one monopoly rent theorem, opponents of stricter antitrust enforcement in vertical settings point at supposed internalizing complementary efficiencies that a monopolist would allegedly forego if it were to discriminate against or exclude competitors in an adjacent market.¹⁷⁵ That is to say, a monopolist, so the argument goes, benefits from the existence of a functional and competitive adjacent market.¹⁷⁶ The monopolist can extract full monopoly rents and profit from the low prices and innovation generated by perfect competition in the adjacent market. The monopolized good becomes more attractive with a wider range of products and higher levels of innovation in the adjacent market—in essence, indirect network effects at the product level.¹⁷⁷ In contrast to the single monopoly rent theorem, this presumes a preference for

substitute end products. First, Lipsky and Sidak seem to assume a binary option: either there is absolute monopoly power or the monopoly on the wholesale level is completely neutralized by competition at the retail level. See *Id.* at 1215. However, the owner of the essential facility might be able to increase its profits in practice by redistributing allocation between the wholesale and retail level while reducing overall output—for example by monopolizing complementary markets for goods that have additional uses. Second, the criticism relies on the example of a commodity market to corroborate a broader argument about the essential facilities doctrine, *id.* at 1214–15. (“If oil is readily available to the region from another source, however, no monopoly constraint on pipeline output (or enhancement in price) would be rational or, in equilibrium, even possible. Alternatively, there may be an energy source that is a reasonable alternative for consumers of oil.”). Yet, where the products are not standardized, innovation matters at all levels of the distribution chain. Market foreclosure at the wholesale or platform level can stifle innovation in the retail market or on the platform. Again, this strategy can be profitable for the platform even where it might reduce overall output as it enables the platform to redistribute profits, for example by exploiting network effects on the platform.

¹⁷⁵ VAN SCHEWICK, INTERNET ARCHITECTURE AND INNOVATION, *supra* note 88, at 222–23; Geradin & Katsifis, *supra* note 8, at 60–65; Khan, *Amazon’s Antitrust Paradox*, *supra* note 1, at 1093–95.

¹⁷⁶ VAN SCHEWICK, *supra* note 88, at 222–23; Geradin & Katsifis, *supra* note 8, at 60–65; Khan, *The Separation of Platforms and Commerce*, *supra* note 1, at 1093.

¹⁷⁷ Geradin & Katsifis, *supra* note 8, at 60–65; Khan, *The Separation of Platforms and Commerce*, *supra* note 1, at 1093–94.

variety in the complementary market. Amazon, for example, becomes more valuable with a wider variety of goods on the platform, app stores create more utility with the number and range of apps provided by third parties, and search engines benefit from ever more content.¹⁷⁸ In short, some of Amazon and Google's offerings benefit from a flourishing secondary market.

Under these premises, efforts to leverage monopoly power and exclude rivals' power would not only be futile, as they are deemed by the single monopoly rent theorem, but may be directly detrimental to the monopolist's bottom line.¹⁷⁹ Clearly, then, assumptions differ between the two concepts, as do their limitations. Instead of a static ratio of goods between the monopolized market and the adjacent market, the complementary efficiencies theorem builds on a mutually beneficial feedback loop between the monopolized market and competition in the adjacent market.

Open ecosystems indeed often enable more innovation than closed alternatives.¹⁸⁰ Thus, it is no surprise that several of the most successful platforms have chosen open architectures to spur growth in their early stages. The operating system Android is a prime example of this strategy (and a stark contrast to the closed environment that Apple iOS offers). Platforms can benefit from experimentation by independent actors without risking their brand image. “[T]he platform owner has the luxury of sitting back and watching innovation occur on its platform,” as Keith Hylton put

¹⁷⁸ Geradin & Katsifis, *supra* note 8, at 60–65; Khan, *The Separation of Platforms and Commerce*, *supra* note 1, at 1093–94. For an example relating to internet access, see VAN SCHEWICK, *supra* note 88, at 223. (“Customers may find Internet service more attractive if they can access a broader range of applications and content through this service. Thus, increasing the number of applications and the amount of content available online may enable the network provider to charge a higher price for Internet service.”)

¹⁷⁹ VAN SCHEWICK, *supra* note 88, at 225.

¹⁸⁰ On optimal openness, see Geoffrey Parker & Marshall Van Alstyne, *Innovation, Openness, and Platform Control*, 64 MGMT. SCI. 3015 (Jul. 2018).

it.¹⁸¹ This opportunity is especially valuable for app development, which is prone to security breaches and infamous for its trial-and-error culture. Amazon embraced a similar strategy with respect to product development, trend-setting, and testing. The “better” and more competitive the platform designs its secondary marketplace, the closer it can drive merchant prices on the platform down to marginal cost and still benefit from product innovation.¹⁸²

While the story of internalizing complementary efficiencies might explain early platform behavior, it proves ill-suited with regard to more mature markets.¹⁸³ In the early days of a platform market, the positive feedback loop between the primary and the complementary market is key for the success of the platform. Once the market has tipped in favor of one dominant player, however, the level of innovation and quality derived from the complementary market matters less and less.¹⁸⁴ The now significant relative size advantage of the dominate network drives and cements market dominance.¹⁸⁵ Consequently, network effects serve as sufficient safeguards against competition and allow the platform to monetize

¹⁸¹ Hylton, *supra* note 55, at 280.

¹⁸² VAN SCHEWICK, *supra* note 88, at 226.

¹⁸³ See Mattioli, *supra* note 49; Betsy Morris & Deepa Seetharaman, *The New Copycats: How Facebook Squashes Competition From Startups*, WALL ST. J. (Aug. 9, 2017), <https://www.wsj.com/articles/the-new-copycats-how-facebook-squashes-competition-from-startups-1502293444>.

¹⁸⁴ See Petri Kuoppamäki, *Tying and Two-Sided Digital Platforms*, in THE ROLES OF INNOVATION IN COMPETITION LAW ANALYSIS 307, 311–12 (Paul Nihoul & Pieter Van Cleynenbreugel eds., Edward Elgar Publishing Dec. 2018); Jonathan Levin, *The Economics of Internet Markets*, in ADVANCES IN ECONOMICS AND ECONOMETRICS 48, 55–56 (Daron Acemoglu et al. eds., Cambridge University Press 2013); Vaheesan, *supra* note 3, at 947. See also Hylton, *supra* note 55, at 279–80 (Discussing “Kill Zone Expropriation:” “When [the platform owner] spots an especially productive innovation, the platform owner can leap and swallow it whole. This means that any innovator on the platform knows that there is an upper limit to its profit from innovation, which triggers expropriation by the platform owner.”).

¹⁸⁵ See Ackerberg & Gowrisankaran, *supra* note 55, at 738, 760; Rohlfs, *supra* note 55, at 19; SHAPIRO & VARIAN, *supra* note 55, at 184; Witt, *supra* note 55, at 771 (seeing the potential to overcome lock-in effects, but emphasizing the “the capacity to pass a ‘critical mass’ threshold or, more precisely, to attract a critical number of potential adopters who then make an adoption decision.”).

the innovative status-quo more efficiently, as economies of scale can be better exploited with a centralized architecture. In other words, size trumps quality and innovation. This shift creates incentives for a platform to close in on competition and push independent actors out of the marketplace.¹⁸⁶ Like the single monopoly rent theorem, internalized complementary efficiencies provide little guidance for regulators trying to enforce antitrust laws in mature markets.

IV. EXAGGERATIONS, ASYMMETRIES, AND DISREGARD OF THE ALTERNATIVES: ADMINISTRABILITY, INFORMATION AGGREGATION, AND ERROR COSTS

The essential facilities doctrine has faced fierce criticism for its alleged lack of administrability by antitrust authorities and, especially, courts.¹⁸⁷ The vagueness, emptiness, and “embarrassing weakness” of the doctrine causes “mischief,” as Michael Boudin observed shortly after the Supreme Court’s decision in *Aspen*.¹⁸⁸ And the consequences of errors on the side of over-enforcement of antitrust provisions exceed those of underenforcement, because other than markets, administrative decisions and court rulings do not correct themselves—or so the story goes.¹⁸⁹ When applying the doctrine, regulators and judges ultimately define the terms of access to the facility, which would usually be left to the market. They might

¹⁸⁶ See Mattioli, *supra* note 49; Morris & Seetharaman, *supra* note 183.

¹⁸⁷ Areeda, *supra* note 1, at 844–45, 851, 853 (focusing especially on juries); Boudin, *supra* note 1, at 399–403.

¹⁸⁸ Michael Boudin, *Antitrust Doctrine and the Sway of Metaphor*, 75 GEO. L. J. 395, 402 (1986) (“Despite its embarrassing weakness, the bottleneck doctrine is nevertheless alive and well in the lower federal courts, doing mischief and gaining momentum.”). On antitrust more generally, see Frank H. Easterbrook, *Limits of Antitrust*, 63 TEX. L. REV. 1, 3 (1984) (In the context of an article that argues for restraining antitrust enforcement: “Small wonder that the history of antitrust is filled with decisions that now seem blunders.”).

¹⁸⁹ *Id.* at 2–3 (“Monopoly is self-destructive. Monopoly prices eventually attract entry. True, this long run may be a long time coming, with loss to society in the interim. The central purpose of antitrust is to speed up the arrival of the long run. But this should not obscure the point: judicial errors that tolerate baleful practices are self-correcting, while erroneous condemnations are not.”).

directly define access conditions or may leave the details to the parties, reserving the right to second-guess conditions offered by the incumbent.¹⁹⁰ In the original essential facility-case, *Terminal Railroad Association*, the Supreme Court followed the second approach.¹⁹¹ The Court only laid out principles that terms of access would need to satisfy, but left details to negotiation between the parties.¹⁹² To ensure compliance with these principles, the Court threatened to revert to ordering divestiture, the remedy initially sought by the government, if terms of access offered by the incumbent were insufficient.¹⁹³ Until 1924, the Court became involved three more times in the case.¹⁹⁴ And no doubt, whether courts impose such terms directly or indirectly, behavioral limitations require ongoing monitoring and enforcement by government or private parties. Monitoring and enforcement can certainly create friction in the form of additional layers of bureaucracy and information inefficiency.¹⁹⁵ However, much of the criticism leveled at the essential facilities doctrine as non-administrable exaggerates the practical difficulties, disregards the costs of policy alternatives, and fails to acknowledge conceivable improvements to the administrative process.¹⁹⁶

¹⁹⁰ *But see* Verizon Communications Inc. v. Law Offices of Curtis V. Trinko, LLP, 540 U.S. 398, 408 (2004) (“[C]ompelling negotiation between competitors may facilitate the supreme evil of antitrust: collusion.”); Hurwitz, *supra* note 98, at 1051.

¹⁹¹ United States v. Terminal Railroad Ass’n of St. Louis, 224 U.S. 383, 383, 411–13 (1912).

¹⁹² *Id.*

¹⁹³ *Id.*

¹⁹⁴ Abbott “Tad” Lipsky Jr., *Essential Facilities Doctrine: Access Regulation Disguised as Antitrust Enforcement*, in THE GLOBAL ANTITRUST INSTITUTE REPORT ON THE DIGITAL ECONOMY 769, 776 (Joshua D. Wright & Douglas H. Ginsburg eds., Global Antitrust Institute 2020).

¹⁹⁵ For the information challenges in the context setting rates and prices, see Katz, *supra* note 32, at 452–53. Where the concern only pertains to protecting limited public resources, private enforcement can provide sufficient relief.

¹⁹⁶ See Lao, *supra* note 6, at 575; Spencer Weber Waller, *Areeda, Epithets, and Essential Facilities - The Future of Monopoly and Monopolization Symposium*, 2008 WIS. L. REV. 359, 369–70 (2008).

Before going into further details, consider a more general point. Critics of the essential facilities doctrine tend to express their general preference for market-based discovery of prices and access conditions to preface rejections of access rights.¹⁹⁷ Proponents of access rights as exemptions do not necessarily doubt that a functioning market would be generally preferable over agency or court administered contracting for access in aggregating the information, however. Proponents only acknowledge that in certain situations and legal environments, market mechanisms fail to provide the necessary check on gatekeeper power and lack the ability to self-correct. High market entry barriers due to network effects fall into that category, for example.¹⁹⁸ A preference for market-based checks on power then becomes a hypothetical but unavailable alternative—at least, as long as the critique is not combined with other policy suggestions that would re-establish competition.¹⁹⁹ What remains is only the extreme preference for unchecked private monopoly power over any sort of state imposed boundary.²⁰⁰ Milton Friedman, for example, expressed a preference for private monopoly over public monopoly or public regulation when given the choice “among evils” in situations of natural monopoly.²⁰¹ Yet even the most ardent supporter of free-wheeling capitalism inserted an “if tolerable” into his endorsement of private

¹⁹⁷ See *Verizon Communications Inc. v. Law Offices of Curtis V. Trinko, LLP*, 540 U.S. 398, 410 n.3 (2004). See also Katz, *supra* note 32, at 452–53.

¹⁹⁸ See Ackerberg & Gowrisankaran, *supra* note 55, at 738, 760; Rohlfs, *supra* note 55, at 19; SHAPIRO & VARIAN, *supra* note 55, at 184; Witt, *supra* note 55, at 771 (seeing the potential to overcome lock-in effects, but emphasizing the “the capacity to pass a ‘critical mass’ threshold or, more precisely, to attract a critical number of potential adopters who then make an adoption decision.”).

¹⁹⁹ Alternatives to the application of the essential facilities doctrine are discussed above and comprise a wide array of options, ranging from breaking up firms along the lines of previous mergers, to regulatorily mandated structural separation and duties to share data.

²⁰⁰ See MILTON FRIEDMAN, *CAPITALISM AND FREEDOM* 28 (University of Chicago Press 40th anniversary ed. 2002).

²⁰¹ *Id.* at 27–28.

monopoly over its alternatives.²⁰²

The specific criticism of the essential facilities doctrine for a lack of administrability can be divided into at least two categories. The first line of critique relates to the essential facility doctrine's alleged lack of consistency and resulting arbitrary enforcement,²⁰³ especially with regard to the prerequisite inability "practically or reasonably to duplicate the essential facility."²⁰⁴ Critics argue that the vagueness of the rule inevitably renders any consistency and logic in its application impossible and, thus, undermines its usefulness.²⁰⁵ However, expressing the scope of the essential facilities doctrine entirely in determinate language, as a rule, would be impossible without diminishing its character as a flexible gap-filler.²⁰⁶ Prior to the creation of the essential facilities doctrine, the Court had already explained that the exercise of a "right to stop dealing" does not impede another person from obtaining that good or service in the marketplace as long as there are sufficient alternatives available.²⁰⁷ And in 1919, the Court established a clear rule-exception relationship in *Colgate*: "In the absence of any purpose to create or maintain a monopoly, the [Sherman A]ct does not restrict the long recognized right [...] freely to exercise his own independent discretion as to parties with whom he will deal."²⁰⁸

Throughout the Court's jurisprudence on duties to deal, the

²⁰² *Id.* at 28.

²⁰³ Boudin, *supra* note 1, at 402; Lipsky, *supra* note 194, at 785.

²⁰⁴ See *MCI Communications Corp. v. Am. Tel. & Tel. Co.*, 708 F.2d 1081, 1132–33 (7th Cir. 1983); Frischmann & Waller, *supra* note 1, at 10.

²⁰⁵ See Areeda, *supra* note 1, at 841 ("It is less a doctrine than an epithet, indicating some exception to the right to keep one's creations to oneself, but not telling us what those exceptions are."); Boudin, *supra* note 1, at 401–3.

²⁰⁶ For the advantageous flexibility of the essential facilities doctrine, specifically in the digital economy, see Vaheesan, *supra* note 3, at 955, 961–62.

²⁰⁷ *E. States Retail Lumber Dealers' Ass'n v. United States - McBride v. United States*, 234 U.S. 600, 614 (1914).

²⁰⁸ *United States v. Colgate & Co.*, 250 U.S. 300, 307 (1919). See also Gerber, *supra* note 1, at 1082.

essential facilities doctrine remains the exception.²⁰⁹ The focus and insistence on heightened levels of consistency²¹⁰ pertaining to a policy option designed to address exceptional circumstances fails to adequately account for alternatives. Non-enforcement inevitably fails to open up foreclosed markets. If vagueness were the true object of concern, it could be addressed by defining clearer thresholds, either as presumptions, like HHI index thresholds in merger enforcement, or as hard rules.²¹¹ By analogy to the general impacts of rules and standards,²¹² such a shift may lead to higher enforcement rates, which might be at odds with the critics' broader policy preferences.²¹³

Moreover, the doctrine's flexibility is one of its main advantages—especially in dynamic markets.²¹⁴ Technological innovation and adoption remains inherently uncertain. A flexible remedy that can be adapted as needed and applied irrespective of the path of innovation provides invaluable advantages, at least as a fallback option and in combination with structural or rule-based approaches. When comparing different approaches to behavioral remedies, some of which provide more certainty than others, a trade-off between that certainty, information assessment costs, and types and magnitudes of future error appears all but inevitable, in parallel to the broader debate of rules versus standards.²¹⁵ Finally, the behavioral standard that the “duplicate” prong imposes does not

²⁰⁹ Pitofsky et al., *supra* note 1, at 448–49.

²¹⁰ Market definitions, for example, are inherently vague, speculative, and, thus, necessarily somewhat inconsistent. Yet the concepts build a cornerstone in antitrust doctrine.

²¹¹ BAKER, *supra* note 131, at 93.

²¹² See Kaplow, *supra* note 101; Eric A. Posner, *Standards, Rules, and Social Norms*, 21 HARV. J.L. & PUB. POL'Y 101 (1997).

²¹³ See BAKER, *supra* note 131, at 93; Easterbrook, *supra* note 188, at 14–17.

²¹⁴ Guggenberger, *supra* note 6.

²¹⁵ See Kaplow, *supra* note 101; Louis Kaplow, *On the Design of Legal Rules: Balancing Versus Structured Decision Procedures*, Vol. 132 HARV. L. REV. 993 (2019).

appear vaguer than comparable standards in law. In fact, arguably vaguer standards govern other parts of society, from general tort law with its reasonable person test to free speech guarantees at the heart of the Constitution that rely on the definitions of public figures and obscenity.²¹⁶ Only few would conclude that it would be wise to eliminate tort liability or abolish the First Amendment due to its inherent vagueness without proposing viable alternatives.

The second category of skepticism aims at the allegedly ill-suited enforcement processes for behavioral remedies resulting from application of the essential facilities doctrine. This line of argument starts with the premise that only the invisible hand of the market can define efficient conditions and prices. Authorities and especially courts²¹⁷ inherently lack the necessary information and expertise to replace these market mechanisms. Remedies that set access conditions or prices, therefore, would inevitably lead to inefficient arrangements. Yet this concern, once more, disregards the alternative—a dysfunctional market that lacks the ability to discover efficient prices and conditions in the first instance. Differentiating between access as such and conditions of the access, as some critics

²¹⁶ See *Jacobellis v. Ohio*, 378 U.S. 184 (1964) (Justice Stewart, concurring, famously sidestepped a precise definition of obscenity entirely and opined: “I shall not today attempt further to define the kinds of material I understand to be embraced within that shorthand description; and perhaps I could never succeed in intelligibly doing so. But I know it when I see it, and the motion picture involved in this case is not that.”); KEITH N. HYLTON, *TORT LAW: A MODERN PERSPECTIVE* 102–21 (2016) (“And although it is objective, it is not easily summarized in the form of a simple cost benefit test. The reasonable person standard incorporates the typical individual’s ability to make long-term plans that might affect the risks he imposes on others and to make tradeoffs that affect those risks.”); Benjamin C. Zipursky, *Reasonableness in and Our of Negligence Law*, 163 U. PA. L. REV. 2131, 2848–49 (2015).

²¹⁷ *Verizon Communications Inc. v. Law Offices of Curtis V. Trinko, LLP*, 540 U.S. 398, 414–15 (2004) (“Even if the problem of false positives did not exist, conduct consisting of anticompetitive violations of § 251 may be, as we have concluded with respect to above-cost predatory pricing schemes, “beyond the practical ability of a judicial tribunal to control.” *Brooke Group Ltd. v. Brown & Williamson Tobacco Corp.*, 509 U. S. 209, 223 [1993]. Effective remediation of violations of regulatory sharing requirements will ordinarily require continuing supervision of a highly detailed decree.”); Hurwitz, *supra* note 98, at 1033.

insist, does not support the concern. Specifically, the distinction that Justice Scalia offers in *Trinko* between an allegedly impossible “estimation of free-market forces” and “simply requiring that the outsider be granted nondiscriminatory admission to the club” as in *Terminal Railroad Association*²¹⁸ lacks merit. This is not least because “any admission to the club” inevitably requires a determination of the appropriate terms of that admission and thus an “estimation of free-market forces.”

The foregoing rebuttal of the universal concerns related to replacing market mechanisms leaves us with the objections against generalist courts as facilitators of such process.²¹⁹ Antitrust cases are heard by generalist judges within generalist courts.²²⁰ And that might reflect a less than optimal institutional arrangement, as defining or assessing access conditions can quickly become very technical and complex—especially in the digital economy.²²¹ That said, generalist courts also preside over cases involving large scale environmental harm, emerging technologies, and securities fraud,. All of these areas are highly technical and, more often than not, require expert knowledge as well. Most importantly, an assumed lack of sector-specific or economic understanding cuts both ways: a decision not to grant access rights defines the market just as much as denying the competitor’s request. The latter might be easier to articulate, but both require the same level of understanding of the

²¹⁸ *Trinko*, 540 U.S. at 410 n.3. See also Areeda, *supra* note 1, at 844–45.

²¹⁹ See *Trinko*, 540 U.S. at 408, 414–15 (“Enforced sharing also requires antitrust courts to act as central planners, identifying the proper price, quantity, and other terms of dealing—a role for which they are ill suited.”); Michael R. Baye & Joshua D. Wright, *Is Antitrust Too Complicated for Generalist Judges? The Impact of Economic Complexity and Judicial Training on Appeals*, 54 J.L. & ECON. 1 (2011); Hurwitz, *supra* note 98, at 1039 (“If a rate-setting agency, aided by substantial expertise and resources devoted to the regulation of a single firm, has such difficulties implementing a duty to deal, how fraught must be the enterprise for a generalist antitrust court?”). See also Vaheesan, *supra* note 3, at 939–40 (suggesting leaning on regulation and specialized agencies, where established).

²²⁰ Vaheesan, *supra* note 3, at 940.

²²¹ *Id.*

market. Finally, assuming that the Supreme Court's ultimate jurisdiction should be preserved, high caliber antitrust cases will end up before generalists anyways.

To address concerns about their institutional capacity to define access conditions, courts could rely on administrative agencies with sectoral expertise, either as advisors on or enforcers of access arrangements.²²² In fact, Philipp Areeda points at the Court's delegation in *Otter Tail* to argue that the case should be understood "quite narrow[ly]."²²³ The scope of that approach might, however, not be as narrow as suggested. The administrative agency does not need to have regulated the access conditions already; holding jurisdiction over issue would suffice. Furthermore, Courts could specifically build on the general practice of amicus invitations without perpetuating the valid concerns about the practice, specifically potential undue influence by special interest groups.²²⁴ Several agencies seem well-positioned: the FCC for communication platforms, the FTC for electronic commerce, or the CFPB for fintech platform such as lending clubs or crowd funding platforms, for example—or a new agency entirely.²²⁵

²²² See Stigler Center, *supra* note 115, at 32 (suggesting a digital authority to oversee the implementation of interoperability requirements). For the institutional capacity of courts compared to regulatory agencies in the context of "establishing the terms and delineating the scope of open access arrangements," see Vaheesan, *supra* note 3, at 939–40.

²²³ Areeda, *supra* note 1, at 848 ("Very importantly, there was already in place a regulatory agency that supervised prices and terms of dealings with local distributors. Thus, the Court could airily require *Otter Tail* to deal but never burden itself with the administrative details, because the Federal Power Commission had the statutory authority and presumed expertness to regulate the prices and terms of dealing.").

²²⁴ For the practice of inviting amicus curiae and its challenges, see Paul M. Collins et al., *The Influence of Amicus Curiae Briefs on U.S. Supreme Court Opinion Content*, 49 L. & SOC'Y REV. 917 (2015); Brian P. Goldman, *Should the Supreme Court Stop Inviting Amici Curiae to Defend Abandoned Lower Court Decisions?*, 63 STAN. L. REV. 907 (2011); Joseph D. Kearney & Thomas W. Merrill, *The Influence of Amicus Curiae Briefs on the Supreme Court*, 148 U. PA. L. REV. 743 (2000); Katherine Shaw, *Friends of the Court: Evaluating the Supreme Court's Amicus Invitations*, 101 CORNELL L. REV. 1533 (2016).

²²⁵ Stigler Center, *supra* note 115, at 32.

Lacking qualifications is not the only shortcoming that critics of the essential facilities doctrine observe. They also point at the time to enforcement associated with long investigations and court proceedings.²²⁶ Especially in dynamic digital markets that might inevitably mean to miss the right timing. While the criticism of the time lag between the assessment of the problem and the final decision is warranted indeed, it again largely ignores the alternative. The delay of a necessary remedy does not support abandoning the remedy altogether. To the contrary, these concerns should provide motivation to reform antitrust doctrine, procedures, and enforcement institutions. We could task specialty courts to deal with antitrust cases more efficiently or increase the funding and strengthen the reactivity of enforcement agencies at all levels.²²⁷ To a significant degree, time to enforcement is a policy choice, not a natural limitation of resources that necessarily diminishes the value of the essential facilities doctrine. That is to say, we could accelerate the application of the essential facilities doctrine if we so choose.

Finally, let us consider the potential harm associated with over- or underenforcement: the error costs.²²⁸ Critics of forceful antitrust enforcement as a form of government intervention generally and the essential facilities doctrine specifically tend to understand error costs asymmetrically: underenforcement may prolong monopolies beyond optimal incentive structures, but eventually the market will self-correct; overenforcement lacks the

²²⁶ On the crucial nature of the timing of antitrust enforcement, see Tim Wu, *Taking Innovation Seriously: Antitrust Enforcement If Innovation Mattered Most*, 78 ANTITRUST L.J. 313, 325–28 (2012).

²²⁷ Key to the success of Thurman Arnold's antitrust enforcement strategy during the Roosevelt administration was a significant increase of the budget and the workforce of the DOJ Antitrust Division, as outlined by himself at the beginning of his term, Thurman Arnold, *The Antitrust Laws, Their Past and Future* 1 (Aug. 1938). For an account of Thurman Arnold's service as United States Assistant Attorney General for the Antitrust Division, see Spencer Weber Waller, *The Antitrust Legacy of Thurman Arnold*, 78 ST. JOHN'S L. REV. 569 (2004).

²²⁸ See BAKER, *supra* note 131, at 71–95; Guggenberger, *supra* note 6, at 324–27.

same self-correcting mechanisms.²²⁹ Based on these assumptions, the choice seems clear and a general skepticism against enforcement warranted.²³⁰ And again, some commentators urge for an even more restraint approach in dynamic digital markets.²³¹ They express worry that, in these environments, overenforcement would be especially harmful, as it could disrupt the disruptors and hamper innovation, creating an irrevocable loss to society.

On closer examination, however, the underlying assumptions for an anti-enforcement bias do not hold. Neither prove false positives (type I error) generally less harmful than false negatives (type II errors), nor does that specifically hold for dynamic digital markets. Consider some of the most palpably questionable premises. First, what provides a reason for the assertion that erroneous enforcement actions could not be overcome at all or, at least, would linger longer than it takes erroneously unchecked monopolies to self-correct? In both situations market structures might or might not recover from the harm in the short or medium term—differences in speed remain speculation. In the (very) long term, of course, the economy will all but certainly overcome either type of erroneous decision.²³² Competitors might or might not step up and challenge the persisting monopoly or fill the void an enforcement action has left. Second, dynamic markets move faster. However, that applies to all aspects of the market and cannot provide the basis for the alleged asymmetry. Third, why should we assume that the harms likely to be caused by underenforcement are quantitatively less than the harms caused by overenforcement? An even more broadly speaking, what do we know about the

²²⁹ Easterbrook, *supra* note 188, at 2–3. *See also* Wright & Mungan, *supra* note 115. *But see* Salop, *supra* note 52, at 573.

²³⁰ *See* Easterbrook, *supra* note 188, at 2–3.

²³¹ Wright & Mungan, *supra* note 115, at 633.

²³² *But see* Easterbrook, *supra* note 188, at 2–3.

quantitative effect of the two types of errors in general? The very observations about the difficulties of finding the sweet spot of perfect enforcement,²³³ suggests that we should be even less confident in accurate quantifications and comparisons of error costs.

The ambiguity in assessing error costs at an individual level is not the only shortcoming of the anti-enforcement error cost-argument. It is also worth considering the dynamics of systemic over- and underenforcement or general biases. The general state of the economy matters. Has the pendulum swung toward alarming levels of concentration or is the economy rather held back by obstacles to scale? That is to suggest that error cost considerations at an individual level may not translate perfectly into identical conclusions at a systemic level. And, more concretely, is the current environment of historically high levels of concentration and private gatekeeping power, the extend of which many have compared to the Gilded Age,²³⁴ one in which we should be equally worried about overenforcement as we should be about underenforcement? Put differently, are we anywhere close to systemic levels of antitrust enforcement that should give rise to concern?

Similar complications arise as it relates to errors' impact on political and economic power structures and private regulation²³⁵—a perspective that too often remains overlooked in antitrust doctrine. The consequences of type I and II errors appear qualitatively distinct, and some even point in opposite directions. Systemic overenforcement generally leads to lower levels of concentration of private power than the law requires; underenforcement stabilizes

²³³ *Id.* at 3 (“In most cases even a perfectly informed court will have trouble deciding what the optimal long-run structure of the industry is, because there is no ‘right’ balance between cooperation and competition.”); Wright & Mungan, *supra* note 115 (“it is very difficult to test the proposition empirically”).

²³⁴ WU, *supra* note 48; Salop, *supra* note 52, at 565.

²³⁵ For “Antitrust as a Rule Against Private Regulation,” see Thomas B. Nachbar, *The Antitrust Constitution*, 99 IOWA L. REV. 57, 88–93 (2013).

gatekeepers, and, in the aggregate, tends to promote further concentration. Relating to the accumulation of private power, antitrust acts as an upper boundary, akin to a speed limit.²³⁶ This differs from aiming for optimal economic efficiency, which can be hampered by both under-, and overenforcement—even if understood broadly, reaching beyond consumer welfare. To be sure, overreaching decisions could lead to ample trade-offs with other values, such as due process or individual economic freedoms. But while systemic threats to these values are theoretically conceivable as consequences of type I errors, they remain rather distant thought experiments based the *status quo* of antitrust doctrine and reasonably expectable changes or reforms. In the end, much will depend on the values incorporated in antitrust analysis, the weight assigned to the values at risk, and the assessment of the state of the political economy within which the decisions are made.

V. MISUNDERSTOOD: ENTRENCHING MONOPOLY POWER AND THE POLITICAL ECONOMY OF REMEDIES

The essential facilities doctrine in its traditional form²³⁷ addresses extreme monopoly power—namely the lack of any reasonable alternatives—by creating access rights enforceable against monopolists.²³⁸ In contrast to horizontal breakups, essential facility-remedies neither directly reinstate competition in the primary market of essential services, nor attempt to do so.²³⁹ This nature of the remedy can be misunderstood as (deliberately) entrenching monopoly power, whereas in fact the essential facilities

²³⁶ I am not aware of, and would not support, suggestions that antitrust should also set a lower boundary for the concentration of political and economic power.

²³⁷ For an expanded version of the essential facilities doctrine with a second level that upends network effect-based monopolies, see Guggenberger, *supra* note 6.

²³⁸ The same applies to other forms of a duty to deal.

²³⁹ The doctrine does, however, reestablish competition in the adjacent or downstream market.

doctrine stands for anything but. The Supreme Court originally relied on access rights over structural separation based on two concerns: choosing the remedy that better protects property rights and opting for a solution that is better public policy. In *Terminal Railroad Association*, the considerations of public policy related to land use in urban settings and the cost of hypothetical competing physical infrastructure.²⁴⁰

In practice, both the intensity of the interference with property rights and concerns of public policy depend on surrounding circumstances. Leaving doctrinal distinctions between forced divestitures and limitations on earning potential aside, access rights can be more onerous (or costly) for shareholders than a break-up. The bottom line very much depends on the tolerable return on investment as part of the fair amortization of investments that underly regulated access conditions. Where access rights are paired with concessions for only very low returns on investment, the essential facilities doctrine significantly erodes shareholder value. Where access conditions allow for relatively high returns on investment, application of the essential facilities doctrine hardly effects the owner's bottom line at all.

But as originally applied by the Supreme Court in *Terminal Railroad Association*, a different factor renders application of the essential facilities-remedy less severe than a horizontal break-up: in effect, the Court gave the Railroad Association a choice between remedies, an option with value in its own right.²⁴¹ The Justices

²⁴⁰ United States v. Terminal Railroad Ass'n of St. Louis, 224 U.S. 383, 387–88 (1912). (“In the country every man builds independently. In the crowded section of a great city, however, if all construction were done independently, the waste in space and the increase in cost of construction would be very great. Community of use of terminals in a large city is more than a matter of convenience, or economy; it is an absolute public necessity. [...] Two bridges across a great river, where one will serve, do not facilitate commerce, but burden it with an unnecessary charge.”)

²⁴¹ *Id.* at 411–13.

threatened to break up the conglomerate if it failed to offer access to competitors in line with the principles set out by the Court.²⁴² The Railroad Association could have ignored the order and faced the consequences. In effect, the Railroad Association itself identified access rights as less intrusive by complying with the Court order in that case, instead of “opting” for a break-up. The monopolist’s preferred remedy (the least costly remedy), however, may differ from case to case.

Critics of the essential facilities doctrine do have a valid point: The traditional form of the concept does not revive competition,²⁴³ as it does not directly change the market structure²⁴⁴ or deprive the gatekeepers of their capability to act as private regulators.²⁴⁵ It only legally constrains monopolist behavior where market power had previously been abused. In essence, the essential facilities doctrine remains a second-best remedy. Though, in certain situations, the theoretically second-best option becomes the only practical option to address monopoly power.²⁴⁶ While the Supreme Court in *Terminal Railroad Association* could well have untangled the two bridges and the ferry company to revive competition (to a

²⁴² *Id.* (“Upon failure of the parties to come to an agreement which is in substantial accord with this opinion and decree, the court will, after hearing the parties upon a plan for the dissolution of the combination between the Terminal Company, The Wiggins Ferry Company, the Merchants’ Bridge Company, and the several terminal companies related to the Ferry and Merchants’ Bridge Company, make such order and decree for the complete disjoinder of the three systems [...].”)

²⁴³ I propose to expand the essential facilities doctrine, see Part I.

²⁴⁴ For concerns relating to regulatory approaches that do not reestablish competition, but set conditions and prices, see Katz, *supra* note 32, at 452–53. For an expansion of the concept to revive competition via interoperability requirements within the primary market, see Guggenberger, *supra* note 6.

²⁴⁵ For “Antitrust as a Rule Against Private Regulation,” see Nachbar, *supra* note 235, at 88–93.

²⁴⁶ See Khan, *supra* note 48, at 132 (“The New Brandeisians—like Justice Brandeis—recognise that certain industries tend naturally towards monopoly. This is especially true of networks. In such cases, the answer is not to break these firms up, but to design a system of public regulation that prevents the executives who manage this monopoly from exploiting their power.”).

certain degree),²⁴⁷ this option is not always available. Especially in the area of infrastructure, natural monopolies are widespread. And even where it is possible to reestablish competition, it is not always desirable. For many reasons, from environmental protection to urban planning, we might not want to build parallel train tracks, bridges, or tunnels, even where we feasibly could. With regard to the digital economy, much depends on our assessment of the intensity of network effects. Where they are particularly strong, horizontal breakups will likely not suffice to reestablish competition—even when combined with stricter merger rules.²⁴⁸

As it relates to concentration of political and private regulatory power in the platform economy,²⁴⁹ the essential facilities doctrine also only provides a second-best option. Instead of directly redistributing and decentralizing power,²⁵⁰ the doctrine constrains the exercise of power. However, the second-best option might still be the best available choice given the constraints imposed by reality and the larger legal system. Moreover, systemic political power often stems from more than market power in one market as defined by the antitrust laws. After all, politically powerful entities regularly operate in a wide variety of product markets. Applying the essential facilities doctrine in one market in which horizontal breakups do not promise sustainable success, does not preclude break-ups of the corporation along different lines to address the general accumulation of political power in other markets.²⁵¹ Consider Google. We might

²⁴⁷ As threatened in case the parties fail to enter into an appropriate agreement, see *Terminal Railroad Ass'n*, 224 U.S. at 411–13.

²⁴⁸ Francis Fukuyama et al., *Report of the Working Group on Platform Scale* 20–21 (2020), <https://cyber.fsi.stanford.edu/publication/report-working-group-platform-scale>; Guggenberger, *supra* note 6.

²⁴⁹ See COHEN, *supra* note 46, at 174–78; Cohen, *supra* note 8; Klonick, *supra* note 8; Van Loo, *The New Gatekeepers*, *supra* note 8; Van Loo, *Federal Rules of Platform Procedure*, *supra* note 8.

²⁵⁰ For an antitrust standard that, among others, aims at dispersing private power, see Steinbaum & Stucke, *supra* note 7, at 603, 617.

²⁵¹ Khan, *The Separation of Platforms and Commerce*, *supra* note 1.

conclude that its search engine should be treated as an essential facility and still force Google to spin off its mobile operating system android, its hardware manufacturing, or its venture arm. To a certain extent, these divestitures could address the concentration of political power independently of whether we understand Google search to be an essential facility. No doubt, concerns about the political power that are directly tied to the market with the natural monopoly might remain. That would apply to the main Facebook network, Twitter, and others, for example, which even in isolation wield enormous political power, as recent decisions to de-platform President Trump have demonstrated.²⁵²

Especially where horizontal breakups do not promise to revive competition or are not feasible at all, functional or vertical separation can and should play a prominent role in resolving conflicts of interest and decentralizing power.²⁵³ Nondiscrimination requirements and duties to deal resulting from an application of the essential facilities doctrine are perfectly compatible with functional separation.²⁵⁴ In fact, the essential facilities doctrine is well suited to address what functional separation does not directly target: monopoly rent extraction, discrimination among participants of the secondary market, and other forms of foreclosure.²⁵⁵

Even setting aside desirable combinations of the essential

²⁵² See Spencer Bokart-Lindell, *Deplatforming Trump Could Work. But at What Cost?*, N.Y. TIMES (Jan. 14, 2021), <https://www.nytimes.com/2021/01/14/opinion/trump-deplatform-twitter.html>; Kate Conger & Mike Isaac, *Inside Twitter's Decision to Cut Off Trump*, N.Y. TIMES (Jan. 16, 2021), <https://www.nytimes.com/2021/01/16/technology/inside-twitter-decision-trump.html>; Michelle Goldberg, *The Scary Power of the Companies That Finally Shut Trump Up*, N.Y. TIMES (Jan. 12, 2021), <https://www.nytimes.com/2021/01/11/opinion/twitter-facebook-trump-ban.html>; Mike Isaac & Kate Conger, *Facebook Bars Trump Through End of His Term*, N.Y. TIMES (Jan. 7, 2021), <https://www.nytimes.com/2021/01/07/technology/facebook-trump-ban.html>.

²⁵³ Khan, *The Separation of Platforms and Commerce*, *supra* note 1.

²⁵⁴ Guggenberger, *supra* note 6.

²⁵⁵ *Id.*

facilities doctrine with other remedies, a duty to deal still does not entrench monopoly power. Other than generally applicable regulation, application of the essential facilities doctrine does not burden nascent competitors. And other than generally applicable regulation, the doctrine does not exacerbate existing economies of scale in markets that already face severe systemic challenges preventing competition, like network effects. In fact, the essential facilities doctrine is highly progressive: after all, it only imposes access rights against the monopolist, not against nascent competitors. Put differently, the essential facilities doctrine limits the earning potential of the monopolist relative to its competitors both in the primary and in the secondary market.²⁵⁶ The doctrine thus weakens the monopolist's competitive position and increases the ability of competitors to challenge the incumbent. In that sense, its effects resemble those of progressive taxation.

CONCLUSION

Criticism of the essential facilities doctrine which heralded its abandonment by and large reflects myths and misguided economic analyses. Going forward, the doctrine should play a crucial role in containing monopoly power, especially in the digital economy.²⁵⁷ As it emerges from the ashes, we must focus the debate on the optimal integration of the essential facilities doctrine into a more comprehensive agenda with structural remedies and broader regulation.

²⁵⁶ Gerber, *supra* note 1, at 1108 (“Although such monopolies [as in the referenced case law] may be too small to warrant application of a regulatory body, imposing a duty to deal may constrain facility owners who reap large monopoly rents merely because they happen to control natural monopolies.”).

²⁵⁷ Vaheesan, *supra* note 3, at 955, 961–62.