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THE INTERNET OF PLATFORMS AND TWO-SIDED MARKETS:
IMPLICATIONS FOR COMPETITION AND CONSUMERS

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I. INTRODUCTION

CONSUMERS in both developed and developing nations increasingly rely on broadband networks to access content, applications, and services.¹ Carriers providing the broadband link between subscribers and Internet cloud-based content and applications² operate as intermediaries with the power to secure payment for services from both upstream sources and downstream subscribers.³ In most instances, wired and wireless carri-

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1. See generally AKAMAI, STATE OF THE INTERNET REPORT: Q1 2017, <https://www.akamai.com/us/en/multimedia/documents/state-of-the-internet/q1-2017-state-of-the-internet-connectivity-report.pdf> [<https://perma.cc/M6W2-6MXC>]; BROADBAND COMM'N FOR SUSTAINABLE DEV., THE STATE OF BROADBAND 2016: BROADBAND CATALYZING SUSTAINABLE DEVELOPMENT (2016), <http://www.broadbandcommission.org/Documents/reports/bb-annualreport2016.pdf> [<https://perma.cc/5N6D-3BH4>]; INT'L TELECOMM. UNION, MEASURING THE INFORMATION SOCIETY REPORT 201 (2016), <http://www.itu.int/en/ITU-D/Statistics/Pages/publications/mis2016.aspx> [<https://perma.cc/L2B7-VLJR>].

2. The Internet cloud refers to the vast array of interconnected networks that make up the Internet and provide users with seamless connectivity to these networks and the content available via these networks. See, e.g., William Jeremy Robison, *Free at What Cost?: Cloud Computing Privacy Under the Stored Communications Act*, 98 GEO. L.J. 1195, 1199 (2010). “The increasing functionality of the Internet is decreasing the role of the personal computer. This shift is being led by the growth of ‘cloud computing’—the ability to run applications and store data on a service provider’s computers over the Internet, rather than on a person’s desktop computer.” *Id.* “Computers today have much better storage capabilities than before. But more importantly, a software solution largely fixed the hardware problem: the creation of cloud computing and the strength of the Internet have served to create a system where firms can rent computer storage space.” Daniel L. Rubinfeld & Michal S. Gal, *Access Barriers to Big Data*, 59 ARIZ. L. REV. 339, 363 (2017).

3. One commentator described this market power in greater detail:

To begin with, platforms both enable and benefit from competitive dynamics of economic exchange that differ in profoundly important ways from those of traditional, one-sided markets. The exchanges constituted by platforms are two- or multi-sided: they serve buyers, the sellers seeking to reach them, and often advertisers seeking the buyers’ attention. Because the platform forms relationships with members of each group separately, it can define the terms of each relationship differently. So, for example, it can charge little or nothing to participants on one side of a target market and make its profit on another side. A dominant platform can reduce prices to one group—for example, book buyers or consumers of professional networking services—below marginal cost and still maintain its dominance by charging fees to some other group, and a provider of free services to consumers can attain and maintain dominance by controlling access to the “market for eyeballs.”

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ers, providing the first and last mile access to the Internet cloud, have relied exclusively or primarily on subscription payments from their “retail” broadband subscribers. However, their intermediary position makes it possible also to secure compensation from upstream content and application⁴ providers and distributors who need the intermediary’s downstream link to consumers.⁵

A second type of intermediary operates in the Internet ecosystem: non-carrier ventures that offer a platform for consumer access to content and applications. Two types of platforms have evolved: (1) ventures like Google and Apple, whose software provides the operating system for smartphone functions, including access to a curated collection of content and applications available via wireless broadband networks; and (2) companies like Amazon, eBay, Facebook, Google, Netflix, and PayPal that have captured substantial market share for specific types of intermediary functions. Operating system intermediaries—e.g., Google Play and Apple’s iTunes and App Store—have the power to establish binding and non-ne-

Julie E. Cohen, *Law for the Platform Economy*, 51 U.C. DAVIS L. REV. 133, 146 (2017) [hereinafter Cohen, *Platform Economy*].

4. *Definition—What Does Mobile Application (Mobile App) Mean?*, TECHOPEDIA, <https://www.techopedia.com/definition/2953/mobile-application-mobile-app> [<https://perma.cc/HT9T-PPD4>] (last visited Nov. 13, 2017) (“A mobile application, most commonly referred to as an app, is a type of application software designed to run on a mobile device, such as a smartphone or tablet computer. Mobile applications frequently serve to provide users with similar services to those accessed on PCs. Apps are generally small, individual software units with limited function. This use of software has been popularized by Apple Inc. and its App Store, which sells thousands of applications for the iPhone, iPad and iPod Touch.”).

5. For example, Comcast, a major broadband access provider in the United States, and Netflix, the predominant supplier of video content, resolved an interconnection and compensation dispute by agreeing to interconnect directly at Comcast’s primary national switching facilities upon payment of a surcharge. *See, e.g.*, Drew FitzGerald & Shalini Ramachandran, *Netflix-Traffic Feud Leads to Video Slowdown*, WALL ST. J. (Feb. 18, 2014, 09:35 PM), <https://www.wsj.com/articles/netflixtraffic-feud-leads-to-video-slowdown-1392772268> [<https://perma.cc/VN65-QSHK>]; Steven Musil, *Netflix Reaches Streaming Traffic Agreement with Comcast*, CNET (Feb. 23, 2014, 10:03 AM), <https://www.cnet.com/news/netflix-reaches-streaming-traffic-agreement-with-comcast/> [<https://perma.cc/2S2E-Q2KL>].

Comcast arguably uses its market power derived from its market share of cable to “squeeze” money out of content providers such as Netflix. But, it is not clear that anyone or any firm is harmed, save Netflix’s profit margin, because it is unclear whether Netflix passes on its increased costs to consumers or simply eats the loss. On the other hand, if it could be shown that (1) Netflix can pass onto consumers the fees it pays Comcast and (2) Comcast’s practice discourages innovative or new firms or services—because they face limited profit potential due to Comcast’s ability to “squeeze” them or prefer its own or affiliated content providers—then consumers would be harmed.

Adam Candeub, *Networks, Neutrality & Discrimination*, 69 ADMIN. L. REV. 125, 165 (2017).

gotiable terms for consumer access to content and applications.⁶ Other intermediaries also establish unilateral, non-negotiable terms and conditions, but consumers have easily accessible alternatives.⁷

Both types of intermediaries can achieve market dominance in a “winner-take-all”⁸ competition by creating a preferred platform standing between upstream content sources and downstream consumers. The combination of high startup costs and low incremental costs to add subscribers favors market concentration and dominance by few firms.⁹ In the market for broadband carriage and in several Internet services such as social networking, winning ventures accrue scale and efficiency advantages as more and more consumers join the bandwagon and select the same option.¹⁰

6. See, e.g., Charles E. MacLean, *It Depends: Recasting Internet Clickwrap, Browseware, “I Agree,” and Click-Through Privacy Clauses as Waivers of Adhesion*, 65 CLEV. ST. L. REV. 45, 48 (2016) (“Contracts of adhesion are form contracts drafted and controlled in all respects by the party in the vastly superior bargaining position, that leave to the weaker contracting party only two options: (1) adhere to the terms as drafted by the party with superior power, or (2) reject its terms entirely. With contracts of adhesion, there is, by definition no negotiation option; it is strictly take-it-or-leave-it.”).

7. See D. Daniel Sokol & Jingyuan (Mary) Ma, *Understanding Online Markets and Antitrust Analysis*, 15 NW. J. TECH. & INTELL. PROP. 43, 50 (2017) (“Traditionally, antitrust analysis is concerned about switching costs from one platform to another. However, in online markets, switching costs are often low because of multi-homing. That is, consumers use multiple search methods online in undertaking web searching. In doing so consumers switch easily from a general search engine to specialized vertical search engines and apps.”).

8. See Thomas R. Eisenmann, *Winner-Take-All in Networked Markets*, HARV. BUS. SCH. CASE COLLECTION (2007), <http://www.hbs.edu/faculty/Pages/item.aspx?num=33035> [<https://perma.cc/C9C8-B3HT>]; Om Malik, *In Silicon Valley Now, It’s Almost Always Winner Takes All*, NEW YORKER (Dec. 30, 2015), <http://www.newyorker.com/tech/elements/in-silicon-valley-now-its-almost-always-winner-takes-all> [<https://perma.cc/7RYB-67S9>].

9. *The University of Chicago Worries About a Lack of Competition*, ECONOMIST: SCHUMPETER (Apr. 12, 2017), <http://www.economist.com/news/business/21720657-its-economists-used-champion-big-firms-mood-has-shifted-university-chicago> [<https://perma.cc/A8UD-DBXF>] (“The big five platform companies—[Google’s parent company] Alphabet, Amazon, Apple, Facebook and Microsoft—earned \$93bn last year and have high market shares, for instance in search and advertising. They are innovative but sometimes behave badly. They have bought 519 firms, often embryonic rivals, in the past decade, and may stifle them. The data they gather can lock customers into their products. They may also allow firms to exert their market power “vertically” up and down the supply chain—think of Amazon using information on what consumers buy to dominate the logistics business. Investors’ sky-high valuations for the platform firms suggest they will, in aggregate, roughly triple in size.”); see also Press Release, University of Chicago Booth School of Business, Events: Is There a Concentration Problem in America? (2017), <https://research.chicagobooth.edu/stigler/events/single-events/march-27-2017> [<https://perma.cc/2P9B-Z756>].

10. See Michal S. Gal & Niva Elkin-Koren, *Algorithmic Consumers*, 30 HARV. J.L. & TECH. 309, 334–35 (2017) (“Digital markets suffer from a high level of concentration. Currently a handful of digital intermediaries with mega platforms control effective points of access to potential users. These include smart devices (iPhone

Economists use the term two-sided markets to identify platform functions where transactions occur both upstream and downstream from the intermediary.¹¹ Many two-sided markets share similar characteristics different than single markets.¹² Some new so-called unicorn¹³ intermediaries can acquire substantial market share and billion-dollar valuations in record time by using digital, broadband networks that can provide global reach at very low cost.

Successful insertion of an intermediary platform has generated both positive and negative impacts on consumer welfare, competition, the rate of innovation, employment, and other key factors. On the positive side, intermediaries can promote efficiency, economies of scale,¹⁴ and positive network externalities¹⁵ where the overall value in a network and its ability

and Kindle), operating systems (iOS and Android), application stores (Apple Store and Google Play) and browser entry points (Google Search and Facebook). The high level of concentration is largely due to network effects, created when the value for each consumer of using the platform rises in parallel with the number of others using the system. These network effects are further increased by the network effects of big data. By converging control of content, access, and online distribution channels, large networks enjoy inherent competitive advantages in access to an immense volume of users' personal online data.”).

11. See generally David S. Evans, *The Antitrust Economics of Multi-Sided Platform Markets*, 20 YALE J. REG. 325 (2003); David S. Evans & Richard Schmalensee, *Guide to the Vocabulary of the New Economics of Multisided Platforms* (2016), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2793021 [<https://perma.cc/45GH-JVN7>]; Lapo Filistrucchi et al., *Market Definition in Two-Sided Markets: Theory and Practice*, 10 J. COMPETITION L. & ECON. 293 (2014); Marc Rysman, *The Economics of Two-Sided Markets*, 23 J. ECON. PERSPECTIVES 125 (2009).

12. See Tren Griffin, *A Dozen Things I've Learned About Multi-Sided Markets (Platforms)*, 25IQ (Oct. 22, 2016), <https://25iq.com/2016/10/22/a-dozen-things-ive-learned-about-multi-sided-markets-platforms/> [<https://perma.cc/88KL-GHM2>]; Des Traynor, *Surviving & Thriving in Two-Sided Markets*, INSIDE INTERCOM, <https://blog.intercom.com/surviving-thriving-in-two-sided-markets/> [<https://perma.cc/S26P-Q498>] (last visited Nov. 15, 2017).

13. See, e.g., Jennifer S. Fan, *Regulating Unicorns: Disclosure and the New Private Economy*, 57 B.C. L. REV. 583, 587 (2016) (“At first glance, the moniker ‘unicorn’ seems appropriate for the elite companies achieving valuations of a billion dollars or more. Each of the members of this unicorn club represents disruptive innovation that has the potential to change the face of how we use everyday services, how we communicate with others, and how we interact with technology in every facet of our lives. Upon closer inspection, however, these so-called unicorns are not a rarity. In fact, the number of unicorns has continued to climb at what some may say is an alarming speed, and now blessings of unicorns abound.”).

14. A firm exhibits economies of scale if the average cost of producing a good falls as the quantity produced rises. “Many internet businesses exhibit large economies of scale, because many of their costs are fixed. For example, many of eBay’s costs come from servers and software development, and these do not increase with the number of customers. Every additional transaction lowers the average cost of a transaction.” *Economies of Scale*, INTERNET & BUS. WIKI, <http://ibiz.wikidot.com/economies-of-scale> [<https://perma.cc/D7AZ-DDWC>] (last visited Feb. 6, 2018).

15. Mike Moffatt, *Introduction to Network Externalities*, THOUGHTCO. (Mar. 17, 2017), <https://www.thoughtco.com/introduction-to-network-externalities-1146145> [<https://perma.cc/AQ97-PLXX>] (“Network externalities are the effects on a user of a product or service of others using the same or compatible products or services.

to generate consumer benefits grow as more users participate. On the negative side, intermediaries can extract high prices from both upstream and downstream participants, erect very high barriers to market entry, and use comparative advantages to dominate in both core and related markets such as the collection, processing, and sale of “Big Data”¹⁶ about subscriber behavior.¹⁷

The business models used by intermediaries often rely on a strategic determination of how to extract payments from multiple parties. Intermediaries can calibrate prices, often appearing to provide “free” or subsidized services to users on one side of the platform, typically downstream consumers.¹⁸ Of course, consumers invariably do pay for products and services whose advertising costs and other subsidies generate higher prices. Consumers also increasingly permit intermediaries to compile information about their wants, needs, desires, app uses, searches, and other behavior that can be processed and marketed to advertisers as the best-ever calibration for targeted commercial pitches. Privacy intrusions¹⁹ and the commodification of consumer behavior generate significant value that

Positive network externalities exist if the benefits (or, more technically, marginal utility) are an increasing function of the number of other users. Negative network externalities exist if the benefits are a decreasing function of the number of other users. For example, Facebook likely confers positive network externalities since it is more useful to a user if more people are using it as well.”).

16. The term Big Data “has commonly come to represent the drastic increase in the volume, variety, and velocity of data that can be analyzed.” Joseph Jerome, *Big Data: Catalyst for a Privacy Conversation*, 48 *IND. L. REV.* 213, 214 (2014).

Technological advances in data collection and storage, along with increases in the use of predictive analytics, are transforming the way that business is conducted in all sectors of the economy. Much attention has been given to the benefits that Big Data will generate; it will provide businesses with insights about their customers, enabling them to tailor their practices to better satisfy consumers and identify ways to increase the efficiency of their operations.

Max N. Helveston, *Consumer Protection in the Age of Big Data*, 93 *WASH. U. L. REV.* 859, 861 (2016). See generally VIKTOR MAYER-SCHÖNBERGER & KENNETH CUKIER, *BIG DATA: A REVOLUTION THAT WILL TRANSFORM HOW WE LIVE, WORK, AND THINK* (2013); Omer Tene & Jules Polonetsky, *Privacy in the Age of Big Data: A Time for Big Decisions*, 64 *STAN. L. REV. ONLINE* 63 (2012).

17. See generally JONATHAN TAPLIN, *MOVE FAST AND BREAK THINGS: HOW FACEBOOK, GOOGLE, AND AMAZON CORNERED CULTURE AND UNDERMINED DEMOCRACY* (2017).

18. See, e.g., Filistrucchi et al., *supra* note 11, at 308 fig.6.

19. See, e.g., Frank Pasquale, *Privacy, Antitrust, and Power*, 20 *GEO. MASON L. REV.* 1009, 1010 (2013) (“It would be nice to believe that market forces are in fact promoting optimal levels of privacy. It would also be comforting if antitrust law indirectly promoted optimal privacy options by assuring a diverse range of firms that can compete to supply privacy at various levels (and in various forms). But this position is not remotely plausible. Antitrust law has been slow to recognize privacy as a dimension of product quality, and the competition that antitrust promotes can do as much to trample privacy as to protect it. In an era of big data, every business has an incentive to be nosy in order to maximize profits.”).

a platform operator can use to generate revenues in ways that most subscribers may not fully understand²⁰ or quantify.²¹

Platform operators emphasize how much value they confer to subscribers who do not have to make a direct payment. Intermediaries conveniently ignore substantial financial compensation that flows from other sources, such as advertisers, and frame their role as creating a mutually beneficial arrangement. A longstanding platform erected by credit card companies provides an example of such a “win-win” scenario. These ventures offer short-term, “free” loans to consumers, and even cash rebates for card use. For users who pay within a brief period after purchase, the credit card use imposes no additional cost. In this scenario, credit card companies must rely solely on upstream vendors to pay fees for the processing of card-based purchases. Of course, credit card companies can and do extract payment from both sides when consumers do not pay within a brief grace period and in turn convert their card use into a high-interest loan.

Some economists supporting the value proposition of platforms emphasize the opportunity for consumers to accrue financial and other welfare-enhancing benefits.²² Additionally, they attempt to show intermediaries cannot gouge or otherwise cheat either upstream vendors or downstream consumers, given the ease with which both sides can migrate to other platform operators offering better terms.²³ Put another

20. See, e.g., Sheri B. Pan, *Get to Know Me: Protecting Privacy and Autonomy Under Big Data's Penetrating Gaze*, 30 HARV. J.L. & TECH. 239, 245 (2016) (“Big data operates by analyzing large datasets, so it relies on obtaining large volumes of information. In developed economies today, data collection occurs constantly. This is in large part due to the prevalence of objects that can sense, store, and transfer information. . . . As more information becomes constant, it is also increasingly imperceptible. Devices automatically take measurements without human intervention. They do not ask the data subject for consent or provide notice every time they record a reading. Because data collection occurs in the background, it easily goes unnoticed.”).

21. See generally Sofia Grafanaki, *Autonomy Challenges in the Age of Big Data*, 27 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 803 (2017); Nathan Newman, *The Costs of Lost Privacy: Consumer Harm and Rising Economic Inequality in the Age of Google*, 40 WM. MITCHELL L. REV. 849 (2014).

22. See, e.g., Christopher S. Yoo, *Innovations in the Internet's Architecture That Challenge the Status Quo*, 8 J. TELECOMM. & HIGH TECH. L. 79, 97 (2010) (“The literature suggests that social welfare would be maximized if the network provider were permitted to price discriminate on both sides of the two-sided market. It also suggests that the prices paid by those on each side of the market can differ widely and that in many cases, it is economically beneficial for one side to subsidize the other side of the market. The fact that the Internet has become increasingly dominated by advertising revenue paid to content and application providers suggest that it may be socially beneficial for content and application providers to subsidize the prices paid by end users.”); see also Adam Candeub & Daniel McCartney, *Law and the Open Internet*, 64 FED. COMM. L.J. 493, 512 (2012).

23. Benjamin G. Edelman & Damien Geradin, *Efficiencies and Regulatory Shortcuts: How Should We Regulate Companies Like Airbnb and Uber?*, 19 STAN. TECH. L. REV. 293, 304 (2016) (“In many high-tech markets, a single firm enjoys a temporary or enduring monopoly, often grounded in technical compatibility, switching costs, or

way, intermediary overreach can result in declining revenues as participants use other platform options or revert to direct options, e.g., cash payments instead of credit card use.

Successful credit card company and other intermediary platform self-regulation depends on the viability of competitive alternatives. The risk of subscriber churn to another credit card company, or a cash transaction, arguably forces credit card companies to refrain from charging vendors exorbitant swipe fees and consumers usurious interest rates. Internet platform operators make similar claims, but in a winner-take-all marketplace, consumers might consider themselves locked in to the status quo, because of few alternatives, the ongoing preference by most consumers for the incumbent venture, and the difficulty and inconvenience in migrating to a less abusive option. Additionally, subscribers may not consider it important to seek alternatives offering less invasive privacy intrusions because many consumers appear not to appreciate fully the monetary value of what they allow an existing intermediary to generate by compiling and mining data about their consumptive behavior.

This Article identifies four types of government responses to price and quality-of-service discrimination that exploit choke points within the Internet ecosystem, where large volume of traffic has to traverse a single digital broadband network or service provider platform. Governments can refrain from regulating access and accept aspects of market concentration as proper rewards to ventures offering desirable content and carriage services. Alternatively, they can impose ex ante safeguards to remedy the anticipated harms to competition and consumers such market concentration will trigger. Between these poles, governments can apply ex post antitrust and competition policy remedies or rely on expert regulatory agencies to respond to complaints, particularly ones about privacy invasions and unfair trade practices.

The Article reports that existing antitrust policy does not support aggressive government intervention based on an assessment that short-term consumer benefits accrue without concerns for longer term harm. The Article also notes that the current regulatory policy favors market forces even when platform operators control key access points and consumers have no way to understand and quantify the value of what they confer to platform operators in exchange for the opportunity to subscribe to broadband service and access to advertiser-supported content and applications.

The Article recommends that courts and government agencies execute their duty to remedy marketplace distortions generated by platform

contractual restrictions. . . . Indeed, there are dozens of ‘Uber clones’ competing vigorously in many markets, particularly in Asia. One might also imagine barriers resulting from scale—that a new transportation platform would struggle to match Uber’s number of vehicles (hence reducing dispatch efficiency and increasing customer wait times), or a new short-term booking platform would struggle to match Airbnb’s breadth of choices. In principle this could impede entry, though we doubt that this alone would support a competition case.”).

operators engaged in anticompetitive practices, but also to recalibrate existing tools to examine the impact on both sides of an intermediary platform, the availability of viable service alternatives, and the consequences of platform market domination on related industry segments. Courts and government agencies should devise timely and effective remedies for resolving valid complaints documenting harm to consumers and competitors.

II. CONSUMER BENEFITS FROM TWO-SIDED MARKETS

While intermediaries have operated in many marketplaces for centuries,²⁴ emerging digital, broadband platforms radically changed “the traditional equilibria of supply and demand, blurring the lines between owners and users, producers and consumers, workers and contractors, and transcend[ed] the spatial divides of personal and professional, business and home, market and leisure, friend and client, acquaintances and stranger, public and private.”²⁵ Digital broadband platform operators can accrue substantial consumer benefits even as they acquire increasing market shares. A win-win scenario combines ample benefits for platform operators and consumers by changing and enhancing the value proposition in commercial transactions.

Digital broadband platform operators can quickly acquire scale economies²⁶ and efficiency gains by attracting growing numbers of users and spreading costs over a large population of users. The incremental cost to add an additional participant approaches zero, because broadband networks have high initial, investment costs, but very low incremental costs incurred when adding users. Additionally, broadband platforms can ac-

24. For example, retailers have used catalogs to offer a vast array of commercial options via a single source:

Inclusion of a product in the Sears, Roebuck catalog gave its manufacturer access to a marketing juggernaut with the ability to reach consumers nationwide, the range to offer concert grand pianos and engraved shotguns, and the power to undercut the prices charged by local [brick-and-mortar] “five-and-ten-cent stores” for everyday essentials.

Cohen, *Platform Economy*, *supra* note 3, at 137.

25. Orly Lobel, *The Law of the Platform*, 101 MINN. L. REV. 87, 90 (2016). A “platform company is launched as an online intermediary between buyers and sellers of goods and services—the ancient role of the middleman—enhanced with the modern power afforded by cloud computing, algorithmic matching, pervasive wireless Internet access, scaled user-networks, and near-universal customer ownership of smartphones and tablets.” *Id.* at 94; *see also* Cohen, *Platform Economy*, *supra* note 3, at 137–38.

26. Scale economies refer to the ability of a single firm to produce a good or service at the lowest per unit cost. “For nearly 100 years, microeconomic theory said that widespread access to telephone technology was more likely if there was only one telephone company, because of economies of scale resulting in what economists call ‘natural monopoly.’” Henry H. Perritt, Jr., *Keeping the Internet Invisible: Television Takes Over*, 21 J. TECH. L. & POL’Y 121, 127 (2017).

crue positive networking externalities²⁷ as subscribership grows. When intermediaries reach a critical mass of popularity, non-users see the advantages in joining the bandwagon, which further enhances the comparative attractiveness of a particular platform operator vis-à-vis other competitors and options.²⁸

Broadband platforms can customize services and offer consumers a smaller, better-calibrated option. For example, Apple successfully executed a new business strategy of offering single music tracks at a fraction of the total album cost.²⁹ Consumers win by having the option of selecting only the desired portion of an album for purchase, Apple wins by extracting a commission, and arguably music creators and distributors lose less by salvaging a revenue stream in lieu of nothing when piracy occurs. Platforms can offer consumers newer and cheaper alternatives, such as Uber drivers' private transport instead of tariffed taxi service.³⁰ Private

27. These positive externalities were elaborated in more detail by John Newman:

Network markets are frequently characterized by positive network effects, or "externalities"—"benefits to society that accrue as the size of a network grows." In a network market, the value to each individual consumer increases with the number of other individuals who use the same network. Take, for example, a telephone network. If very few telephones existed, I would not value a telephone very highly, or at least not nearly as highly as I do today. The more individuals who use the telephone network, the more individuals I am able to reach with my own telephone—and the more valuable my phone becomes to me. Thus, telephone networks allow for direct, positive network externalities. Many of the industries that have arisen from the advent of digital computers and broadly available Internet access exhibit similar positive network externalities, both direct and indirect. Online social networking sites like Facebook allow for direct, positive effects (much like the telephone industry). And a broad range of product markets allow for indirect, positive network externalities. Take, for example, Apple's iPod: as more individuals purchase iPods, Apple is increasingly incentivized to invest in adding songs to its iTunes Music Store, thereby increasing the value of the iPods. The current market for Blu-ray players operates similarly as does the market for Microsoft's Windows operating system (OS). These positive network externalities that tend to characterize new, digital industries can, however, have less benign implications.

John M. Newman, *Anticompetitive Product Design in the New Economy*, 39 FLA. ST. U. L. REV. 681, 688–89 (2012) (quoting Howard A. Shelanski & J. Gregory Sidak, *Anti-trust Divestiture in Network Industries*, 68 U. CHI. L. REV. 1, 7–8 (2001)).

28. See generally John Farrell & Garth Saloner, *Standardization, Compatibility, and Innovation*, 16 RAND J. ECON. 70 (1985); Michael L. Katz & Carl Shapiro, *Network Externalities, Competition, and Compatibility*, 75 AM. ECON. REV. 424 (1985); Mark A. Lemley & David McGowan, *Legal Implications of Network Economic Effects*, 86 CALIF. L. REV. 479 (1998); Carl Shapiro, *Exclusivity in Network Industries*, 7 GEO. MASON L. REV. 673 (1999).

29. E.g., Anthony Bruno & Glenn Peoples, *Valuable iTunes Pricing a Money-maker for Artists*, REUTERS (June 21, 2009, 01:37 AM), <https://www.reuters.com/article/us-online/variable-itunes-pricing-a-moneymaker-for-artists-idUSTRE55K0DJ20090621> [<https://perma.cc/ZF8D-5RFZ>].

30. See Diana Cao, Note, *Regulation Through Deregulation: Sharing Economy Companies Gaining Legitimacy by Circumventing Traditional Frameworks*, 68 HASTINGS L.J.

operators typically have less overhead in commercializing their private automobiles and incur far less market entry costs than what taxi operators bear, e.g., rationed and high-cost licensing and regulatory burdens such as compulsory fixed pricing of service.

Platform intermediaries must deliver a compelling value proposition to generate consumer use, particularly when alternatives exist with low entry barriers and switching costs. Few platforms start with a dominant market share and the ability to forestall multi-homing, the option of consumers to use many different platforms and to toggle between them.³¹ Many platform operators encounter competition.³² The combination of competitive necessity and more efficient operations can readily translate into the offering of lower-priced products and services to consumers, particularly because two-sided platform operators can calibrate how much to charge each side:

[P]rofit-maximizing prices may require charging one side less than the marginal cost of serving that side. Empirical surveys of industries based on . . . [two-sided platforms] find many examples of prices that are low, or even negative, so that customers on one side are incentivized to participate in the platform.³³

Economists, legislators, regulators, and policy makers find it difficult to support restrictions or prohibitions on the activities of two-sided platform operators willing to offer subsidies, internally or from upstream market participants, that confer significant cost savings to consumers. Such reticence may allow the pricing of goods and services at zero cost, or at least below the marginal cost of production—an outcome normally considered illogical and unsustainable in the brick-and-mortar marketplace—

1085, 1091–92 (2017) (“Disrupting actors interpret regulation as an inefficiency that must be avoided, and they attempt to capitalize off the avoidance. By avoiding the regulatory regimes, platforms like Airbnb and Uber gain momentum by creating entirely new markets and new consumer behavior in existing markets. This type of business also forces its users to ignore the regulations because of the appearance of legitimacy of the companies.” (citations and internal quotations omitted)). See generally Hannah A. Posen, *Ridesharing in the Sharing Economy: Should Regulators Impose Über Regulations on Uber?*, 101 IOWA L. REV. 405 (2015); Inara Scott & Elizabeth Brown, *Redefining and Regulating the New Sharing Economy*, 19 U. PA. J. BUS. L. 553 (2017).

31. See Sokol & Ma, *supra* note 7, at 50 (defining “multi-homing” as when “consumers use multiple search methods online in undertaking web searches”).

32. See *id.* at 48 (“Online markets are constantly transforming. Indeed, online markets typically have innovative challengers against incumbents. Challengers may overtake incumbent firms through new ideas and technologies. In such settings, there are low entry barriers.”).

33. David S. Evans & Michael Noel, *Defining Antitrust Markets When Firms Operate Two-Sided Platforms*, 2005 COLUM. BUS. L. REV. 667, 668 (2005).

or creates significant market distortion through predatory pricing and abuse of market power.³⁴

III. CONSUMER COSTS FROM TWO-SIDED MARKETS

Immediate and longer-term costs offset readily identifiable benefits from two-sided platforms. In the short term, ventures like Amazon enhance consumer welfare by offering a growing inventory of products and services at lower prices, the product of operational efficiencies and the willingness to eschew profits in exchange for increasing market share and scope. However, in the longer term, consumers may suffer from the loss of competition from brick-and-mortar local vendors, as well as from the consequences of ever more accurate assessment of consumer price sensitivity, increasingly invasive collection of subscribers' consumption behavior, and the brokering of such data by largely unregulated ventures.³⁵ At some point, online platform operators may consider their market position sufficiently impenetrable so that they can refrain from aggressive price cutting and forgoing near-term profitability.

Additionally, these operators may have so developed data analytics that they can quite accurately set and frequently modify prices with an eye toward maximizing profits.³⁶ Dynamic pricing refers to the ability of product and service vendors to change prices quickly by collecting and analyzing data about supply and current consumer demand.³⁷ Rather than set a

34. Some economists and legal scholars refrain from classifying low, or below cost pricing by platform operators as evidence of market power or anticompetitive conduct:

[T]he price on each side is a complex function of the elasticities of demand [i.e., intensity of preference] on both sides, indirect network effects, and marginal costs on both sides. Thus, it is incorrect to conclude, as a matter of economics, that deviations between price and marginal cost on one side indicates that 2SPs are pricing to exploit market power and drive out competition.

Id. at 696.

35. Data brokers, or information reselling companies, collect consumer information and convert it into marketable information about categories of consumers, or even individual dossiers about a single consumer.

A glaring drawback exists in this convenient set up between data brokers and marketing companies—it takes place without consumers' knowledge or consent. Because data brokers mostly operate beyond the gaze of the public eye, individuals are largely unaware of their existence and their monumental impact on day-to-day transactions. This is problematic for two reasons: (1) it invades consumers' rights to privacy and (2) subjects them to unwarranted, and often unforeseeable discrimination.

Ashley Kuempel, *The Invisible Middlemen: A Critique and Call for Reform of the Data Broker Industry*, 36 *NW. J. INT'L L. & BUS.* 207, 210 (2016).

36. See, e.g., Laura Fleming, *How Much Does J. Crew Really Know About You?: The Harsh Reality of A Mega-Retailer's Privacy Policy*, 31 *SYRACUSE J. SCI. & TECH. L.* 1, 4–5, 10 (2015).

37. See Vivian Adame, Comment, *Consumers' Obsession Becoming Retailers' Possession: The Way That Retailers Are Benefiting from Consumers' Presence on Social Media*, 53 *SAN DIEGO L. REV.* 653, 667 (2016) ("Dynamic Pricing uses consumers' 'electronic

fixed price, only occasionally raised or lowered, vendors can make frequent pricing changes based on current marketplace conditions. While such dynamic pricing arguably represents an efficiency-promoting, fine-tuning of price setting, consumers may consider it unfair and discriminatory.³⁸ When demand increases, or supply drops, so-called surge pricing substantially increases prices from a level most consumers consider fair and might expect to pay. Even though low demand and oversupply might trigger short-term price reductions, consumers may focus on rapid and substantial surge prices.

A worst-case scenario considers a platform-dominated economy as severely harmful to workers and consumers, not an extraordinary opportunity:

A “peer economy” of platform-arranged production will break down old hierarchies. Gig workers will be able to knit Etsy scarfs in the morning, drive Uber cars in the afternoon, and write Facebook comments at night, flexibly shifting between jobs and leisure at will.

But is platform capitalism really a route to opportunity for labor, or just one more play for capital accumulation in an increasingly stratified economy?³⁹

IV. SUBSCRIBER DATA VALUE AND LOCK-IN COST MISSING IN THE COST-BENEFIT ANALYSIS

To calculate the value proposition in broadband networks, subscribers typically consider the benefits of access as offset by the costs. One can readily assess the benefits of access, but the costs are not as readily determined. Consumers may wrongly assume that they have free access, because no subscription payment occurs except to the broadband carrier. The “free access” conclusion fails to consider two offsetting costs: (1) the increase in the price of advertised goods and services, and (2) the mone-

footprint[s]’—their record of previous purchases, their addresses, and maybe the other sites they have visited to determine just how much they are willing to pay for a product or service. Those consumers who can afford to pay more based on their footprint, do, while more price-sensitive consumers receive the same product or service for less.” (quoting Paul Krugman, *Reckonings; What Price Fairness?*, N.Y. TIMES (Oct. 4, 2000), <http://www.nytimes.com/2000/10/04/opinion/reckonings-what-price-fairness.html> [<https://perma.cc/94TR-RR8T>])).

38. *See, e.g.*, Ryan Calo, *Digital Market Manipulation*, 82 GEO. WASH. L. REV. 995, 1029 (2014) (“[D]igital market manipulation creates subjective privacy harms insofar as the consumer has a vague sense that information is being collected and used to her disadvantage, but never truly knows how or when. In the digital market manipulation context, the consumer does not know whether the price she is being charged is the same as the one charged to someone else, or whether she would have saved money by using a different browser or purchasing the item on a different day.”).

39. Frank Pasquale, *Two Narratives of Platform Capitalism*, 35 YALE L. & POL’Y REV. 309, 312–13 (2016).

tary value accruing to intermediary carriers, operating system software authors, and broadband content and application vendors when they acquire, collate, analyze, and sell data about subscribers' wants, needs, desires, web site visits, location, and communications.⁴⁰

Consumers have plenty of experience with advertiser-supported access to content as this model has provided a “win-win” value position in broadcast radio and television for many years.⁴¹ Consumers also have the opportunity for “free-rider”⁴² access to advertiser-subsidized content without having to consume the products and services provided by the advertisers. Additionally, both content intermediaries and advertisers have had limited ways to acquire data about consumers for better targeting because of the one-way nature of broadcasting and relatively uncalibrated and unsophisticated ways to calculate audience numbers and preferences.

Broadband intermediaries have far better ways to monitor, surveil, collect, and sell subscriber data. This changes the value of what the intermediary has to offer because the ability to “mine” subscriber data can pro-

40. See, e.g., Matthew T. Bodie et al., *The Law and Policy of People Analytics*, 88 U. COLO. L. REV. 961, 964–65 (2017); Gal & Elkin-Koren, *supra* note 10, at 309; Kenneth A. Grady, *Mining Legal Data: Collecting and Analyzing 21st Century Gold*, 20 J. INTERNET L. 1, 12–13 (2017); Philip Hacker & Bilyana Petkova, *Reining in the Big Promise of Big Data: Transparency, Inequality, and New Regulatory Frontiers*, 15 Nw. J. TECH. & INTELL. PROP. 1, 10 (2017); Ramsi A. Woodcock, *Big Data, Price Discrimination, and Antitrust*, 68 HASTINGS L.J. 1371, 1400 (2017).

41. See, e.g., C. Edwin Baker, *Advertising and a Democratic Press*, 140 U. PA. L. REV. 2097, 2100 (1992) (“By ‘subsidizing’ the press, advertising makes mass media broadly available. This subsidy enables the media to engage in the expensive enterprises of gathering, shaping, and distributing news (and entertainment).”).

42. Henry H. Perritt, Jr., *Property and Innovation in the Global Information Infrastructure*, 1996 U. CHI. LEGAL F. 261, 267–68 (1996) (“A private good is both rival and exclusive. Consumption of the good excludes others from consuming the same good, and relative to a public good, it is much easier to exclude consumers from the good’s benefit. Most of the goods and services bought and sold are private goods. Gasoline, for example, is a private good because each gallon can be used by one consumer only to the exclusion of another consumer. The nonexcludability and nonrival features of public goods threaten the ability of an original supplier of goods to recover her investment. Nonexcludability means that she cannot systematically refuse to supply the good to nonpayers while supplying it to payers. Nonrivalness means that each customer becomes a potential competing supplier. Thus, public goods, and goods that have some public-good characteristics, have a higher free-ride potential. Conversely, the stronger the characterization of a product as a private good, with its commensurate increase in exclusivity, the lower the free-ride potential. A drive-in movie, for example, has public-good characteristics. It is nonrival and it is difficult to exclude viewers. Nonpaying viewers may not be able to hear the movie, but they can still see it and free ride to an extent. The same movie takes on private-good characteristics when shown in a private theater. It then becomes possible to exclude people from enjoying the movie altogether, ending the free-rider threat. Thus, as the movie takes on more private-good characteristics, its free-ride potential decreases.”); see also Marina Lao, *Resale Price Maintenance: The Internet Phenomenon and “Free Rider” Issues*, 55 ANTI-TRUST BULL. 473, 477–78 (2010).

vide an additional revenue stream.⁴³ Broadband carriers have inserted language in their subscription agreements that confers a nearly unfettered contractual right to collect and sell data about individual subscribers.⁴⁴ Unlike content and application providers, as well as operating system software authors, broadband carriers have no obligation to confer a benefit, or service discount, in exchange for such access. Subscribers have to accept the carrier right of data collection and sale as part of what they have to confer to the carrier in exchange for the privilege to become a paying subscriber.⁴⁵

Remarkably, Congress⁴⁶ and the Federal Communications Commission (FCC)⁴⁷ have concluded that consumers do not need any FCC guards

43. See B. Bodo et al., *Tackling The Algorithmic Control Crisis—The Technical, Legal, and Ethical Challenges of Research Into Algorithmic Agents*, 19 YALE J.L. & TECH. 133, 141 (2017) (“When it comes to the aforementioned digital intermediaries, we as a society have no idea what information and ads individuals are exposed to: we have no way of knowing how that information was selected for them; we do not know whether there is a human editor who edits information streams, and if there is, who he/she might be; and even producers, whose content is being relayed, have only very limited information on who their audience is, while the public has almost no insight into the transactions and information flows on these platforms. The incentives are structured so that whatever limited information stakeholders have on the personalized, digital media market, the information will not be shared, so any meta-information on these markets remains extremely fragmented state, if in any state at all.”).

44. See, e.g., *Data Policy*, FACEBOOK, <https://www.facebook.com/privacy/explanation> [<https://perma.cc/FH73-QZWQ>] (as revised Sept. 29, 2016); *Privacy Policy*, GOOGLE, <https://www.google.com/policies/privacy/> [<https://perma.cc/5XMQ-QXBD>] (as revised Dec. 18, 2017).

45. For example, AT&T’s Privacy Policy outlines the numerous ways the company can use subscriber information internally and as a marketable asset. In terms of what benefits accrue to subscribers, the company states:

[Y]ou get advertising that’s more relevant to your interests. For example, if a particular audience segment, like adults between the ages of 21 and 25 with a certain income range, has demonstrated a greater interest in movies than other segments, we might send them a movie ad for a movie geared toward young adults. This is just one way we deliver content that’s more relevant.

AT&T *Privacy Policy FAQ*, AT&T, http://about.att.com/sites/privacy_policy/terms#collect [<https://perma.cc/BJ9C-WGRN>] (last visited Oct. 28, 2017).

46. See, e.g., Pub. L. No. 115–22, 131 Stat. 88 (2017) (expressing congressional disapproval of “the rule submitted by the Federal Communications Commission relating to Protecting the Privacy of Customers of Broadband and Other Telecommunications Services”).

47. See *Protecting the Privacy of Customers of Broadband and Other Telecommunications Services*, 32 FCC Rcd. 1793, 1793 (Mar. 1, 2017) [hereinafter 2017 Stay of Privacy Rules] (order granting stay petition in part). In 2016, the Democratic majority FCC proposed privacy safeguards that did not become effective with the election of Donald Trump and the conversion to a Republican majority. See *Protecting the Privacy of Customers of Broadband and Other Telecommunications Services*, 31 FCC Rcd. 13911 (Nov. 2, 2016) [hereinafter 2016 Privacy Order] (Report and Order); see also Cecilia Kang, *Broadband Providers Will Need Permission to Collect Private Data*, N.Y. TIMES (Oct. 27, 2016), <https://www.nytimes.com/2016/10/28/technology/fcc-tightens-privacy-rules-for-broadband-providers.html> [<https://perma.cc/Y39H-SG2S>]; U.S. FED. COMM’N COMM’N, FACT

against privacy invasion and overly intrusive data collection. Opponents to consumer safeguards created by the FCC in 2016, but not yet implemented, emphasize that digital broadband carriers should not bear greater regulatory burdens than what content and application vendors bear.⁴⁸ However, the concern for regulatory parity considers broadband carriage as no more essential to consumers than any particular service or application carried by network operators. Arguably, no service or application rises to the level of public utility or essential service. Consumers opting to become subscribers willingly part with privacy expectations in exchange for access.⁴⁹ The FCC now considers broadband carriers as similarly entitled to extract such concessions, even though existing, or prospective subscribers receive no discount or additional enhancement.⁵⁰

A majority at the FCC now considers the Federal Trade Commission (FTC) as the primary agency for providing any necessary safeguards,⁵¹ despite its lack of industry-specific expertise and its emphasis on remedying competitive harm from content and application providers with limited experience about how carriers operate and their potential from harmful activities.⁵²

SHEET: THE FCC ADOPTS ORDER TO GIVE BROADBAND CONSUMERS INCREASED CHOICE OVER THEIR PERSONAL INFORMATION (Oct. 27, 2016), https://apps.fcc.gov/edocs_public/attachmatch/DOC-341938A1.pdf [<https://perma.cc/LU4R-4KZB>].

48. See 2016 Privacy Order, 31 FCC Rcd. at 14119 (Pai, Comm'r, dissenting) ("But due to the FCC's action today, those who have more insight into consumer behavior (edge providers) will be subject to more lenient regulation than those who have less insight (ISPs). This doesn't make sense.").

49. See *supra* note 44 and accompanying text for explanation of Facebook and Google's privacy policies.

50. See 2016 Privacy Order, 31 FCC Rcd. at 13926–28.

51. In granting a stay to privacy rules specifically applicable to Internet Service Providers, proposed in 2016, the FCC stated its intent to rely primarily on FTC safeguards and general protections created by section 222 of the Communications Act.

[W]e conclude that preserving the status quo pending further examination of whether to uphold the Order's deviation from the FTC's successful data security framework would benefit consumers, competition, innovation and the digital economy—and thus further the public interest. Therefore, the public interest disfavors compelling BIAS providers and other telecommunications carriers to incur substantial costs and burdens to implement the data security rule pending our reconsideration of that rule.

2017 Stay of Privacy Rules, 32 FCC Rcd. at 1799–1800; see also 2016 Privacy Order, 31 FCC Rcd. at 13913–14.

52. See U.S. FED. COMM'N COMM'N & U.S. FED. TRADE COMM'N, RESTORING INTERNET FREEDOM FCC-FTC MEMORANDUM OF UNDERSTANDING (2017), https://www.ftc.gov/system/files/documents/cooperation_agreements/fcc_fcc_mou_internet_freedom_order_1214_final_0.pdf [<https://perma.cc/J7HH-C47D>]; U.S. FED. COMM'N COMM'N & U.S. FED. TRADE COMM'N, FCC-FTC CONSUMER PROTECTION MEMORANDUM OF UNDERSTANDING (2015), https://www.ftc.gov/system/files/documents/cooperation_agreements/151116ftcc-mou.pdf [<https://perma.cc/2MHJ-T442>].

Unlike broadband carriers, operating system, content, and application providers do confer consumer benefits for the opportunity to commodify and sell subscriber data. With varying degrees of clarity, subscription agreements set out what kinds of data can be collected and sold. Subscribers cannot negotiate modifications of these terms and few read and understand what privacy rights they relinquish and which firms may acquire data about them.⁵³ Additionally, subscribers and industry observers have limited ways to calculate the value in data mining and sales. AT&T briefly provided a rough value estimate when it offered to refrain from data mining if a wireline subscriber paid an additional \$29 per month in certain markets.⁵⁴

One could argue that setting a price for enhanced privacy protection provides clarity and a new customer option.⁵⁵ However, many broadband subscribers may wrongly assume they should not have to pay a premium for something they consider a basic right. Because many digital broad-

53. See, e.g., Andrew W. Bagley & Justin S. Brown, *Limited Consumer Privacy Protections Against the Layers of Big Data*, 31 SANTA CLARA HIGH TECH. L.J. 483, 489 (2014) (“The dynamic ways in which information is transmitted, collected, and stored through common online interactions exceeds the norms of traditional peer-to-peer relationships. Data is used to create marketing profiles, sell advertisements, conduct product analysis, and so much more in the big data marketplace. These realities illustrate the difficulty for even a user familiar with the provisions of each terms of service agreement to conceptualize where their data might wind up.”); see also Michelle Geronimo, *Online Browsing: Can, Should, and May Companies Combine Online and Offline Data to Learn About You?*, 9 HASTINGS SCI. & TECH. L.J. 211, 212, 224 (2017).

54. See WILLKIE FARR & GALLAGHER LLP, DATA PRIVACY & SECURITY WATCH 5 (2015), http://www.willkie.com/~media/Files/Publications/2015/03/Willkie_Data_Privacy_and_Security_Watch_Spring%202015.pdf [<https://perma.cc/Z2B6-KA6A>] (“As part of its GigaPower gigabit-speed broadband Internet service, AT&T is offering consumers an option to prevent AT&T from collecting vast amounts of data about its users’ browsing habits for advertising and other purposes. The privacy surcharge of \$29 per month—nearly \$350 per year—is a model that many consumer-facing edge providers like Facebook and Google have thus far resisted, choosing instead to continue offering their services for ‘free’ while relying on their troves of user data to generate advertising revenue.”); see also Karl Bode, *AT&T Tries To Claim That Charging Users More for Privacy Is a “Discount”*, TECHDIRT (Apr. 5, 2016, 06:28 AM), <https://www.techdirt.com/articles/20160329/08514034038/att-tries-to-claim-that-charging-users-more-privacy-is-discount.shtml> [<https://perma.cc/J2NQ-CJRG>]; John Brodtkin, *AT&T Charges \$29 More for Gigabit Fiber That Doesn’t Watch Your Web Browsing*, ARS TECHNICA (Feb. 16, 2015, 12:38 PM), <https://arstechnica.com/business/2015/02/att-charges-29-more-for-gigabit-fiber-that-doesnt-watch-your-web-browsing/> [<https://perma.cc/WKU2-XQP7>]; Elizabeth Dwoskin & Thomas Gryta, *AT&T Offers Data Privacy—for a Price*, WALL ST. J.: DIGITS, (Feb. 18, 2015, 06:01 AM), <https://blogs.wsj.com/digits/2015/02/18/att-offers-data-privacy-for-a-price/> [<https://perma.cc/C64F-BWMK>].

55. See Omri Ben-Shahar, Opinion, *Your Internet Privacy Should Be Up for Sale*, FORBES (Aug. 8, 2016, 06:29 AM), <https://www.forbes.com/sites/omribenshahar/2016/08/08/your-internet-privacy-should-be-up-for-sale/#31c0f6267ef2> [<https://perma.cc/D3UE-UNP3>]; Jeff John Roberts, *AT&T Charges \$29 for Privacy. Time for Others to Do the Same*, GIGAOM (Feb. 17, 2015, 07:41 AM), <https://gigaom.com/2015/02/17/att-charges-29-for-privacy-time-for-others-to-do-the-same/> [<https://perma.cc/8FB8-QJVB>].

band subscribers do not read their service agreements, or understand them after a complete review, a misperception of privacy rights has widely occurred.⁵⁶ Broadband subscribers agree to terms that accord service providers virtually unfettered opportunities to exploit the consumer data they acquire and process.

V. DEFICIENCIES IN EXISTING GOVERNMENT OVERSIGHT MODELS

The United States federal government has yet to revise existing legal, regulatory, and jurisprudential models and frameworks for application to issues raised by the onset of broadband intermediary platforms.⁵⁷ Governments use the same tools, market definitions, market penetration calculations, consumer protection strategies, and competition policies as though digital broadband networks operate no differently than legacy brick-and-mortar ventures. This section will identify four traditional governmental strategies and explain how each model ignores fundamental differences between physical and broadband-mediated transactions.

As a threshold matter, governments decide whether and how to intervene in a specific industry sector. They may opt to rely entirely on marketplace forces, confident that competition will force businesses to operate in ways that deliver a compelling value proposition for consumers and engage in no anticompetitive practices. Other governments may pursue the opposite: an interventionist approach, imposing *ex ante* rules and regulations,⁵⁸ such as network neutrality and common carrier regulation,⁵⁹ based on the view that unfettered marketplace forces will harm consumers and competition. Between these polar opposites, two alternative, possibly

56. See, e.g., Adame, *supra* note 37, at 667; Fleming, *supra* note 36, at 4–5, 10.

57. See *infra* Part V(A).

58. On three occasions, the FCC has opted to apply *ex ante* regulatory oversight. See Protecting and Promoting the Open Internet, 30 FCC Rcd. 5601 (2015) [hereinafter 2015 Open Internet Order] (report and order on remand, declaratory ruling, and order), *affirmed sub nom.*, U.S. Telecom Ass'n v. FCC, 825 F.3d 674 (D.C. Cir. 2016), *abrogated by* Restoring Internet Freedom, No. 17-108, 2018 WL 305638 (F.C.C.) (2018); Preserving the Open Internet, 25 FCC Rcd. 17,905 (2010) [hereinafter 2010 Open Internet Order] (Report and Order), *aff'd in part, vacated and remanded in part sub nom.*, Verizon v. FCC, 740 F.3d 623 (D.C. Cir. 2014), *on remand*, Protecting and Promoting the Open Internet, 29 FCC Rcd. 5561 (2014) (notice of proposed rulemaking); Formal Complaint of Free Press and Public Knowledge Against Comcast Corp. for Secretly Degrading Peer-to-Peer Applications, 23 FCC Rcd. 13028 (2008) (memorandum opinion and order), *vacated sub nom.*, Comcast Corp. v. FCC, 600 F.3d 642, 653 (D.C. Cir. 2010) (FCC deemed to have exceeded its statutory authority when responding to a complaint and imposing network neutrality rules).

59. See Justin S. Brown & Andrew W. Bagley, *Neutrality 2.0: The Broadband Transition to Transparency*, 25 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 639, 658 (2015); Rob Frieden, *What's New in the Network Neutrality Debate*, 2015 MICH. ST. L. REV. 739, 785 (2015); Barbara van Schewick, *Network Neutrality and Quality of Service: What a Nondiscrimination Rule Should Look Like*, 67 STAN. L. REV. 1, 16 (2015); Tim Wu, *Network Neutrality, Broadband Discrimination*, 2 J. TELECOMM. & HIGH TECH. L. 141, 142 (2003).

complementary, ex post strategies exist: (1) apply antitrust, consumer protection, and prohibitions on unfair trade practices to remedy proven harms; and (2) use dispute resolution through litigation and complaint-filing procedures to fashion remedies that typically impose monetary fines and compulsory modification of business practices.

Each of the legacy models fails to achieve an ideal balance between governmental regulatory forbearance and intervention, primarily because the assumptions, strategies, and tactics applied do not make essential adjustments reflecting the difference between digital broadband networking and preexisting channels of commerce. Additionally, traditional tools applied by the Justice Department, FCC, and FTC result in less than optimal outcomes, either by detecting false positives, which trigger unnecessary marketplace intervention, or by reaching false negatives, which fail to trigger important safeguards based on an incorrect determination that no harm to consumers or competition has occurred or will occur.

A. *False Positives and Negatives*

Governments generate the greatest disservice to constituents when regulatory safeguards unnecessarily replace or dislodge marketplace forces, or when harm to consumers and competition occurs because regulatory safeguards do not exist. Significant harms also occur when regulatory safeguards infringe on markets when ex ante government safeguards generate a false positive that identify as troublesome transitory or non-existent harm.⁶⁰ False negatives generate similar problems when the absence or ineffectuality of safeguards prevents the regulatory agency from identifying and resolving marketplace harms.⁶¹

The three primary government agencies with a jurisdictional link to aspects of digital broadband platforms have generated both false positives and negatives primarily because the tools they have used in physical markets are ill-equipped to identify and resolve problems in the Internet cloud. The Department of Justice has statutory authority to investigate and sanction anticompetitive conduct, but current economic doctrine favors inaction when identifiable consumer benefits accrue, despite the likelihood for longer term financial harm to both consumers and competitors.⁶² The FTC has begun to ascend the learning curve on questions about privacy and unfair trade practices in the Internet ecosystem, but it has lacked jurisdiction at certain times while at other times it appears to lack specific expertise in how digital broadband networks and two-sided markets operate.⁶³ The FCC has generated regulatory uncertainty and overall confusion by shifting between a predisposition not to act, despite some evidence of harm to consumers and competition, and

60. See Frieden, *supra* note 59, at 742 n.8.

61. See *id.* at 742.

62. See *infra* notes 65–78 and accompanying text.

63. See *infra* notes 79–94 and accompanying text.

newfound zeal to generate ex ante safeguards that may overreach and trigger false positives.⁶⁴

With three government agencies sharing jurisdiction over policy, economic, and legal issues related to two-sided markets, consumers can suffer from both inaction and overreach. Currently the three government agencies in a position to oversee and remedy platform intermediary marketplace abuses lack the will to act, largely based on contestable attributions about the sufficiency of self-regulation and competitive necessity.

1. *Department of Justice*

The Justice Department has primary statutory authority to enforce antitrust laws and generally to assess the competitive health of markets.⁶⁵ This agency relies heavily on economic doctrine⁶⁶ to provide guidance on how to enforce laws enacted over one hundred years ago. The Justice Department has embraced policies, often first promoted by academics, that purport to offer a better sense of the potential for benefits and harms in commercial transactions, including mergers and acquisitions, as well as in pricing decisions.

For example, the Chicago School⁶⁷ has provided consistent and impactful intellectual leadership to support the conclusion that government should eschew marketplace intervention if near-term, quantifiable consumer benefits appear plausible, even if structural changes result in highly

64. See *infra* notes 95–118 and accompanying text.

65. See, e.g., Kevin Ryan et al., *Antitrust*, 54 AM. CRIM. L. REV. 987, 987 n.2 (2017); *Antitrust Laws and You*, U.S. DEP'T OF JUSTICE, <https://www.justice.gov/atr/antitrust-laws-and-you> [<https://perma.cc/8EQD-CR6Q>] (last updated Jan. 5, 2017).

66. See, e.g., *Economic Analysis Group*, U.S. DEP'T OF JUSTICE, <https://www.justice.gov/atr/about-division/economic-analysis-group> [<https://perma.cc/N5DT-KLCG>] (last visited Feb. 7, 2018) (“Antitrust analysis studies and predicts the economic effects of strategic firm behavior and changes in industry structure. Economists work in teams with attorneys in the Division on every civil investigation of proposed mergers or possible anticompetitive business conduct by firms (such as exclusive contracts and loyalty discounts). We spend time in the beginning of an investigation interviewing executives at firms and evaluating company documents and data to determine the best way to model the industry and identify potentially dispositive facts and empirical projects.”).

67. The Chicago School refers to economic theory and policy favoring marketplace resource allocation and limited government intervention, focused primarily on promoting economic efficiency. Economists at the University of Chicago have achieved prominence in this line of academic analysis. See, e.g., 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, 4 (2007) (“Why has U.S. antitrust law grown more tolerant in its treatment of dominant firm behavior? In tracing the intellectual stimulus for this development, I often have ascribed the U.S. retreat from intervention-oriented policies chiefly to the influence of the ‘Chicago School’ and have treated Chicago School ideas as the principal intellectual foundation of modern U.S. doctrine and policy.”); see also Lawrence Lessig, *The New Chicago School*, 27 J. LEGAL STUD. 661, 662–72 (1998).

concentrated markets.⁶⁸ Using this policy predicate, the Justice Department typically refrains from objecting to acquisitions of companies that complement and vertically integrate with the acquiring company's commercial activities.⁶⁹ In the communications marketplace, the Justice Department did not object when Comcast proposed to acquire NBC Universal⁷⁰ because the combined venture primarily integrated content creation with content distribution. Conceivably, a single venture engaged in two aspects in the "food chain" of video commerce can enhance consumer welfare and promote competition while also enhancing scale, efficiency, and stock valuation of the acquiring company.⁷¹

The Justice Department also has embraced economic doctrine that a very high market share held by one or two companies does not necessarily evidence harmful market power. Instead, such industrial concentration can accrue efficiency and economies of scale benefits without also raising prices for consumers.⁷² Additionally, this agency largely favors any commercial activity that confers a near-term cost saving to consumers, despite

68. See generally ROBERT H. BORK, *THE ANTITRUST PARADOX: A POLICY AT WAR WITH ITSELF* (1978); Richard A. Posner, *The Chicago School of Antitrust Analysis*, 127 U. PA. L. REV. 925 (1979).

69. See generally U.S. DEP'T OF JUSTICE, *NON-HORIZONTAL MERGER GUIDELINES* (1984), <https://www.justice.gov/sites/default/files/atr/legacy/2006/05/18/2614.pdf> [<https://perma.cc/HV9J-JQ2A>].

70. See Press Release No. 11-061, U.S. Dep't of Justice, Office of Public Affairs, Justice Department Allows Comcast-NBCU Joint Venture to Proceed with Conditions (Jan. 18, 2011), <https://www.justice.gov/opa/pr/justice-department-allows-comcast-nbcu-joint-venture-proceed-conditions> [<https://perma.cc/FF5H-FSLV>]; see also Megan Sieffert, *Conception to Distribution: Vertical Integration in the Television Production and ISP Industry*, 6 J. BUS. ENTREPRENEURSHIP & L. 157, 166 (2012).

71. See, e.g., Lina M. Khan, *Amazon's Antitrust Paradox*, 126 YALE L.J. 710, 733 (2017) ("In the 1950s—while Congress, enforcement agencies, and the courts recognized potential threats posed by vertical arrangement—Chicago School scholars began to cast doubt on the idea that vertical integration has anticompetitive effects. By replacing market transactions with administrative decisions within the firm, they argued, vertical arrangements generated efficiencies that antitrust should promote. And if integration failed to yield efficiencies, then the integrated firm would have no cost advantages over unintegrated rivals, therefore posing no risk of impeding entry."); see also Robert Bork, *Vertical Integration and the Sherman Act: The Legal History of an Economic Misconception*, 22 U. CHI. L. REV. 157, 157 (1954).

72. Courts in the United States and elsewhere in the world have embraced the view that "high market share in a multi-sided market setting is not indicative of market power." Sokol & Ma, *supra* note 7, at 48; see also David S. Evans, *The Emerging High-Court Jurisprudence on the Antitrust Analysis of Multisided Platforms*, CPI ANTI-TRUST CHRON., Feb. 2017, at 9, <https://www.competitionpolicyinternational.com/wp-content/uploads/2017/02/CPI-Evans.pdf> [<https://perma.cc/EX77-EJ8K>]; Hein Hobbelen et al., *Selected Recent Developments in the Application of EU Competition Law to Online Platforms*, EURO. UNIV. INST.: FCP WORKSHOP (Oct. 2016), <http://www.eui.eu/Projects/ENTRANCE/Documents/NewEntrance/Workshops/AnnualConference/Recent-Development-in-the-Application-of-EU-Competition-law-to-Online-Platforms-Hobbelen-Lorje%CC%81-Guenay.pdf> [<https://perma.cc/H2DV-GJKE>].

the potential for longer term harm.⁷³ In application, the Justice Department and reviewing courts consider quite unlikely and infeasible a company strategy for deliberately underpricing goods and services with an eye toward driving out competitors and subsequently raising prices.⁷⁴ Embracing Chicago School rationale, the Justice Department and many reviewing courts consider such predatory pricing irrational because ventures may not be able to recoup prior losses, particularly for markets with low barriers to market entry.⁷⁵

The nature of two-sided digital broadband markets and the business strategies of platform operators challenge baseline assumptions driving antitrust policies. The Justice Department has not previously confronted a

73. Cf. Patrick Bolton et al., *Predatory Pricing: Strategic Theory and Legal Policy*, 88 GEO. L.J. 2239, 2241 (2000) (“Predatory pricing poses a dilemma that has perplexed and intrigued the antitrust community for many years. On one hand, history and economic theory teach that predatory pricing can be an instrument of abuse; on the other hand, price reductions are the hallmark of competition and the tangible benefit that consumers perhaps most desire from the economic system.”).

74. See, e.g., *Brooke Grp. Ltd. v. Brown & Williamson Tobacco Corp.*, 509 U.S. 209, 212, 217 (1993); *Matsushita Elec. Indus. Co. v. Zenith Radio Corp.*, 475 U.S. 574, 587 (1986); Daniel A. Crane, *The Paradox of Predatory Pricing*, 91 CORNELL L. REV. 1, 2–3 (2005) (“Predatory pricing is a paradoxical offense. Although antitrust law values low prices and abhors high ones, the ‘predator’ stands accused of charging too low of a price—of doing too much of a good thing. Society considers predation socially harmful because the artificially low prices of today drive out competitors and allow the high prices of tomorrow. But proof of actual high prices in the later time period is not required, since even attempts at predation that never succeed and never lead to monopolistic recoupment are condemned. ‘Predators’ can face treble damage suits for pricing too low, even if they never offend the law’s ultimate concern by pricing too high.”); Christopher R. Leslie, *Rationality Analysis in Antitrust*, 158 U. PA. L. REV. 261, 319 (2010) (“[C]ourts routinely hold plaintiffs’ allegations of predatory pricing to be implausible because judges view the alleged conduct as irrational. In *Matsushita*, the majority reasoned that predatory pricing ‘makes no economic sense’ because the alleged conspiracy in that case failed. However, in some later opinions invoking *Matsushita*, the court’s pronouncement of implausibility is belied by the very success of the alleged predation. For example, in *Brooke Group*, Liggett alleged that B&W engaged in predatory pricing in order to coerce Liggett into increasing the prices of generic cigarettes, which would allow B&W and the other tobacco firms to raise prices of branded cigarettes. The Supreme Court found Liggett’s theory to be implausible because it would have required B&W to engage in allegedly irrational conduct—sustaining definite losses with a speculative likelihood of recoupment. Despite the fact that Liggett convinced a jury otherwise, the Supreme Court majority held that the predation as described by Liggett could not have happened as a matter of law.”).

75. See Khan, *supra* note 71, at 726–27 (“[T]he Chicago School critique of predatory pricing doctrine rests on the idea that below-cost pricing is irrational and hence rarely occurs. For one, the critics argue, there is no guarantee that reducing prices below cost would either drive a competitor out or otherwise induce the rival to stop competing. Second, even if a competitor were to drop out, the predator would need to sustain monopoly pricing for long enough to recoup the initial losses and successfully thwart entry by potential competitors, who would be lured by the monopoly pricing.”).

business strategy like that of Amazon that expects to endure decades of losses generated by a deliberate strategy to expand market share and the range of products and services offered coupled with low prices that major brick-and-mortar businesses cannot match.⁷⁶

Amazon can pursue a “loss leader” pricing strategy because its platform activities extend well beyond serving as an intermediary for books and other consumer products. Its “conduct and structure may threaten competition yet fail to trigger scrutiny under the analytical framework presently used in antitrust”⁷⁷ based on its control over consumer data and relentless pursuit of market share in a “winner-take-all” competition. An essential element of the business of Amazon and other digital broadband platform operators does not trigger any government scrutiny using conventional antitrust measures of relevant markets, dominance, and pricing power. Government agencies allocate most if not all scrutiny over a venture’s core business, while ignoring how ancillary ventures constitute a key, strategic part. For example, government antitrust and competition policy concentrates on Google’s dominant market share in the Internet search marketplace, without fully appreciating that search dominance also extends into the market for broadband network-delivered advertising and the development of markets for the large volume of consumer data the company acquires, processes, and analyzes.⁷⁸

The likely failure of antitrust and competition policy agencies to detect long-term adverse impacts to consumers and competition does not necessarily warrant preemptive steps that would foreclose acquisitions, order divestitures, mandate licensing of key business functions, or impose neutrality or common carrier safeguards. Such safeguards could well impose excessive false positive remedies. However, the current state of antitrust economic doctrine and policy appears likely to generate false negative determinations, based on the failure to consider the broad reach of platform operators’ business plans and how ancillary and under-scrutinized activities help offset the consequences of aggressive below-cost pricing strategies used to acquire dominance in winner-take-all markets.

2. *Federal Trade Commission*

The FTC has lead responsibility for consumer protection in privacy and data security,⁷⁹ but must defer to the FCC when a problem involves

76. See generally *id.* at 712–17.

77. *Id.* at 784.

78. “[C]ustomer data can be a strategic asset that allows a platform to maintain a lead over rivals and to limit entry into its market.” Howard A. Shelanski, *Information, Innovation, and Competition Policy for the Internet*, 161 U. PA L. REV. 1663, 1679 (2013); see also generally Rubinfeld & Gal, *supra* note 2.

79. Section 5(a)(2) of the Federal Trade Commission Act empowers and directs the FTC:

to prevent persons, partnerships, or corporations, except banks, savings and loan institutions . . . Federal credit unions . . . common carriers . . . air carriers and foreign air carriers . . . from using unfair methods of

ventures classified as common carriers.⁸⁰ The common carrier regulatory classification unambiguously has applied to wireless cellular telephone carriers since their market debut⁸¹ and also has covered all broadband Internet access providers until the FCC's recent initiative to reclassify broadband Internet access service as an information service.⁸²

Having split jurisdiction between the FTC and the FCC has the potential for more false negatives resulting from uncertainty over which agency has jurisdiction⁸³ to detect and remedy deceptive acts and unfair trade practices.⁸⁴ A decision by the Ninth Circuit Court of Appeals⁸⁵ injected even greater uncertainty about whether the FTC retains any jurisdiction if

competition in or affecting commerce and unfair or deceptive acts or practices in or affecting commerce.

Federal Trade Commission Act of 1914, § 5(a)(2), 15 U.S.C. § 45(a)(2) (2012); *see also* Woodrow Hartzog & Daniel J. Solove, *The Scope and Potential of FTC Data Protection*, 83 GEO. WASH. L. REV. 2230, 2232 (2015).

80. *See* U.S. FED. COMM'N COMM'N & U.S. FED. TRADE COMM'N, *supra* note 52.

81. *See* 47 U.S.C. § 332(c)(1)(A) (2012).

A person engaged in the provision of a service that is a commercial mobile service shall, insofar as such person is so engaged, be treated as a common carrier for purposes of this chapter, except for such provisions of subchapter II of this chapter as the Commission may specify by regulation as inapplicable to that service or person. In prescribing or amending any such regulation, the Commission may not specify any provision of section 201, 202, or 208 of this title, and may specify any other provision only if the Commission determines that—

- (i) enforcement of such provision is not necessary in order to ensure that the charges, practices, classifications, or regulations for or in connection with that service are just and reasonable and are not unjustly or unreasonably discriminatory;
- (ii) enforcement of such provision is not necessary for the protection of consumers; and
- (iii) specifying such provision is consistent with the public interest.

Id.

82. *See* Restoring Internet Freedom, 82 Fed. Reg. 25,568, 32 FCC Rcd. 4434 (proposed June 2, 2017) [hereinafter Restoring Internet Freedom NPRM].

83. *See* Maureen K. Ohlhausen, Comm'r, Fed. Trade Comm'n, FTC-FCC: When is Two a Crowd?, Address at 33rd Annual Institute on Telecommunications Policy & Regulation 4 (Dec. 4, 2015), https://www.ftc.gov/system/files/documents/public_statements/893473/151204plispeech1.pdf [<https://perma.cc/4Z95-TNM8>] (“Consumers may also be worse off if the two enforcers have conflicting rulebooks.”); *see also id.* at 7 (“In short, I believe there is little evidence that consumers will be better off if one portion of the internet ecosystem operates under a different set of rules from the rest. If there are two cops on the beat, their rulebooks—both as written and as enforced—should be consistent.”).

84. *See id.* at 4 (“[H]aving more enforcers isn't always better for consumers. For example, consumers will be worse off if overlapping efforts unnecessarily divert resources from more pressing issues. When two cops are on one beat, another beat may be left vulnerable. Additionally, if enforcers fail to leverage their comparative advantages, consumers will be worse off. For example, one wouldn't expect a homicide detective to do a good job as a tax fraud investigator, and vice versa.”).

85. *FTC v. AT&T Mobility LLC*, 835 F.3d 993 (9th Cir. 2016), *rev'd*, 883 F.3d 849 (9th Cir. 2018) (en banc).

a venture engages in any sort of common carrier activity. The court interpreted section 5 of the FTC Act⁸⁶ as foreclosing FTC regulatory oversight if a venture engages in any manner of common carrier services.⁸⁷ While the FTC Act clearly forecloses the agency from investigating and possibly sanctioning deceptive or unfair acts and practices of common carriers subject to the Communications Act of 1934, until its reversal by an en banc panel, *FTC v. AT&T Mobility LLC*⁸⁸ appeared to exempt ventures that offer both information services and telecommunications services.

The FCC and FTC have executed a Memorandum of Understanding⁸⁹ outlining each agency's scope of shared regulatory responsibility. However, the Ninth Circuit initially did not agree that both agencies could coordinate and calibrate investigations and enforcement proceedings based on whether the suspect activities involved a common carrier service, or non-common carriage, such as an information service.⁹⁰

AT&T Mobility addressed whether the FTC could sanction a carrier for misrepresenting the scope and nature of "unlimited" service as well as whether and when the carrier would "throttle" the speed of bit transmission when subscribers exceed a monthly usage threshold. The court rejected the view that a wireless carrier could offer subscribers both common carrier and private carrier services. Using what appears to be an either/or analysis the court concluded that "based on the language and structure of

86. Section 5(a)(2) of the Act provides that:

The Commission is hereby empowered and directed to prevent persons, partnerships, or corporations, except banks, savings and loan institutions described in section 57a(f)(3) of this title, Federal credit unions described in section 57a(f)(4) of this title, common carriers subject to the Acts to regulate commerce, air carriers and foreign air carriers subject to part A of subtitle VII of Title 49, and persons, partnerships, or corporations insofar as they are subject to the Packers and Stockyards Act, 1921, as amended [7 U.S.C. § 181], except as provided in section 406(b) of said Act [7 U.S.C. § 227(b)], from using unfair methods of competition in or affecting commerce and unfair or deceptive acts or practices in or affecting commerce.

15 U.S.C. § 45(a)(2) (2012).

87. See *AT&T Mobility*, 835 F.3d at 997 ("The issue presented to us is whether the common carrier exemption in section 5 is status-based, such that an entity is exempt from regulation as long as it has the status of a common carrier under the 'Acts to regulate commerce,' or is activity-based, such that an entity with the status of a common carrier is exempt only when the activity the FTC is attempting to regulate is a common carrier activity.>").

88. 835 F.3d 993 (9th Cir. 2016), *rev'd*, 883 F.3d 848 (9th Cir. 2018) (en banc).

89. See, e.g., U.S. FED. COMM'N COMM'N & U.S. FED. TRADE COMM'N, *supra* note 52.

90. See *AT&T Mobility*, 835 F.3d at 1003 ("The common carrier exemption in section 5 of the FTC Act carves out a group of entities based on their status as common carriers. Those entities are not covered by section 5 even as to non-common carrier activities. Because AT&T was a common carrier, it cannot be liable for the violations alleged by the FTC.>").

the FTC Act, that the common carrier exception is a status-based exemption and that AT&T, as a common carrier, is not covered by section 5.⁹¹

The court concluded that based on a reading of the FTC Act and case precedent, it should identify a single regulatory status for AT&T Mobility and not the combination of common and private carrier activities in which the carrier engages.⁹² Noting that wireless carriers like AT&T Mobility can and do offer both common carrier and information services, the court concluded that Congress would have enacted explicit FTC authority to regulate the latter if the legislature intended this outcome. “[I]t would be expected that Congress would have been more precise in its language if it intended the FTC to retain regulatory authority over a common carrier’s non-common carrier activity.”⁹³

This decision largely eliminated FTC regulatory safeguards leaving the FCC with the option of offering replacement oversight, something the current FCC has no intention of doing. As the FTC historically has provided consumer safeguards the FCC has not provided, the possibility exists that legitimate privacy and cybersecurity concerns will go unprotected unless the FCC embarks on a politically and strategically questionable expansion of its regulatory wingspan to impose privacy safeguards on information service providers, or the FTC quickly acquires extensive expertise on how the Internet works at each level of activity, including first and last mile content carriage.

Even though the Ninth Circuit en banc panel reversed *AT&T Mobility*, the sharing of responsibility between the FCC and FTC will continue to combine significantly different expertise and case precedent. The FTC has focused on content and service providers, while the FCC has concentrated on the behavior of the carriers providing the conduit for content and applications.

In a convergent marketplace, where conduit and content combine, safeguards are needed for both functions. Similarly, convergent technologies do not make it possible for regulatory jurisdiction to apply based on a semantic dichotomy separating mutually exclusive sets of telecommunications common carriers and providers of information services and other types of unregulated content and applications.⁹⁴

91. *See id.* at 998.

92. *See id.* at 998 (“The plain language of the common carrier exemption casts the exemption in terms of status, contrary to the FTC’s position. The phrase ‘common carriers subject to the Acts to regulate commerce,’ 15 U.S.C. § 45(a)(2), does not contain any language suggesting that the activities of a common carrier affect the exemption’s application.”).

93. *Id.* at 999.

94. *See* Rob Frieden, *The Rise of Quasi-Common Carriers and Conduit Convergence*, 9 I/S: J. L. & POL’Y 471, 472 (2014); Rob Frieden, *The FCC’s Name Game: How Shifting Regulatory Classifications Affect Competition*, 19 BERKELEY TECH. L.J. 1275, 1278, 1280 (2004).

3. *Federal Communications Commission*

The FCC has struggled for decades to establish the optimal regulatory treatment of data communications. The Commission has careened from establishing *ex ante* safeguards, based on the assumption that carriers have the ability and incentive to engage in anticompetitive practices, to using *ex post* remedies triggered only when it receives a compelling complaint. Such administrative inconsistency has resulted from the combination of ambiguous and outdated legislation; increased partisanship among the Commissioners; changes in the economic doctrine embraced by a majority of the Commissioners; and an apparent inability to adjust policies, rules, and regulations to account for converging technologies and markets.

The Communications Act of 1934, having last been comprehensively amended in 1996, provides the FCC with service definitions that the Commission considers mutually exclusive and dichotomous.⁹⁵ Even though consumers readily understand that a wireless handset provides both voice and data services, the FCC attempts to ignore technological and market convergence by shoehorning all wireless services into either a lightly regulated information service category or a telecommunications service category that qualifies for more extensive regulation, largely nullified by the option to forbear from applying regulations should the market operate competitively.⁹⁶

The FCC triggered several court reversals when it attempted to stretch the permissible regulatory scope of information service oversight.⁹⁷ It responded in 2015 with a decision to reclassify broadband Internet access as regulated telecommunications services that overreaches unless the Commission follows through with its commitment to forbear from applying

95. Restoring Internet Freedom NPRM, 82 Fed. Reg. 25,568, 25,573, 32 FCC Rcd. 4434, 4447 (“The Commission has previously concluded that Congress formally codified information services and telecommunications services as two, mutually exclusive types of service in the Telecommunications Act. . . . We believe this conclusion regarding mutual exclusivity is correct based on the text and history of the Act.”).

96. 2015 Open Internet Order, 30 FCC Rcd. 5601, 5603, *affirmed sub nom.*, U.S. Telecom Ass’n v. FCC, 825 F.3d 674 (D.C. Cir. 2016), *abrogated by* Restoring Internet Freedom, No. 17-108, 2018 WL 305638 (F.C.C.) (2018) (“[W]e concurrently exercise the Commission’s forbearance authority to forbear from application of 27 provisions of Title II of the Communications Act, and over 700 Commission rules and regulations. This is a Title II tailored for the 21st century, and consistent with the ‘light-touch’ regulatory framework that has facilitated the tremendous investment and innovation on the Internet.”).

97. *See* 2010 Open Internet Order, 25 FCC Rcd. 17905 (2010), *aff’d in part, vacated and remanded in part sub nom.*, Verizon v. FCC, 740 F.3d 623 (D.C. Cir. 2014); Formal Complaint of Free Press and Public Knowledge Against Comcast Corp. for Secretly Degrading Peer-to-Peer Applications, 23 FCC Rcd. 13028 (2008) (memorandum opinion and order), *vacated sub nom.* Comcast Corp. v. FCC, 600 F.3d 642 (D.C. Cir. 2010).

most common carrier regulations.⁹⁸ In these partisan and non-collegial times, a Republican FCC Commissioner will not trust a Democratic counterpart to make good on a promise to remove or refrain from applying most common carrier regulations as unnecessary and possibly counterproductive. Similarly, a Democratic Commissioner will not trust a Republican counterpart to take any affirmative steps to remedy real competitive and consumer protection harms once an information service classification applies that would permit the FCC to eschew any oversight.

The FCC cannot provide regulatory clarity when its Commissioners elevate political party objectives above common sense and the public interest. Republican Commissioners are convinced that regulation imposes unnecessary costs that translate into higher prices, less innovation, reduced investment in infrastructure, and fewer jobs. They consider the telecommunications and information services marketplaces robustly competitive and able to self-regulate, even though consumers typically have to accept non-negotiable service terms and conditions that include mandatory arbitration⁹⁹ in lieu of court hearings and near-complete opportunities for carriers to commodify and market data about subscribers' network uses. Democratic Commissioners identify the same adverse consequences to competition and consumers but attribute the failure to regulate as the cause.

Throughout the FCC's consideration of the proper regulatory model for broadband Internet access, the Commission did not directly address the impact of platform intermediaries. It did identify separate elements in the complete link from content and application source to consumer. However, it emphasized the potential for "retail" Internet Service Providers (ISPs) serving end users to operate anti-competitively only insofar as its treatment of traffic destined for their subscribers. The Commission focused primarily on ISP traffic management and delivery roles without considering whether and how ISP carriage might create a platform intermediary function. The current FCC has no interest in examining ISP collection and marketing of subscriber network use and in assessing the impact on legitimate privacy expectations. Having reclassified broadband Internet access as an information service, the FCC can largely disengage from broadband oversight.

98. See 2015 Open Internet Order, 30 FCC Rcd. at 5615 ("[T]his Order concludes that the retail broadband Internet access service available today is best viewed as separately identifiable offers of (1) a broadband Internet access service that is a [common carrier] telecommunications service (including assorted functions and capabilities used for the management and control of that telecommunication service) and (2) various 'add-on' applications, content, and services that generally are information services.").

99. See *AT&T Mobility LLC v. Concepcion*, 563 U.S. 333, 350–52 (2011) (deeming enforceable a compulsory arbitration requirement contained in a wireless carriage subscription agreement); Arpan A. Sura & Robert A. Derise, *Conceptualizing Concepcion: The Continuing Viability of Arbitration Regulations*, 62 U. KAN. L. REV. 403, 404–05 (2013).

a. The FCC's 2015 Open Internet Order

Under a Democratic party majority, the FCC expressed concern that without muscular, common carrier regulatory oversight, ISPs would create fast lanes,¹⁰⁰ offering “better than best efforts” traffic prioritization at a surcharge, while relegating everyone else to intentionally slow lanes¹⁰¹ possibly unable to handle even ordinary traffic volumes.¹⁰² The potential marketplace distortion lies in the expectation that ISPs can exploit market power, particularly for the last mile delivery of content to retail broadband subscribers.¹⁰³ Content providers and distributors unable or unwilling to pay surcharges would experience artificial congestion and quality-of-ser-

100. See 2015 Open Internet Order, 30 FCC Rcd. at 5690 (“Some edge and transit providers assert that large broadband Internet access service providers are creating artificial congestion by refusing to upgrade interconnection capacity at their network entrance points for settlement-free peers or CDNs, thus forcing edge providers and CDNs to agree to paid peering arrangements. These parties suggest that paid arrangements resulting from artificially congested interconnection ports at the broadband Internet access service provider network edge could create the same consumer harms as paid arrangements in the last-mile, and lead to paid prioritization, fast lanes, degradation of consumer connections, and ultimately, stifling of innovation by edge providers.”).

101. See *id.* at 5608 (“The record demonstrates the need for strong action. The *Verizon* court itself noted that broadband networks have ‘powerful incentives to accept fees from edge providers, either in return for excluding their competitors or for granting them prioritized access to end users.’ Mozilla, among many such commenters, explained that ‘[p]rioritization . . . inherently creates fast and slow lanes.’ Although there are arguments that some forms of paid prioritization could be beneficial, the practical difficulty is this: the threat of harm is overwhelming, case-by-case enforcement can be cumbersome for individual consumers or edge providers, and there is no practical means to measure the extent to which edge innovation and investment would be chilled. And, given the dangers, there is no room for a blanket exception for instances where consumer permission is buried in a service plan—the threats of consumer deception and confusion are simply too great.” (quoting *Verizon*, 740 F.3d at 645–46)).

102. DEREK TURNER, FREE PRESS, NET NEUTRALITY: INVESTMENT AND ECONOMICS 3–4 (2010), http://www.freepress.net/sites/default/files/fp-legacy/Net_Neutrality_Investment_and_Economics.pdf [<https://perma.cc/8TM2-Q5PZ>] (“Network neutrality advocates worry that ISPs will intentionally degrade basic broadband service with an eye toward forcing upstream content providers to pay additional fees to ensure that content arrives without disruption even though no such surcharge was necessary previously: Without Network Neutrality, ISPs will have a strong incentive to reduce investment and make congestion commonplace in order to extract revenues from content providers willing to pay to avoid traffic delays. Without open Internet rules, ISPs will be granted license to abuse their positions as terminating access monopolies, which is in direct conflict with the Act’s goals for nondiscriminatory interconnection.”).

103. See *Verizon*, 740 F.3d at 645–46 (“Broadband providers also have powerful incentives to accept fees from edge providers, either in return for excluding their competitors or for granting them prioritized access to end users.” (citations omitted)); 2015 Open Internet Order, 30 FCC Rcd. at 5608 (“Although there are arguments that some forms of paid prioritization could be beneficial, the practical difficulty is this: the threat of harm is overwhelming, case-by-case enforcement can be cumbersome for individual consumers or edge providers, and there is no practical means to measure the extent to which edge innovation and investment would be chilled. And, given the dangers, there is no room for a blanket exception for

vice degradation, which in turn would deteriorate consumers' quality of experience. Bear in mind that for video content, consumers have very low tolerance for any form of network performance declines that prevent the seamless display of "must see," "mission critical" content.¹⁰⁴

Without framing the matter in the context of intermediary market power, the FCC anticipated the likelihood for ISPs to pursue price and quality-of-service discrimination strategies that could harm competition and consumers rather than provide different service tiers and price points. With an eye toward foreclosing harm, the FCC established *ex ante* safeguards to sanction anticipated market distortions, rather than using *ex post* remedies if and when such abuses occur.¹⁰⁵

The FCC concentrated on the potential harms generated by ISPs with broadband networks providing the first and last mile links to consumers. It emphasized the need for narrowly crafted rules designed to "prevent specific practices we know are harmful to Internet openness—blocking, throttling, and paid prioritization—as well as a strong standard of conduct designed to prevent the deployment of new practices that would harm Internet openness."¹⁰⁶ The Commission concluded that ISPs have both the incentive and ability to leverage access in ways that can thwart the virtuous cycle of innovation and investment in the Internet ecosystem.

The key threat to the virtuous cycle is that broadband providers have both the incentive and the ability to act as gatekeepers standing between edge providers and consumers. As gatekeepers, they can block access altogether; they can target competitors, including competitors to their own video services; and they can extract unfair tolls.¹⁰⁷

The FCC considered it essential that ISPs not have the ability to exploit Internet access in anticompetitive ways that would reduce demand for Internet services.¹⁰⁸ To achieve that goal, the Commission established

instances where consumer permission is buried in a service plan—the threats of consumer deception and confusion are simply too great.”).

104. See Frieden, *supra* note 59, at 750.

105. See Rob Frieden, *Ex Ante Versus Ex Post Approaches to Network Neutrality: A Comparative Assessment*, 30 BERKELEY TECH. L.J. 1561, 1562–63 (2015); Jasper P. Sluijs, *Network Neutrality Between False Positives and False Negatives: Introducing a European Approach to American Broadband Markets*, 62 FED. COMM. L.J. 77, 88 (2010).

106. See 2015 Open Internet Order, 30 FCC Rcd. at 5603.

107. *Id.* at 5608.

108. See *id.* at 5629–30 (“Broadband providers’ networks serve as platforms for Internet ecosystem participants to communicate, enabling broadband providers to impose barriers to end-user access to the Internet on one hand, and to edge provider access to broadband subscribers on the other. . . . [T]he record provides substantial evidence that broadband providers have significant bargaining power in negotiations with edge providers and intermediaries that depend on access to their networks because of their ability to control the flow of traffic into and on their networks. Another way to describe this significant bargaining power is in terms of a broadband provider’s position as gatekeeper—that is, regardless of the competition in the local market for broadband Internet access, once a consumer chooses a broadband provider, that provider has a monopoly on access to the subscriber. . . . Broadband providers can exploit this role by acting in ways that may

a clear, ISP nondiscrimination rule in its 2015 Protecting and Promoting the Open Internet (Open Internet Order):

Any person engaged in the provision of broadband Internet access service, insofar as such person is so engaged, shall not unreasonably interfere with or unreasonably disadvantage (i) end users' ability to select, access, and use broadband Internet access service or the lawful Internet content, applications, services, or devices of their choice, or (ii) edge providers' ability to make lawful content, applications, services, or devices available to end users. Reasonable network management shall not be considered a violation of this rule.¹⁰⁹

The nondiscrimination rule established an expectation that ISPs operate as neutral conduits for content without the ability to favor, or disfavor, content. On one hand, nondiscrimination rules work to prevent ISPs from providing preferential and superior handling of traffic generated by a corporate affiliate or a third party willing to pay a surcharge. But on the other hand, the rules largely prevent ISPs from providing upstream content providers with opportunities to secure expedited treatment of traffic that may need such comparatively better processing to ensure superior quality of service. While the rules create the risk of sanctions for generating artificial congestion to extort higher payments from content providers, they also may sanction benign or desired enhancements when actual congestion could otherwise result in degraded service.

The nondiscrimination rule and prohibition on prioritizing traffic also generated uncertainty about what ISPs can and cannot do to tier and differentiate service. For example, the Democratic majority FCC had expressed concerns about zero rating of the wireless traffic generated by a corporate affiliate and content providers willing to pay a surcharge.¹¹⁰

harm the open Internet, such as preferring their own or affiliated content, demanding fees from edge providers, or placing technical barriers to reaching end users. Without multiple, substitutable paths to the consumer, and the ability to select the most cost-effective route, edge providers will be subject to the broadband provider's gatekeeper position.”).

109. *Id.* at 5609. The FCC defines reasonable network management practice as one having “a primarily technical network management justification, but does not include other business practices. A network management practice is reasonable if it is primarily used for and tailored to achieving a legitimate network management purpose, taking into account the particular network architecture and technology of the broadband Internet access service.” *Id.* at 5611.

110. *See* WIRELESS TELECOMM. BUREAU, FCC, POLICY REVIEW OF MOBILE BROADBAND OPERATORS' SPONSORED DATA OFFERINGS FOR ZERO-RATED CONTENT AND SERVICES 17 (Jan. 11, 2017) [hereinafter 2017 Wireless Telecommunications Bureau Zero Rating Report], https://transition.fcc.gov/Daily_Releases/Daily_Business/2017/db0111/DOC-342987A1.pdf [<https://perma.cc/USQ6-RNQB>] (“Mobile broadband providers are experimenting with a variety of sponsored data and zero-rating initiatives. While this dynamic environment has benefited consumers, these business arrangements may raise many of the same economic and public policy issues involving network owners that the Commission has long considered. In par-

Such arrangements can reduce consumers' out-of-pocket costs, but they also may distort the competitive marketplace for different types of content by making zero rated content comparatively more attractive simply because downloading it does not debit a monthly data cap.

In addition to the specific prohibitions on blocking, throttling, and paid prioritization, the FCC established a general prohibition on ISP practices that would unreasonably interfere with or disadvantage downstream consumers and upstream edge providers of content, applications, and services. The Commission established rules for ad hoc consideration whether an ISP had engaged in a practice “that unreasonably interfere[s] with or unreasonably disadvantage[s] the ability of consumers to reach the Internet content, services, and applications of their choosing or of edge providers to access consumers using the Internet.”¹¹¹

The Commission applied a more open-ended evaluation than its previously proposed legal standard prohibiting commercially unreasonable practices contained in its 2014 Preserving the Open Internet (2014 Open Internet) notice of proposed rulemaking (NPRM).¹¹² The FCC concluded that it should “adopt a governing standard that looks to whether consumers or edge providers face unreasonable interference or unreasonable disadvantages, and makes clear that the standard is not limited to whether a practice is agreeable to commercial parties.”¹¹³

The FCC reported that it would use a “no-unreasonable interference/disadvantage standard”¹¹⁴ to evaluate controversial subjects, including the lawfulness of sponsored data arrangements where an ISP accepts

ticular, sponsored data offerings by vertically integrated mobile broadband providers may harm consumers and competition in downstream industry sectors by unreasonably discriminating in favor of select downstream providers, especially their own affiliates.”).

111. *See* 2015 Open Internet Order, 30 FCC Rcd. at 5659.

112. *See id.* at 5665 (“Based on the record before us, we are persuaded that adopting a legal standard prohibiting commercially unreasonable practices is not the most effective or appropriate approach for protecting and promoting an open Internet.” (citing comments made regarding Preserving the Open Internet, 22 FCC Rcd. 13064 (proposed Oct. 22, 2009))).

113. *Id.* at 5666. The FCC identified a number of factors it will consider in future evaluations. These include an assessment whether a practice allows end-user control and is consistent with promoting consumer choice; its competitive effect; whether consumers and opportunities for free expression are promoted or harmed; the effect on innovation, investment, or broadband deployment; whether the practice hinders the ability of end users or edge providers to use broadband access to communicate with each other; and whether a practice conforms to best practices and technical standards adopted by open, broadly representative, and independent Internet engineering, governance initiatives, or standards-setting organization. *See id.* at 5661–65.

114. *Id.* at 5609 (“Thus, the Order adopts the following standard: Any person engaged in the provision of broadband Internet access service, insofar as such person is so engaged, shall not unreasonably interfere with or unreasonably disadvantage (i) end users’ ability to select, access, and use broadband Internet access service or the lawful Internet content, applications, services, or devices of their choice, or (ii) edge providers’ ability to make lawful content, applications, services,

advertiser payment in exchange for an agreement not to meter and debit the downstream traffic delivery.¹¹⁵ The Commission also decided to use this standard to consider the lawfulness of data caps that tier service by the amount of permissible downloading volume.¹¹⁶ In both instances, the FCC saw the potential for an ISP to create artificial scarcity to extract higher revenues, by favoring corporate affiliates and third parties willing to pay a surcharge.¹¹⁷ Additionally, the Commission worried that data caps had the potential for disadvantaging competitors by creating disincentives for consumers to try new video programming options, particularly if a zero rated ISP option exists.¹¹⁸

b. The D.C. Circuit Court of Appeals Affirms the FCC

On appeal to the Court of Appeals for the District of Columbia, the FCC defended its legal right to reclassify services in light of changed circumstances.¹¹⁹ The Commission had to convince the court that the Communications Act authorizes service reclassifications or lacks specificity thereby allowing an expert regulatory agency to clarify ambiguities. By a 2–1 vote, reflecting vastly different legal philosophies and acceptance of the FCC’s rationales, assumptions, and evidence, the court rejected all challenges to the FCC’s Open Internet Order.¹²⁰

The majority considered its review function quite limited. The court opted to apply ample case precedent supporting deference to regulatory agency expertise on both procedural and substantive areas.¹²¹ In a nut-

or devices available to end users. Reasonable network management shall not be considered a violation of this rule.”).

115. *See id.* at 5666–68 (“While our bright-line rule to treat paid prioritization arrangements as unlawful addresses technical prioritization, the record reflects mixed views about other practices, including usage allowances and sponsored data plans. Sponsored data plans (sometimes called zero-rating) enable broadband providers to exclude edge provider content from end users’ usage allowances. On the one hand, evidence in the record suggests that these business models may in some instances provide benefits to consumers, with particular reference to their use in the provision of mobile services. Service providers contend that these business models increase choice and lower costs for consumers. . . . On the other hand, some commenters strongly oppose sponsored data plans, arguing that ‘the power to exempt selective services from data caps seriously distorts competition, favors companies with the deepest pockets, and prevents consumers from exercising control over what they are able to access on the Internet,’ again with specific reference to mobile services. . . . [W]e will look at and assess such practices under the no-unreasonable interference/disadvantage standard, based on the facts of each individual case, and take action as necessary.” (footnotes omitted)).

116. *See id.* at 5668 (declaring that no-unreasonable interference/disadvantage standard would be used to evaluate data caps).

117. *See id.* at 5666–68 (explaining the Commission’s concerns with sponsored data arrangements).

118. *See id.* at 5668 (discouraging potential of data caps to discourage competition).

119. *See generally* U.S. Telecom Ass’n v. FCC, 825 F.3d 674 (D.C. Cir. 2016).

120. *See generally id.*

121. The D.C. Circuit explained that:

shell, the majority opted not to second guess the FCC, and instead it expressed support for the Commission's interpretation of law and its assessment of how consumers access the Internet and what they expect from service providers.¹²² This decision supports a rare instance where the FCC substantially expanded its regulatory wingspan, despite the general trend toward less government oversight.¹²³

The court accepted the FCC's rationale for reclassification, considering it reasonable¹²⁴ in light of how consumers rely on telecommunications links to access content, largely offered by ventures other than the carrier providing access. Additionally, the majority decision considered and rejected many of the objections raised in the partial dissent. In particular,

[W]e think it important to emphasize two fundamental principles governing our responsibility as a reviewing court. First, our "role in reviewing agency regulations . . . is a limited one." Our job is to ensure that an agency has acted "within the limits of [Congress's] delegation" of authority, and that its action is not "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law." Critically, we do not "inquire as to whether the agency's decision is wise as a policy matter; indeed, we are forbidden from substituting our judgment for that of the agency." Nor do we inquire whether "some or many economists would disapprove of the [agency's] approach" because "we do not sit as a panel of referees on a professional economics journal, but as a panel of generalist judges obliged to defer to a reasonable judgment by an agency acting pursuant to congressionally delegated authority."

Id. at 696–97 (internal citations omitted).

122. The court supported the FCC's determination that broadband Internet access constitutes a separate and standalone service vis-à-vis the information services consumers acquire via telecommunications service links. "That consumers focus on transmission to the exclusion of add-on applications is hardly controversial. Even the most limited examination of contemporary broadband usage reveals that consumers rely on the service primarily to access third-party content." *Id.* at 698. The court also noted that broadband Internet access providers use information services to facilitate links to content but agreed with the FCC that such reliance does not convert the telecommunications service into an information service. *See id.*

123. *See id.* at 734 ("That brings us to our [dissenting] colleague's suggestion that the Order embodies a 'central paradox[]' in that the Commission relied on the Telecommunications Act to 'increase regulation' even though the Act was 'intended to "reduce regulation."' We are unmoved. The [Telecommunications Act of 1996], by its terms, aimed to 'encourage the rapid deployment of new telecommunications technologies.' If, as we reiterate here (and as the partial dissent agrees), section 706 grants the Commission rulemaking authority, it is unsurprising that the grant of rulemaking authority might occasion the promulgation of additional regulation. And if, as is true here (and was true in *Verizon*), the new regulation is geared to promoting the effective deployment of new telecommunications technologies such as broadband, the regulation is entirely consistent with the Act's objectives." (internal citations omitted)).

124. *See id.* at 713 ("The problem in *Verizon* was not that the Commission had misclassified the service between carriers and edge providers but that the Commission had failed to classify broadband service as a Title II service at all. The Commission overcame this problem in the Order by reclassifying broadband service—and the interconnection arrangements necessary to provide it—as a telecommunications service.").

the majority rejected the partial dissent's reliance on assertions that reclassification would harm carriers' incentives to invest in infrastructure. The court held that "it was not unreasonable for the Commission to conclude that broadband's particular classification was less important to investors than increased demand."¹²⁵ The partial dissent endorsed various filings that found flaws in the FCC's economic and market analysis, but the majority refrained from rejecting the FCC's overall assessments and replacing them with general criticisms on the appropriateness of the FCC's analysis.¹²⁶

The court also found no defects in the FCC's decision to apply its Open Internet access rules to mobile broadband access. The court rejected the rationale that the rules could only apply to fixed services, because the traditional understanding of common-carrier-delivered Public Switched Telephone Network services only applies to fixed services made available to the public. The court considered mobile broadband as now generally available to the public as evidenced by the common use of smartphones that provide both voice and data services.¹²⁷

The court strongly rejected the argument that the FCC's Open Internet rules impermissibly constrain ISPs' First Amendment freedom.

Common carriers have long been subject to nondiscrimination and equal access obligations akin to those imposed by the rules without raising *any* First Amendment question. Those obligations affect a common carrier's neutral transmission of *others'* speech, not a carrier's communication of its own message.¹²⁸

The court noted that telephone companies, railroads, and postal services have borne equal access obligations like that now applied to ISPs "without raising any First Amendment issue."¹²⁹

125. U.S. Telecom Ass'n v. FCC, 825 F.3d 674, 710 (D.C. Cir. 2016).

126. *See id.* ("We see no reason to second guess these factual determinations, since the court properly defers to policy determinations invoking the [agency's] expertise in evaluating complex market conditions." (alteration omitted) (quoting Gas Transmission Nw. Corp. v. FERC, 504 F.3d 1318, 1322 (D.C. Cir. 2007))).

127. *See id.* at 715–16 ("Aligning mobile broadband with mobile voice based on their affording similarly ubiquitous access, moreover, was in keeping with Congress's objective in establishing a defined category of commercial mobile services subject to common carrier treatment: to creat[e] regulatory symmetry among similar mobile services." (citations omitted)); *id.* at 716–17 ("In mobile petitioners' view, mobile broadband (or any non-telephone mobile service)—no matter how universal, widespread, and essential a medium of communication for the public it may become—must *always* be considered a 'private mobile service' and can *never* be considered a 'commercial mobile service.' Nothing in the statute compels attributing to Congress such a wooden, counterintuitive understanding of those categories.").

128. *Id.* at 740.

129. *Id.* The court did note that in some instances, ISPs do create and distribute content, but in such instances, common carriage requirements do not apply:

c. The 2017 Network Neutrality Reversal NPRM

With the election of President Donald Trump and the appointment of Ajit Pai as FCC Chairman, muscular network neutrality rules soon evaporated as the Commission reverted to a general promotion of openness and best practices largely free of any enforcement mechanism.¹³⁰ Despite judicial affirmance of an earlier reclassification of broadband Internet access as a telecommunications service, subject to common carrier regulation, the Restoring Internet Freedom NPRM proposed to revert to a looser regulatory classification triggering little or no government oversight:

Today, we take a much-needed first step toward returning to the successful bipartisan framework that created the free and open Internet and, for almost twenty years, saw it flourish. By proposing to end the utility-style regulatory approach that gives government control of the Internet, we aim to restore the market-based policies necessary to preserve the future of Internet Freedom, and to reverse the decline in infrastructure investment, innovation, and options for consumers put into motion by the FCC in 2015.¹³¹

The FCC proposed to apply the information service regulatory classification to broadband Internet access¹³² and to treat wireless service as private carriage rather than the existing commercial designation established by Congress.¹³³ The Commission heavily relied on a questionable conclu-

If a broadband provider nonetheless were to *choose* to exercise editorial discretion—for instance, by picking a limited set of websites to carry and offering that service as a curated internet experience—it might then qualify as a First Amendment speaker. But the Order itself excludes such providers from the rules.

Id. at 743.

130. The FCC proposed treating broadband Internet access as an information service, subject to Title I of the Communications Act, which does not authorize the FCC to impose common carrier regulations. Instead the Commission has an ambiguous regulatory authority to impose safeguards and to promote goals. For example, the Restoring Internet Freedom NPRM endorsed four principles for Internet freedom to further ensure that the Internet would remain a place for free and open innovation with minimal regulation. *See* Restoring Internet Freedom NPRM, 82 Fed. Reg. 25,568, 25,570; 32 FCC Rcd. 4434, 4435. These four “Internet freedoms” include the freedom to access lawful content, the freedom to use applications, the freedom to attach personal devices to the network, and the freedom to obtain service plan information. *See id.* at 25,577; 32 FCC Rcd. at 4438.

131. *Id.* at 25,570; 32 FCC Rcd. at 4435.

132. *See id.* at 25,570; 32 FCC Rcd. at 4441 (“Today, we propose to reinstate the information service classification of broadband Internet access service and return to the light-touch regulatory framework first established on a bipartisan basis during the Clinton Administration.”).

133. *See id.* (“We also propose to reinstate the determination that mobile broadband Internet access service is not a commercial mobile service.”); *id.* at 25,576; 32 FCC Rcd. at 4455 (“Furthermore, insofar as mobile broadband Internet access service is best interpreted to be an information service, we believe that likely also would counsel in favor of classifying it as a private mobile service to avoid the

sion that common carriage regulation stifles investment, innovation, and employment in the Internet ecosystem. While offering a dismissive reference to contrary studies,¹³⁴ the FCC opted to accept unconditionally the conclusion that network neutrality constitutes the sole reason for a reduction in capital expenditures by incumbent broadband carriers. The Commission opted to ignore clear evidence that Internet ventures continue to invest billions in both content delivery plant and content creators who need a robust distribution network to deliver content to consumers.¹³⁵

The FCC produced no evidence of causation nor did it appear to consider other factors that may have contributed, such as the billions of dollars recently invested in content, e.g., Verizon's acquisition of America

inconsistency of the service being both an information service and a common carrier service. The Commission explained this reasoning when originally classifying mobile broadband Internet access service as both an information service and a private mobile service, and we propose to apply that same reasoning again here.”).

134. *See id.* at 25,573; 32 FCC Rcd. at 4449 n.116. *See generally* Karl Bode, *One More Time with Feeling: Net Neutrality Didn't Hurt Broadband Investment in the Slightest*, TECHDIRT: NET NEUTRALITY (Aug. 24, 2016, 06:29 AM), <https://www.techdirt.com/blog/netneutrality/articles/0160823/09034535313/one-more-time-with-feeling-netneutrality-didnt-hurt-broadband-investment-slightest.shtml> [<https://perma.cc/G962-GD53>]; Sara Kamal, *The Truth About Net Neutrality and Infrastructure Investment*, PUBLIC KNOWLEDGE: NET NEUTRALITY (May 8, 2017), <https://www.publicknowledge.org/news-blog/blogs/the-truth-about-net-neutrality-and-infrastructure-investment> [<https://perma.cc/2VXW-2AVY>]; S. DEREK TURNER, FREE PRESS, IT'S WORKING: HOW THE INTERNET ACCESS AND ONLINE VIDEO MARKETS ARE THRIVING IN THE TITLE II ERA (2017), <https://www.freepress.net/sites/default/files/resources/internet-access-and-online-video-markets-are-thriving-in-title-ii-era.pdf> [<https://perma.cc/FF7S-YZTW>].

135. *See* Restoring Internet Freedom NPRM, 82 Fed. Reg. at 25,574; 32 FCC Rcd. at 4449 (“We believe that these reduced expenditures are a direct and unavoidable result of Title II reclassification, and exercise our predictive judgment that reversing the Title II classification and restoring broadband Internet access service to a Title I service will increase investment.”). The Commission relies on a single study, prepared by a researcher financially sponsored by stakeholders opposed to network neutrality rules. *See id.* at 25,273; 32 FCC Rcd. at 4449 n.113 (citing Hal J. Singer, *2016 Broadband Capex Survey: Tracking Investment in the Title II Era*, HAL SINGER (Mar. 1, 2016), <https://halsinger.wordpress.com/2017/03/01/2016-broadband-capex-survey-tracking-investment-in-the-title-ii-era> [<https://perma.cc/7A9R-BB8W>]).

Online and Yahoo,¹³⁶ AT&T's acquisition of DirecTV,¹³⁷ and several mergers of cable television operators.¹³⁸ Additionally, the Commission did not factor in the cyclical nature of facilities investment that, for example, triggers a spike in a new generation of wireless plant, e.g., from third generation to fourth generation technology, followed by a normal reduction in capital expenditures as the new equipment becomes operational. The FCC also ignored the fact that despite operating within a so-called public utility regulatory regime, wireless carriers have invested billions on spectrum and network facilities capable of delivering content at near-wireline speeds.¹³⁹

The Restoring Internet Freedom NPRM devoted substantial space to supporting the proposed reclassification of broadband Internet access as an information service. The Commission considered this classification more appropriate and lawful, going so far as to claim bipartisan support,

136. See Kevin Fitchard, *The Real Reason Verizon Bought AOL*, FORTUNE (June 24, 2015), <http://fortune.com/2015/06/24/verizon-gains-aol/> [https://perma.cc/K4CJ-97VN] (“Verizon recently completed its \$4.4 billion acquisition of Internet pioneer AOL. . . . The telecom giant is one of the most successful companies in the world (it currently sits at number 15 on the Fortune 500) However, growth in the mobile market is likely to slow in the coming years, with any significant revenue generated by luring consumers away from competing mobile operators or selling current customers more than one device. The days of huge quarterly subscriber connections are over, which means the company needs to find a new cash cow if it intends to keep growing.”); Arjun Kharpal, *Verizon Completes its \$4.48 Billion Acquisition of Yahoo; Marissa Mayer Leaves with \$23 Million*, CNBC (June 13, 2017, 08:00 AM), <https://www.cnbc.com/2017/06/13/verizon-completes-yahoo-acquisition-marissa-mayer-resigns.html> [https://perma.cc/N6AG-9GVW].

137. See, e.g., Thomas Gryta, *AT&T Closes \$49 Billion DirecTV Buy*, WALL ST. J. (July 24, 2015, 03:42 PM), <https://www.wsj.com/articles/at-t-closes-49-billion-directv-acquisition-1437766932?mg=prod/accounts-wsj> [https://perma.cc/C4M7-Y8K6]. The Justice Department sued to block AT&T's purported acquisition of Time Warner for approximately \$85 billion. See, e.g., Trefis Team, *AT&T's Time Warner Deal Looking Likely, Will it Be a Catalyst for the Stock?*, FORBES: GREAT SPECULATIONS (Aug. 9, 2017, 01:55 PM), <https://www.forbes.com/sites/greatspeculations/2017/08/09/atts-time-warner-deal-looking-likely-will-it-be-a-catalyst-for-the-stock/#5dd78e3a183b> [https://perma.cc/VSC9-BQCA]; Derek Thompson, *Why the Trump Administration Is Suing to Block the AT&T-Time Warner Merger*, ATLANTIC (Nov. 20, 2017), <https://www.theatlantic.com/business/archive/2017/11/trump-att-time-warner/546443/> [https://perma.cc/2LK8-C4TQ].

138. For example, Charter Communications acquired Time Warner Cable and Bright House Networks in 2016 at a cost of \$67.1 billion. See Cynthia Littleton, *What's Next Now That Charter-Time Warner Cable Merger Is Complete*, VARIETY (May 18, 2016, 06:25 AM), <http://variety.com/2016/tv/news/charter-time-warner-cable-merger-completed-1201777511/> [https://perma.cc/XV9B-4XAW].

139. The FCC implies that regulatory compliance forces carriers to incur costs that otherwise would have accrued consumer benefits. “Internet service providers have finite resources, and requiring providers to divert some of those resources to newly imposed regulatory requirements adopted under Title II will, unsurprisingly, reduce expenditures that benefit consumers.” Restoring Internet Freedom NPRM, 82 Fed. Reg. at 25,574; 32 FCC Rcd. at 4449.

despite the fact that the previous Democratic majority favored common carrier requirements.

We believe the Commission under Democratic and Republican leadership alike was correct in these decisions to classify broadband Internet access service as an information service and that, 20 years after the passage of the Telecommunications Act, we should be reluctant to second-guess the interpretations of those more likely to understand the contemporary meaning of the terms of the Telecommunications Act.¹⁴⁰

The Commission identified ample precedent where reviewing courts defer to its technical expertise and statutory interpretation, particularly where the underlying law lacks clarity.¹⁴¹

Ironically, reversion to the information services classification will result in two outcomes that can have directly harmful impact on consumers and carriers. First, reliance on Title I authority does not in and of itself reduce the regulatory uncertainty which the FCC and stakeholders abhor¹⁴² because of the potential disincentives for investment, innovation, and employment it creates. The FCC signals that its reliance on Title I will promote deregulation, if not un-regulation, but ample case precedent

140. *Id.* at 25,573; 32 FCC Rcd. at 4447.

141. *See id.* at 25,574–75; 32 FCC Rcd. at 4452–53 (“An agency also is free to change its approach to interpreting and implementing a statute so long as it acknowledges that it is doing so and justifies the new approach. Evaluating the change in regulatory approach in the *Title II Order*, the D.C. Circuit majority in *US Telecom* applied a ‘highly deferential standard’ to the agency’s predictive judgments regarding the investment effects of reclassification, [citing] and deferr[ing] to the Commission’s ‘evaluat[ion of] complex market conditions’ underlying its rejection of providers’ reliance interests in the prior classification.” (citing *FCC v. Fox Television Stations, Inc.*, 556 U.S. 502, 515–16 (2009); *U.S. Telecom Ass’n v. FCC*, 825 F.3d 674, 707, 710 (D.C. Cir. 2016); *Mary V. Harris Found. v. FCC*, 776 F.3d 21, 24–25 (D.C. Cir. 2015))); *id.* at 25,574; 32 FCC Rcd. at 4452 (“The Commission has authority, as the Supreme Court recognized in *Brand X*, to interpret the Communications Act, including ambiguous definitional provisions.” (citing *Nat’l Cable & Telecomms. Ass’n v. Brand X Internet Servs.*, 545 U.S. 967 (2005))).

142. The Commission considers Title II regulation as causing substantial regulatory uncertainty despite the greater specificity this Title provides as compared to Title I. “In addition to imposing significant regulatory costs on Internet service providers, Title II reclassification created significant regulatory uncertainty. *US Telecom* specifically identified ‘regulatory uncertainty’ as one of the causes of reduced investment.” *Id.* at 25,574; 32 FCC Rcd. at 4451. Title I provides an ambiguous sphere of regulatory authority which the FCC overstepped when it imposed common carrier responsibilities on broadband service providers that were then classified as information service providers. *See Verizon v. FCC*, 740 F.3d 623, 659 (D.C. Cir. 2014) (overturning 2010 Open Internet Order, 25 FCC Rcd. 17905 (2010)); *Comcast Corp. v. FCC*, 600 F.3d 642, 644 (D.C. Cir. 2010) (FCC deemed to have exceeded its statutory authority when responding to a complaint and imposing network neutrality rules).

shows that reviewing courts may not trust regulatory agencies¹⁴³ to maintain consistency.¹⁴⁴ The FCC clearly seeks to remove regulatory oversight, but it also retains Title I, so-called ancillary jurisdiction to intervene as circumstances warrant, e.g., when a carrier deviates from any of the 2005 Open Internet principles.¹⁴⁵

Second, reversion to Title I oversight resurrects the view that the FCC can compartmentalize Internet technologies into an airtight, mutually-exclusive dichotomy of telecommunications services and information services¹⁴⁶ despite market and technological convergence. For example, the FCC already has had to address the fact that wireless devices combine basic, regulated telecommunications services, such as voice telephony and texting, with unregulated or differently-regulated content and information services. Even during a time when the Commission considered broadband access as constituting an information service, it imposed common-

143. In his dissenting opinion in a case where the majority deferred to the FCC's expertise to determine which regulatory classification to apply, Justice Scalia warned that regulatory agencies can and will abuse such discretion:

In other words, what the Commission hath given, the Commission may well take away—unless it doesn't. This is a wonderful illustration of how an experienced agency can (with some assistance from credulous courts) turn statutory constraints into bureaucratic discretions. The main source of the Commission's regulatory authority over common carriers is Title II, but the Commission has rendered that inapplicable in this instance by concluding that the definition of "telecommunications service" is ambiguous and does not (in its current view) apply to cable-modem service. It contemplates, however, altering that (unnecessary) outcome, not by changing the law (i.e., its construction of the Title II definitions), but by reserving the right to change the facts. Under its undefined and sparingly used "ancillary" powers, the Commission might conclude that it can order cable companies to "unbundle" the telecommunications component of cable-modem service. And presto, Title II will then apply to them, because they will finally be "offering" telecommunications service! . . . Such Möbius-strip reasoning mocks the principle that the statute constrains the agency in any meaningful way.

Brand X, 545 U.S. at 1013–14 (Scalia, J., dissenting).

144. For example, a reviewing court twice rejected a Democratic majority FCC from imposing consumer safeguards based on a general conferral of jurisdiction over wire and radio contained in Title I of the Communications Act of 1934, as amended. See *Verizon*, 740 F.3d at 659; *Comcast Corp.*, 600 F.3d at 644 (FCC deemed to have exceeded its statutory authority when responding to a complaint and imposing network neutrality rules) .

145. For a further discussion of the FCC's Title I jurisdiction, see *supra* note 130.

146. See *Restoring Internet Freedom NPRM*, 82 Fed. Reg. at 25,573; 32 FCC Rcd. at 4447 ("The Commission has previously concluded that Congress formally codified information services and telecommunications services as two, mutually exclusive types of service in the Telecommunications Act. The Title II Order did not appear to disagree with this analysis, finding that broadband Internet access service was a telecommunications service and not an information service. We believe this conclusion regarding mutual exclusivity is correct based on the text and history of the Act."); *id.* at 25,576; 32 FCC Rcd. at 4455 ("We also believe that mobile broadband Internet access service is not the 'functional equivalent' of commercial mobile service.").

carrier-type affirmative duties to deal and interconnect on wireless carriers so that consumers can access Internet services when “roaming” outside their home service territories.¹⁴⁷

The FCC also proposed to eliminate the application of a catch-all standard used in the 2015 Open Internet Order that prohibited “current or future practices that cause the type of harms [the Commission’s] rules are intended to address.”¹⁴⁸ This standard allows the Commission to prohibit practices that it determines unreasonably interfere with or unreasonably disadvantage the ability of consumers to reach the Internet content, services, and applications of their choosing, or the ability of online content, applications, and service providers to access consumers. It also enables the FCC to prohibit any ISP practice that it believes violates any one of the non-exhaustive list of factors adopted in the 2015 Open Internet Order.

The Commission believed that eliminating a standard of conduct will provide greater clarity to stakeholders, because the current rules are “premiered on theoretical problems that will be adjudicated on an individual, case-by-case basis, [so that] Internet service providers must guess at what they are permitted and not permitted to do.”¹⁴⁹ The Commission cited zero rating as an example where the FCC, under a Democratic majority, investigated the lawfulness of subsidized data access, while the new Republican majority quickly shut down the investigation.¹⁵⁰ Arguably, any actual regulatory uncertainty resulted from different interpretations of the conduct standard based on political party affiliation, rather than the conduct standard itself. Removing the standard provides no guidance at all, unless the Commission has signaled that it cannot anticipate a problem with any carrier offer to exempt specific types of traffic from debiting a monthly data allowance.

The 2017 Restoring Internet Freedom NPRM also sought comments on whether the FCC should eliminate three carrier conduct prohibitions contained in the 2015 Open Internet Order: blocking, throttling, and paid prioritization. The Commission strongly hinted that it considers these ex

147. Reexamination of Roaming Obligations of Commercial Mobile Radio Service Providers and Other Providers of Mobile-data Services, 26 FCC Rcd. 5411, 5411–12 (2011) (second report and order), *aff’d sub. nom.*, *Cellco P’ship v. FCC*, 700 F.3d 534 (D.C. Cir. 2012).

148. *See* 2015 Open Internet Order, 30 FCC Rcd. 5601, 5659, *affirmed sub nom.*, *U.S. Telecom Ass’n v. FCC*, 825 F.3d 674 (D.C. Cir. 2016), *abrogated by* Restoring Internet Freedom, No. 17-108, 2018 WL 305638 (F.C.C.) (2018).

149. *See* Restoring Internet Freedom NPRM, 82 Fed. Reg. at 25,577; 32 FCC Rcd. at 4459.

150. *See* Wireless Telecommunications Bureau Report: Policy Review of Mobile Broadband Operators’ Sponsored Data Offerings for Zero Rated Content and Services, 32 FCC Rcd. 1093, 1093 (Feb. 3, 2017) (order) (setting aside and rescinding a previously issued Policy Review Report and any and all guidance, determinations, and conclusions contained therein, including the document’s draft framework); *see also* 2017 Wireless Telecommunication Bureau Zero Rating Report, *supra* note 110, at 1.

ante safeguards both unnecessary and imposed without evidence that consumers have suffered, or would suffer, harm if the prohibitions did not exist.¹⁵¹

The Commission also sought comments on whether section 706 of the Telecommunications Act provides it with direct statutory authority to impose regulatory safeguards or simply requires the FCC to assess the competitiveness and accessibility of the broadband marketplace and report findings to Congress. This portion of the NPRM may appear insignificant and narrow, but the Commission clearly signaled its view that section 706 provides no statutory authority to impose regulatory safeguards under any circumstances.¹⁵² Even if the current FCC Commissioners retained the option of regulatory intervention, an already expressed view that the wired and wireless broadband marketplace operates competitively¹⁵³ strongly implies that a majority Republican FCC would never seek to impose regulatory safeguards based on section 706 authority.

For good measure, the Restoring Internet Freedom NPRM also sought comments as to whether any regulatory burden on broadband access providers would violate their First Amendment expression rights, a matter summarily dismissed by the D.C. Court of Appeals majority but raised in a dissent.¹⁵⁴ Lastly, the FCC expressed a keen interest in applying a disciplined and substantive cost-benefit analysis assessing the financial impacts of its action.¹⁵⁵ While laudable, the FCC's NPRM provided several instances where the Commission reached broad sweeping conclusions without the empirical evidence and analysis it now regularly seeks to conduct.

151. See Restoring Internet Freedom NPRM, 82 Fed. Reg. at 25,578; 32 FCC Rcd. at 4460 (“In the *Title II Order*, despite virtually no quantifiable evidence of consumer harm, the Commission nevertheless determined that it needed bright line rules banning three specific practices by providers of both fixed and mobile broadband Internet access service: Blocking, throttling, and paid prioritization. The Commission also ‘enhanced’ the transparency rule by adopting additional disclosure requirements. Today, we revisit these determinations and seek comment on whether we should keep, modify, or eliminate the bright line and transparency rules.”).

152. See *id.* at 25,580; 32 FCC Rcd. at 4466 (“We seek comment on whether section 706(a) and (b) of the 1996 Act are best interpreted as hortatory rather than as delegations of regulatory authority. Such an interpretation generally is reflected in the Commission’s approach to section 706 prior to 2010.”).

153. See Annual Report and Analysis of Competitive Market Conditions with Respect to Mobile Wireless, Including Commercial Mobile Services, FCC 17-126, 2017 WL 4348640, at *34 (F.C.C.) (2017), http://transition.fcc.gov/Daily_Releases/Daily_Business/2017/db0927/FCC-17-126A1.pdf [<https://perma.cc/YWE2-2SJ9>] (“Focusing only on competition in the provision of mobile wireless services, rather than attempting to examine the broader mobile wireless ecosystem, our assessment of various generally accepted metrics of competition in this *Twentieth Report* indicates that there is effective competition in the marketplace for mobile wireless services.”).

154. See Restoring Internet Freedom NPRM, at 82 Fed. Reg. at 25,581; 32 FCC Rcd. at 4468–69.

155. See *id.*; 32 FCC Rcd. at 4468–70.

d. Restoring Internet Freedom Order

On a 3-2 party line vote, the FCC again shifted its Internet regulatory posture, this time eliminating rules and regulations that anticipate the need to establish rules and regulations to remedy practices that harm consumers and competition.¹⁵⁶ The Republican majority voted a complete reversal of what it considered heavy-handed and unnecessary marketplace meddling that the Democratic majority had created in 2015.¹⁵⁷ Relying largely on conjecture and research sponsored by stakeholders, the current FCC deemed its reversal as necessary to remedy the marketplace intrusions of the 2015 Open Internet Order¹⁵⁸ that have harmed competition, broadband infrastructure investment, and innovation.¹⁵⁹

The Restoring Internet Freedom document has three parts: a declaratory ruling, report and order, and order. In the declaratory ruling portion, the FCC reclassified broadband Internet access service as an “information service” not lawfully subject to Title II, common carrier regulation.¹⁶⁰ Before its 2015 Open Internet Order, the FCC treated broad-

156. See Restoring Internet Freedom, WC Docket No. 17-108, 2018 WL 305638 (F.C.C.) (2018) [hereinafter Restoring Internet Freedom Order].

157. See *id.* at *1 (“We reverse the Commission’s abrupt shift two years ago to heavy-handed utility-style regulation of broadband Internet access service and return to the light-touch framework under which a free and open Internet underwent rapid and unprecedented growth for almost two decades. We eliminate burdensome regulation that stifles innovation and deters investment, and empower Americans to choose the broadband Internet access service that best fits their needs.”).

158. See 2015 Open Internet Order, 30 FCC Rcd. 5601, *affirmed sub nom.*, U.S. Telecom Ass’n v. FCC, 825 F.3d 674 (D.C. Cir. 2016), *abrogated by* Restoring Internet Freedom, No. 17-108, 2018 WL 305638 (F.C.C.) (2018).

159. See Restoring Internet Freedom Order, at *35 (“The Commission has long recognized that regulatory burdens and uncertainty, such as those inherent in Title II, can deter investment by regulated entities The balance of the evidence in the record suggests that Title II classification has reduced ISP investment in broadband networks as well as hampered innovation because of regulatory uncertainty.”). Ironically, when asserting that wireless broadband constitutes a full, competitive alternative to wireline option, the Restoring Internet Freedom Order emphasizes the near term availability of fifth generation wireless service that required substantial sunk investment by carriers subject to network neutrality obligations: “With the advent of 5G technologies promising sharply increased mobile speeds in the near future, the pressure mobile exerts in the broadband market place will become even more significant.” Restoring Internet Freedom Order, at *49.

160. See *id.* at *2 (“[W]e end utility-style regulation of the Internet in favor of the market-based policies necessary to preserve the future of Internet freedom. In the 2015 *Title II Order*, the Commission abandoned almost twenty years of precedent and reclassified broadband Internet access service as a telecommunications service subject to myriad regulatory obligations under Title II of the Communications Act of 1934, as amended (the Act). We reverse this misguided and legally flawed approach and restore broadband Internet access service to its Title I information service classification. We find that reclassification as an information service best comports with the text and structure of the Act, Commission precedent, and our policy objectives. We thus return to the approach to broadband Internet access service affirmed as reasonable by the U.S. Supreme Court.”).

band access as an information service and the Supreme Court deferred to the Commission's regulatory judgment in the *Brand X*¹⁶¹ case. However, the FCC attempted to use its ancillary jurisdiction under Title I of the Communications Act to justify regulatory safeguards twice considered as unlawful common-carrier-type duties by reviewing courts.¹⁶²

The Restoring Internet Freedom Order reclassified wireless broadband Internet access service as a private mobile service¹⁶³ in an attempt to eliminate the common carrier responsibilities created by Congress for so-called Commercial Mobile Radio Service.¹⁶⁴ The Order also removes the FCC from using its telecommunications-specific expertise to guard against possible antitrust, consumer protection, and privacy violations. Instead, the Federal Trade Commission will add this responsibility¹⁶⁵ to its broad oversight wingspan.¹⁶⁶

The report and order portion created a transparency requirement for broadband carriers to disclose information about their practices to consumers, entrepreneurs, and the Commission, including any blocking, throttling, paid prioritization, or affiliated prioritization.¹⁶⁷ The FCC con-

161. 545 U.S. 967 (2005).

162. See 2010 Open Internet Order, 25 FCC Rcd. 17905 (2010), *aff'd in part, vacated and remanded in part sub nom.*, Verizon v. FCC, 740 F.3d 623 (D.C. Cir. 2014); Formal Complaint of Free Press and Public Knowledge Against Comcast Corp. for Secretly Degrading Peer-to-Peer Applications, Memorandum Opinion and Order, FCC Rcd. 13028 (2008), *vacated sub nom.*, Comcast Corp. v. FCC, 600 F.3d 642, 659 (D.C. Cir. 2010) (FCC deemed to have exceeded its statutory authority when responding to a complaint and imposing network neutrality rules).

163. See Restoring Internet Freedom Order, at *2 (“We also reinstate the private mobile service classification of mobile broadband Internet access service and return to the Commission’s definition of ‘interconnected service’ that existed prior to 2015. We determine that this light-touch information service framework will promote investment and innovation better than applying costly and restrictive laws of a bygone era to broadband Internet access service.”).

164. See 47 U.S.C. § 332(c)(1) (2012).

165. See Restoring Internet Freedom Order, at *2 (“Our balanced approach also restores the authority of the nation’s most experienced cop on the privacy beat—the Federal Trade Commission—to police the privacy practices of Internet Service Providers (ISPs).”).

166. In *FTC v. AT&T Mobility LLC*, the Ninth Circuit Court of Appeals ruled that the FTC lacked jurisdiction over any venture that provided both services lawfully within its jurisdiction and those outside its jurisdiction, such as common carrier telecommunications services. 835 F.3d 993 (9th Cir. 2016), *rev'd*, 883 F.3d 849 (9th Cir. 2018) (en banc).

167. See Restoring Internet Freedom Order, at *2 (“Next, we require ISPs to be transparent. Disclosure of network management practices, performance, and commercial terms of service is important for Internet freedom because it helps consumers choose what works best for them and enables entrepreneurs and other small businesses to get technical information needed to innovate. Individual consumers, not the government, decide what Internet access service best meets their individualized needs. We return to the transparency rule the Commission adopted in 2010 with certain limited modifications to promote additional transparency, and we eliminate certain reporting requirements adopted in the *Title II Order* that we find to be unnecessary and unduly burdensome.”).

siders disclosure sufficient instead of an absolute prohibition of the practices mentioned above. The Commission considers the “bright line” rules created in the 2015 Open Internet Order as too expensive and constraining. Additionally, the Commission eliminated the Internet Conduct Standard on grounds that it was vague and could prevent innovative ISP business models and interfere with their commercial relationship both downstream to retail broadband consumers and upstream to other ISPs, Content Distribution Networks, such as Akamai, and content creators.¹⁶⁸

The order portion unilaterally shuts down any additional fact finding and public comment filing opportunities, finding that that the public interest would not be served by adding to the already voluminous record in this proceeding.¹⁶⁹

VI. A REALISTIC ASSESSMENT OF PLATFORM COSTS AND BENEFITS

Consumers and governments may not fully understand the tradeoffs when digital broadband intermediaries dominate many market segments including first and last mile content carriage, smartphone and computer operating systems, and a variety of content and applications market segments including Internet search, social networking, and Internet-mediated retail commerce. One can readily appreciate the upside consumer benefits in having access to advertiser-supported content and Internet markets subsidized by ventures willing to forego short-term profits for longer term market share and diversification (shelf-space). A more difficult undertaking calculates what direct and indirect costs consumers incur, presently and in the future, for the opportunity to participate in winner take all two-sided markets.

Prevailing economic doctrine, widely embraced by government legislators, judges, and regulators, favors an inclination not to intervene in the marketplace when identifiable, near-term cost savings and other welfare enhancements flow to consumers. However, it has become increasingly clear that consumers have to contribute more value than what they might infer from widespread promotion of “free” and subsidized access. Last mile carriers, app store vendors, and many dominant firms in the Internet

168. *See id.* at *86 (“We eliminate the conduct rules adopted in the *Title II Order*—including the general conduct rule and the prohibitions on paid prioritization, blocking, and throttling. We do so for three reasons. First, the transparency rule we adopt, in combination with the state of broadband Internet access service competition and the antitrust and consumer protection laws, obviates the need for conduct rules by achieving comparable benefits at lower cost. Second, scrutinizing closely each prior conduct rule, we find that the costs of each rule outweigh its benefits. Third, the record does not identify any legal authority to adopt conduct rules for all ISPs, and we decline to distort the market with a patchwork of non-uniform, limited-purpose rules.”).

169. *See id.* at *119 (“We are convinced that we have a full and complete record on which to base our determination today without incorporating . . . [additional] materials.”).

ecosystem have mastered the ability to acquire, market, and sell subscriber data that constitutes the value exchanged by subscribers for access.

In the short run, the value proposition from participating in two-sided markets may decline as consumers begin to understand the monetary value of the network usage data they generate and consent to having platform operators convert into revenue from advertisers and through dynamic pricing. In the longer term, the commodification of consumer data may accrue the highest strategic and financial advantages for ventures that already have successfully exploited positive network externalities and have acquired large market shares. Whether this advantage stifles innovation and competition depends on the ability of consumers to change their subscriptions and actually do so.

In the Internet ecosystem, lock-in can occur when consumers lack complete information about what they have to pay and what they lose in exchange for the opportunity to become a subscriber.¹⁷⁰ In addition to the transaction costs incurred in looking for an alternative and subscribing to it, prospective churning consumers have to identify a greater welfare enhancement, lower costs, or both. Possibly, few consumers have the disposition and wherewithal to undertake regular cost-benefit analyses as well as a determination whether to stick with the status quo or seek better terms and conditions.

Simply put, digital broadband consumers may likely suffer more significant, but not readily quantifiable harms, as digital broadband intermediaries find new and more precise ways to maximize revenues from both upstream and downstream sources. Broadband carriers and other platform operators will attempt to create ever more diverse and profitable revenue streams by mining, marketing, and selling downstream subscriber usage data. Additionally, such intermediaries will continue to impose commissions, surcharges, and other fees on upstream content and applications vendors.

Government agencies with jurisdiction to monitor such actions appear ill-equipped to provide effective oversight, based on their fealty to now questionable economic and antitrust theory, their inability or unwillingness to consider costs and benefits on both sides of the two-sided market, and their emphasis on short-term consumer benefits that may not seem as generous as initially estimated. The FCC disserves the public interest given its predilection to find false positive problems ostensibly remedied with ex ante safeguards when Democrats have a majority and false negatives when a Republican majority removes consumer safeguards and fails to establish ex post remedies, despite the likelihood that disputes and conflicts will arise.

170. See, e.g., Evans, *supra* note 11, at 363 (defining “lock-in effects” as “where consumers may be reluctant to switch to a new network and lose the benefits of network externalities unless others also switch”).

Additionally, the multiple-decade emphasis on network neutrality has distracted the FCC and the other agencies having partial jurisdiction.¹⁷¹ The fixation with last mile downstream parity of access largely ignores what platform intermediaries can do behind the scenes with data mining techniques that extract marketable and valuable information about subscriber behavior. Narrowing the focus to the potential for unlawful quality of service discrimination of downstream content carriage leaves the FCC with little time, energy, and inclination to consider what kinds of harms can result from the collection of data about what content subscribers access and how intermediaries can use this data to erect even higher barriers to market entry and competition.

A. *The Way Forward*

Regulatory agencies with jurisdiction to safeguard consumers and reviewing courts should better calibrate the tools they use to investigate the potentially harmful effects of platform intermediaries on competition and consumers, with emphasis on the potential for privacy intrusions, unfair trade practices, market concentration, and anticompetitive tactics. The goals for recalibration should focus on acquiring a better understanding of platform operator practices and their impacts, rather than serve as a justification for more intrusive government oversight. Such a holistic approach can better assess the costs and benefits generated by platform intermediaries.

1. *Assess Impacts on Both Sides of a Platform*

To achieve greater clarity on the potential for beneficial and harmful impact, courts and government agencies should examine platform operations on both upstream and downstream market sides. Using a cost-benefit analysis, they may determine that harmful impacts on one side are offset by benefits on the other side. In other instances, they may identify greater harms or benefits when examining both sides.

A complete assessment of market impacts on both sides of a platform promotes a thorough and fair assessment without favoring intervention or forbearance. For example, in *United States v. American Express Co.*,¹⁷² the

171. See Cohen, *Platform Economy*, *supra* note 3, at 188. (“[T]he current regulatory structure does not permit any regulator to consider the full group of actors whose activities determine the neutrality or nonneutrality of access to networked digital communications capabilities. . . . Platforms and their government relations firms have exploited the apparent unfairness; for example, Google has adopted the posture of a supplicant seeking nondiscriminatory access to connection points for its Google Fiber initiative, even though it and other dominant platform firms ‘already benefit from what are essentially internet fast lanes, and this has been the case for years.’” (quoting Robert McMillan, *What Everyone Gets Wrong in the Debate over Net Neutrality*, WIRED (June 23, 2014), https://www.wired.com/2014/06/net_neutrality_missing [<https://perma.cc/8YW9-YEBV>])).

172. 838 F.3d 179 (2d Cir. 2016), *cert. granted sub. nom.*, *Ohio v. Am. Express Co.*, 138 S. Ct. 355 (2017).

Second Circuit Court of Appeals considered both sides of the credit card platform and reversed a lower court's decision that could have harmed consumers in the long run even as it appeared to benefit them in the short term. *American Express* examined market impacts on both sides of the credit card platform marketplace with an eye toward assessing the complete financial impact of a credit card company's rules precluding vendors that accept multiple types of credit cards from encouraging consumers to use one that would impose lower fees on vendors. The court rejected the lower court's singular focus on upstream vendors, because so-called anti-steering rules can have a direct impact on both upstream vendors and downstream consumers as well as impact the relationships and interactions¹⁷³ between both market segments and the issuers of credit cards.

The interdependency that causes price changes on one side can result in demand changes on the other side. If a merchant finds that a network's fees to accept a particular card exceed the benefit that the merchant gains by accepting that card, then the merchant likely will choose not to accept the card. On the other side, if a cardholder finds that too few merchants accept a particular card, then the cardholder likely will not want to use that card in the first place. Accordingly, in order to succeed, a credit-card network must "find an effective method for balancing the prices on the two sides of the market."¹⁷⁴

The court undertook a comparison of costs and benefits affecting both vendors and credit card users. While anti-steering rules mandated by credit card issuers can constitute an illegal vertical restraint on trade by reducing competition among credit card companies, the court considered the potential for offsetting, positive financial impact on credit card users through lower costs and more financial incentives to use a specific card.¹⁷⁵

A thorough examination of impacts to both upstream vendors accepting credit cards and downstream consumers using them motivated the Second Circuit Court of Appeals to reverse the lower court's decision find-

173. *See id.* at 185–86 (“The functions provided by the credit-card industry are highly interdependent and, at the cardholder/merchant-acceptance level, result in what has been called a ‘two-sided market.’ The cardholder and the merchant both depend upon widespread acceptance of a card. That is, cardholders benefit from holding a card only if that card is accepted by a wide range of merchants, and merchants benefit from accepting a card only if a sufficient number of cardholders use it.”).

174. *Id.* at 186 (quoting Jean–Charles Rochet & Jean Tirole, *An Economic Analysis of the Determination of Interchange Fees in Payment Card Systems*, 2 *REV. NETWORK ECON.* 69, 72 (2003)).

175. *See id.* at 202 (“In order to remain competitive on the cardholder side of the platform, a payment-card network might need to increase cardholder rewards—or, in other words, cut prices to cardholders. This, in turn, might diminish the network's profitability from the hypothetical price increase. If the network chose in that situation not to increase cardholder rewards, then merchant attrition likely would continue increasing as a result of the reduction in cardholders. Over time, the reduction in transactions could make the hypothetical price increase unprofitable.”).

ing anticompetitive harm only to vendors. The appellate court identified offsetting benefits to consumers even when credit card company rules impose higher costs and limit ways for vendors to steer consumers to cards with lower vendor fees.¹⁷⁶

The Second Circuit opted to examine both sides of the credit card market, because variance in costs incurred by both vendors and credit card users can impact both sides of the platform operated by a credit card issuer. In light of the interdependency of product and service vendors and consumers using credit cards, the court identified two joint market effects not considered by the lower court: (1) impact of anti-steering rules on the level of card issuer market competition and (2) the impact of credit card issuer anti-steering rules on their incentives to offer usage inducements to consumers.¹⁷⁷ While the credit card marketplace is concentrated with only four companies and evidences substantial barriers to market entry, the court noted the ease with which consumers can shift card allegiance based on many factors including the costs incurred by using a specific card as well as the financial inducements offered by credit card issuers to encourage subscriber loyalty.¹⁷⁸

The *American Express* case emphasizes the need for courts, and by extension regulatory agencies, to consider the relationship between upstream and downstream market participants in terms of their impact on each other—i.e., interdependency—and in terms of their relationship with the platform intermediary. In the credit card ecosystem, the availability of alternative credit cards and the ease with which consumers can change allegiances evidence a competitive credit card platform marketplace with significant consumer sensitivity to comparative costs and benefits accruing from the use of specific cards.

The digital broadband ecosystem may not have the same competitive alternatives. Similarly, high barriers to market entry, combined with all-or-nothing scale opportunities from positive networking externalities, promote highly concentrated market segments. For example, the wireless marketplace in the United States also has four major, national carriers¹⁷⁹

176. *See id.*

177. *See id.* at 204–05.

178. *See id.* at 189–90, 205 (“Both merchants and cardholders engage in ‘multihoming,’ meaning that both cardholders and merchants may choose to use or accept several different cards. Multihoming tends to lower prices by functioning essentially as an availability of substitutes. . . . A cardholder often has more choices of payment method than a merchant has the ability to accept, and thus the cardholder may simply opt not to own cards that charge membership fees or offer relatively few cardholder benefits. Largely due to multihoming, not all merchants or all cardholders use all payment-card networks.”); *id.* at 203 (“A firm that can attract customer loyalty only by *reducing* its prices does not have the power to *increase* prices unilaterally.”).

179. The market research firm Strategy Analytics reports that in the first quarter of 2017, Verizon had 146.013 million subscribers and generated \$15.778 billion in annual revenue. AT&T had 134.218 million subscribers and generated \$14.538 billion in annual revenue. TMobile had 72.597 million subscribers and generated

and the wired broadband market is similarly concentrated.¹⁸⁰ Unlike the credit card marketplace, broadband access consumers cannot easily migrate from one carrier to another in light of service contracts imposing financial penalties for early termination, the option to spread out the cost of smartphones over a long service period, and technical incompatibility between handsets.

Credit card consumers can apply for another card online in a matter of minutes, while broadband consumers incur far greater transaction costs and inconvenience in changing carriers. Significant lock-in also occurs when consumers opt to use a wireless handset manufactured by Apple and one using the Google Android operating system. Similarly, the bandwagon effect creates major disincentives for individuals to refrain from abandoning the market leader for another option having fewer subscribers.

By examining both sides of a digital broadband platform market, courts and regulatory agencies can enhance the accuracy of their assessment of competition and whether consumers benefit or suffer from intermediaries having significant market share. In turn, they can better calibrate a remedy or reach an empirically supported conclusion that no market intervention is necessary.

2. Consider Whether and How Lock-In Exists

Courts and regulatory agencies should consider the product and service options available to digital broadband subscribers. In some instances, they have ample choices which prevent lock-in and evidence a competitive

\$7.329 billion in annual revenue. Sprint had 58.741 million subscribers and generated \$5.560 billion in annual revenue. The fifth largest carrier U.S. Cellular had 4.996 million subscribers and generated \$746 million in annual revenue. See Mike Dano, *How Verizon, AT&T, T-Mobile, Sprint and More Stacked Up in Q1 2017: The Top 7 Carriers*, FIERCEWIRELESS (May 8, 2017, 03:41 PM), <http://www.fiercewireless.com/wireless/how-verizon-at-t-t-mobile-sprint-and-more-stacked-up-q1-2017-top-7-carriers> [https://perma.cc/P39B-4M8J].

180. The top cable television broadband network providers, as of the fourth quarter in 2016: Comcast with 24.701 million subscribers, Charter with 22.593 million subscribers, and Altice USA with 4.167 million subscribers. See Daniel Frankel, *The Top 6 Cable, Satellite and Telco Pay-TV Operators in Q4: Ranking Comcast, Charter and More*, FIERCECABLE (Mar. 15, 2017), <http://www.fiercecable.com/cable/top-6-cable-satellite-and-telco-pay-tv-operators-q4-ranking-comcast-charter-and-more> [https://perma.cc/AGF7-AQBL]. As of the third quarter in 2016, AT&T had 14.2 million broadband subscribers and generated \$40.9 billion in total annual revenue. Verizon had 7.04 million broadband subscribers and generated \$30.9 billion in total annual revenue. CenturyLink had 5.95 million broadband subscribers and generated \$3.92 billion in total annual revenue. Frontier had 4.4 million broadband subscribers and generated \$2.52 billion in total annual revenue. See Sean Buckley, *The Top 12 Wireline Providers in Q3 2016: AT&T and Verizon See Broadband Gains, but Cable Retains the Upper Hand*, FIERCETELECOM (Nov. 21, 2016, 11:45 AM), <http://www.fiercetelecom.com/telecom/top-12-wireline-providers-q3-2016-at-t-and-verizon-see-broadband-gains-but-cable-retains> [https://perma.cc/GH63-6HG2].

marketplace.¹⁸¹ However, in other instances lock-in occurs, because consumers have few alternatives, or they incur costs, inconvenience, or reduced benefits if they leave the dominant platform.

Lock-in can occur even when alternative options exist. For example, an electronic commerce site, like eBay, may steer subscribers to its formerly-affiliated electronic funds transfer platform operated by PayPal, even though alternative payment systems exist and can be used. Consumers have incentives to use PayPal, because the eBay site appears to favor and expedite such transactions and most vendors prefer to receive payment via PayPal. The preference for PayPal and the greater ease consumers have in using the preferred payment system generate substantial motivations to take the promoted and preferred path of least resistance.

Courts and regulatory agencies have to consider the potential for lock-in beyond simply assessing whether a specific market segment has multiple platform operators. The existence of alternatives, by itself, does not evidence ample multi-homing options. In the absence of service alternatives, courts, and regulators should consider downstream consumers' quality of experience to ensure that the apparent preference for a single platform option promotes convenience and enhances consumer welfare.

3. *Assess Market Impacts, Rather than Simply Calculate Market Share*

As noted, courts and regulators generally refrain from reaching conclusions about market competitiveness based solely on calculations showing a concentrated market or one dominated by a single venture. Large firms having high market share may evidence a firm's superior business acumen or the need for ventures to accrue economies of scale to thrive in a specific market segment.

On the other hand, market dominance may have significant and potentially adverse impacts on consumers and the potential for competition. Significant harm may arise not just because a firm has a dominant market share, but because it can leverage dominance in one market to dominate other market segments. For example, Google dominates the market for Internet search and advertising, despite ample multi-homing alternatives.¹⁸² Regulatory and antitrust intervention is not warranted simply because Google has acquired substantial market share in Internet search. However, the company's success in dominating the search market also

181. See, e.g., Evans, *supra* note 11, at 363.

182. Google has an estimated 79.88% share of the Internet search market in the United States as of the third quarter 2016. See Matt Southern, *Latest Search Market Share Numbers: Google Search Up Across All Devices*, SEARCH ENGINE J. (Aug. 31, 2016), <https://www.searchenginejournal.com/august-2016-search-market-share/172078/> [<https://perma.cc/MP64-CS97>]. "Last year, Google held 75.8 percent of the search ad market, bringing in \$24.6 billion in revenue from search ads. That's expected to grow to \$36.62 billion in revenue, or 80.2 percent of the market, in 2019." Tess Townsend, *Google's Share of the Search Ad Market Is Expected to Grow*, RECODE (Mar. 14, 2017, 09:05 AM), <https://www.recode.net/2017/3/14/14890122/google-search-ad-market-share-growth> [<https://perma.cc/N3GZ-Y6PW>].

translates into substantial market share in the auctioning of advertising opportunities to search consumers.¹⁸³

Courts and regulators may need to consider the inter-relationship between a venture's successes in two or more markets, because dominance in combined or interdependent markets may trigger new or greater risks for consumers. Just as platform intermediary operation affects both downstream and upstream users, so too can market success in one market generate unrivaled opportunities to extend market power elsewhere. Such leverage may have adverse impacts on the potential for new competition, even from innovative ventures. While the FCC has concentrated on foreclosing the potential for anticompetitive practices of ISPs operating biased, non-neutral networks, perhaps even greater harm can arise in the accrual of market power by combining dominance in two or more intermediary markets, e.g., Google's dominance in Internet search and advertising.¹⁸⁴

VII. CONCLUSION

Digital broadband technologies and markets have reached a critical mass of market penetration and efficiency enhancements highlighted by embedded platforms. The Internet ecosystem has many markets predominated by single ventures that have acquired dominance in winner take all competition that rewards ventures best able to exploit positive network externalities. Intermediaries have conferred significant, identifiable benefits to consumers, who also incur offsetting costs, not all of which can be easily quantified or measured.

Intermediary platform operators can calibrate cost recovery from both upstream and downstream users. In many instances, downstream consumers have benefitted from subsidies and pricing strategies that reduce or eliminate direct out-of-pocket costs. However, subsidy payers, such as advertisers, eventually recoup their costs through higher charges for goods and services. In light of enhancements in the acquisition, analysis, and marketing of consumer behavior data, both vendors and platform intermediaries now have more diversified and extensive ways to recoup costs and to improve prospects for generating more revenues. Such data mining can impose new costs on consumers who have to tolerate more extensive privacy intrusions in exchange for access to so-called free ser-

183. See Nathan Newman, *Search, Antitrust, and the Economics of the Control of User Data*, 31 YALE J. REG. 401, 411 (2014) ("Google's monopoly of the online search advertising market causes clear harm to consumers. The most apparent harm is reduced competition in the online advertising market, where the higher prices charged to advertisers inevitably gets passed onto consumers in the form of higher prices for the advertised goods and services they buy. But a deeper harm is the stunted 'market' for user data itself, where lack of vigorous competition means that users too readily share that data at too low a price—usually for free—in exchange for software services that cost Google far less than the value of the user data it collects.").

184. See, e.g., Filistrucchi et al., *supra* note 11, at 308 fig.6.

vices. Enhanced consumer surveillance can impose lower or higher costs, as exemplified by dynamic pricing that frequently changes rates through algorithmic analysis of overall supply and demand, as well as a prediction of a prospective customer's intensity of preference for a particular good or service.

In light of the mixed impacts of embedded intermediaries on competition and consumers, legislatures, courts, and regulators should apply up-to-date tools for assessing current and prospective impacts. Unfortunately, the speed of innovation and the convergence of technologies and markets have exceeded the ability of governments to stay current. Accordingly, the tools used to assess market impact have become ill-suited and poorly calibrated to meet new challenges.¹⁸⁵ Conventional antitrust and economic theories lack an emphasis on identifying both short-term and longer-term consequences of platform operations. While immediate consumer welfare enhancement supports regulatory forbearance, governments need to consider whether and how longer-term impacts will remain benign or favorable.

In too many instances, governments have overstated consumer benefits and the absence of competitive harm because they have not considered an intermediary's impact on both upstream and downstream markets, have failed to consider fully whether and how subscriber lock-in has occurred, and have come up with all sorts of rationales to excuse substantial market concentration based on short-term consumer benefits that may not be as generous if offsetting privacy intrusions are factored in the calculus.

Going forward, governments should appreciate that platform intermediaries do not operate as charities and that the conferral of benefits to consumers may be offset by negative impacts on both consumers and competition, even in the short term. A more holistic examination of impacts, without placing a premium on short-term consumer benefits, would generate a more accurate assessment of the mixed impacts generated by platform intermediaries.

185. See Rachel Brandenburger et al., *Merger Control Revisited: Are Antitrust Authorities Investigating the Right Deals?*, 31 ANTITRUST BULL. 28, 29 (2017) ("While traditional [merger and acquisition] filing thresholds such as revenue and market share are meant to capture transactions likely to give rise to competition concerns in most sectors, some antitrust authorities are now questioning whether the thresholds are adequate to identify potentially anticompetitive transactions in certain sectors, such as biotechnology and high-tech. The potential for innovation or a unique repository of 'big data' are often key features of these sectors—and some question whether a company's small current revenues might mask its likely future competitive significance.").