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The Mixed Blessing in Subsidized Internet Access

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The Mixed Blessing in Subsidized Internet Access

Rob Frieden¹

Abstract

This article offers an unsponsored examination of current disputes whether national regulatory authorities (“NRAs”) should permit broadband carriers and content providers, such as Facebook, to subsidize broadband access to a limited, “walled garden” of content. The subsidy makes it possible for sponsored data access without debiting a monthly data allowance. Wireless subscribers, with service caps typically set at 1-5 Gigabytes allowed per month, can quickly exhaust their monthly allotment when streaming video content. Even so-called unlimited data plans in developed countries have monthly data thresholds that, if reached, trigger slower content delivery speeds and possibly degraded screen resolution of delivered video content.²

The article concludes that even though carriers and content providers serve profit maximizing goals in zero rating arrangements, the practice can have positive spillover effects including more access by impoverished users, stimulated interest in diversifying uses of wireless handsets and possible migration to broadband access options that equally support content consumption and creation. While carriers and content providers can migrate tentative, subsidized users into paying ones, zero rating also provides first time access opportunities, particularly for individuals least able to afford even extremely low cost access options available in many lesser developed countries. Additionally, zero rating can stimulate interest by

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² “On all T-Mobile plans, during congestion the top 3% of data users (>28GB/mo.) may notice reduced speeds until next bill cycle. Video typically streams on smartphone/tablet at DVD quality (480p). Tethering at Max 3G speeds.” *Introducing T-Mobile ONE*, TMOBILE, <https://explore.t-mobile.com/t-mobile-one> (last visited Mar. 2, 2017).

consumers financially able to afford unsubsidized access, but heretofore uninterested in, or uninformed about the benefits.

The article identifies ways for carriers and NRAs to limit subsidies in ways that accrue social benefits without creating an unlimited “free rider” opportunity for all wireless subscribers, regardless of ability to pay for service. The article suggests that carriers should offer zero rating opportunities on a conditional and promotional basis thereby making it more difficult for existing subscribers simply to use zero rating access as a way to avoid paying surcharges for exceeding data caps. While NRAs should not micro-manage carriers’ service pricing, establishing qualification rules for access to zero rating fits with other universal service initiatives that rely on well calibrated and targeted subsidies to simulate broadband service demand and supply.

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1. Apply Qualifying Criteria

I. Introduction

Throughout the world, many Internet Service Providers (ISPs) have introduced broadband Internet access services offering subscribers reduced out of pocket costs, or eliminating them entirely.³ Broadband consumers typically welcome such subsidies provided by their service provider with an eye toward promoting more expensive tiers of service, or by content creators keen on attracting greater interest. Subsidies, not mandated by governments, recently have triggered regulatory concerns about harmful impacts on the marketplace for Internet-delivered content.

Internet broadband subsidies have triggered disputes whether they benignly enhance the value proposition in broadband access, or result in harmful marketplace distortions where gatekeepers can favor specific sources of content:

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 . . . [and] support continued investment in broadband infrastructure On the other hand, some commenters strongly oppose sponsored data plans, arguing that [it] “distorts competition, favors companies with the deepest pockets, and prevents consumers from exercising control over what they are able to access on

³ Until recently, in the United States, local access providers’ pecuniary prerogatives generally determined lay users’ service quality. They could offer tiered pricing schemes so that people who wanted or simply could afford better service could pay for it. Access providers could also enter into specialized arrangements with major Internet companies and edge providers to quicken or otherwise privilege access to subscribers. Lay users generally have had little choice in the matter. One recent manifestation of this practice is ‘zero-rating,’ where mobile service providers do not count subscribers’ connections to affiliated content or applications against data usage limits. Mobile providers implement such plans to gain an obvious advantage over competitors. There are reasons to believe that zero-rating might actually help spawn Internet access in developing countries. Olivier Sylvain, *Network Equality*, 67 HASTINGS L.J. 443, 451–52 (2016).

the Internet” . . . The record also reflects concerns that such arrangements may hamper innovation and monetize artificial scarcity.⁴

Broadband subsidies enhance the value proposition to prospective subscribers who lack discretionary funds, computer literacy, or sufficient interest. They also provide an attractive incentive for existing subscriber migration to a more expensive service tier offering faster data transmission speeds, higher allotment of content downloading and uploading, or a combination of the two. ISPs offer internal subsidies,⁵ but they also partner with advertisers, content creators and content distributors.⁶

Two labels apply to most of the broadband access subsidy arrangements.⁷ First, the label “sponsored data” identifies the subsidy source as a third party, not the carrier or consumer who is willing to pay for the exemption of specific types of content from debiting a monthly data plan. Such underwriting parallels media advertising where consumers have “free rider”⁸ opportunities

⁴ *Protecting and Promoting the Open Internet*, GN Dkt No. 14-28, Report & Order on Remand, Declaratory Ruling, and Order, 30 FCC Rcd. 5601, 5666–67 (2015) [hereinafter *2015 Open Internet Order*]; *United States Telecom Ass’n v. FCC*, 825 F.3d 674 (D.C. Cir. 2016). *pet. for en banc rehearing denied*.

⁵ For example, AT&T offers zero rating of data traffic to broadband customers who also subscribe to the company’s DirecTV satellite television service. This arrangement eliminates surcharges imposed on customers who exceed their monthly data rate allowance. *See DirecTV + Internet*, AT&T, <https://www.att.com/internet/index.html> (last visited Feb. 27, 2017).

⁶ For example, Facebook partners with ISPs in over 50 developing nations to provide wireless broadband access limited by a number of factors including which Internet sites are accessible. *See Free Basics Platform*, FACEBOOK, <https://info.internet.org/en/story/platform/> (last visited Feb. 27, 2017).

⁷ Zero ratings refer to “commercial arrangements and unilateral decisions by network operators pursuant to which [specific] Internet Protocol (IP)-delivered traffic is exempted from usage-based pricing.” ERIK STALLMAN & R. STANLEY ADAMS, *ZERO RATING: A FRAMEWORK FOR ASSESSING BENEFITS AND HARMS 2* (Jan. 2016); *See also* ROSLYN LAYTON & SILVIA MONICA ELALUF-CALDERWOOD, *ZERO RATING: DO HARD RULES PROTECT OR HARM CONSUMERS AND COMPETITION? EVIDENCE FROM CHILE, NETHERLANDS AND SLOVENIA* (Aug. 15, 2015); CAROLINA ROSSINI & TAYLOR MOORE, *EXPLORING ZERO RATING CHALLENGES: VIEWS FROM FIVE COUNTRIES* (July 2015); ALLIANCE FOR AFFORDABLE INTERNET, *THE IMPACTS OF EMERGING MOBILE DATA SERVICES IN DEVELOPING COUNTRIES* (Nov. 2015). The term sponsored data represents the same arrangement with emphasis on the subsidy mechanism used.

⁸ It is possible for consumers to effectively use free products without incurring a cost, monetary or otherwise. For example, consumers may be able to play free trials of games by logging in as guests. Banner ads on websites arguably convey no costs if they are easy enough to ignore. In these cases, the free offer *ex ante* may remain free *ex post*. In

to receive content without buying the promoted goods and services. Advocates for sponsored data arrangements frame the subsidies as offering consumer welfare enhancements without any significant distortion of marketplace competition.⁹ The second term “zero rating” highlights cost-saving opportunities available to consumers who can conserve their monthly data allotment by not having it debited when accessing content available from specific providers. Other subsidy arrangements exist, but do not snugly fit within either the sponsored data, or zero rating categories. These subsidies offer promotions designed primarily to induce existing subscribers to use more expensive tiers of service,¹⁰ to download and use specific software and applications¹¹ or to buy specific equipment, such as a game console.¹²

Subsidy opponents have predicted significant distortions to the marketplace of ideas, harm to the level of innovation and the potential for less competition.¹³ They worry that subsidies will bolster the market dominance of incumbent carriers and a small number of content providers by creating irresistible incentives for consumers to favor subsidized content and to rely on deep-

these situations, loss leaders can be lost, and free riders can ride free. Chris Jay Hoofnagle & Jan Whittington, *Free: Accounting for the Costs of the Internet's Most Popular Price*, 61 UCLA L. REV. 606 (2014).

⁹ Fanny Gunnarsdóttir, *Data Wants to be Free: So Sponsor It*, 3 ERICSON BUS. REV. 2 (2015).

¹⁰ See FACEBOOK, *supra* note 5.

¹¹ See, e.g., *Sponsored Data*, AT&T, <https://www.att.com/att/sponsoreddata/en/index.html#tab1>.

¹² Kyle Orland, *Comcast: Xbox 360 On Demand Streams Won't Count Against Data Caps*, ARS TECHNICA (Mar. 26, 2012, 12:54 PM), <http://arstechnica.com/gaming/2012/03/comcast-xbox-360-on-demand-streams-wont-count-against-data-caps/>.

¹³ “The overarching problem here is that widespread zero-rating harms innovation. It prevents newer and smaller players from challenging the established companies, and that’s particularly true when those established companies start consolidating and getting even bigger.” Davey Alba, *Big AT&T Deal Proves It’s Time to Stop ‘Zero Rating’*, WIRED (Nov. 3, 2016, 7:00 AM), <https://www.wired.com/2016/11/att-time-warner-deal-shows-time-stop-zero-rating/>; *Zero-Rating Plans are a Serious Threat to the Open Internet*, NEW AMERICA (Mar. 28, 2016), <https://www.newamerica.org/oti/blog/zero-rating-plans-are-a-serious-threat-to-the-open-internet/>.

pocketed carriers able to offer the most generous discounts, or bundles of services that combine content and carriage.¹⁴

Empirical evidence provides some support for this argument. The most popular subsidy arrangements come from major incumbent content providers, such as Facebook, offering a limited “walled garden”¹⁵ of content. To the extent new consumers embrace broadband services and remain willing to make do with a curated sliver of content, then incumbents can extend their market penetration while handicapping the prospects for market entrants lacking funds to pay for free, or low cost access to their content.

On the other hand, broadband subsidies can enhance societal welfare by stimulating demand for broadband service by individuals uninterested in such access, or lacking sufficient discretionary income.¹⁶ Many sponsored data plans offer access to information services such a

¹⁴ See Emily Hong, *A Zero Sum Game? What You Should Know about Zero-rating*, NEW AMERICA (Feb. 4, 2016), <https://www.newamerica.org/weekly/109/a-zero-sum-game-what-you-should-know-about-zero-rating/>; The Editorial Board, *Why Free Can Be a Problem on the Internet*, N.Y. TIMES (Nov. 14, 2015), http://www.nytimes.com/2015/11/15/opinion/sunday/why-free-can-be-a-problem-on-the-internet.html?_r=0.

¹⁵ “The idea is that once these new users get some experience in a walled garden of Facebook or Google, they will want more Internet access and pay for it, making the carriers’ initial investment worthwhile.” David Talbot, *Facebook and Google Create Walled Gardens for Web Newcomers Overseas*, MIT TECHNOLOGY REVIEW (Mar. 21, 2013), <http://www.technologyreview.com/news/512316/facebook-and-google-create-walled-gardens-for-web-newcomers-overseas>.

¹⁶ Zero rating is a particularly challenging policy area. If practiced by a network operator that has effective market power, it could be viewed as a form of vertical foreclosure (see *supra* Section I), which generally reduces societal welfare. A blanket prohibition would have complex effects that are not well understood. What is fairly clear, however, is that it would put NRAs in the miserable position of denying benefits to consumers that the market players would otherwise be willing to give them. For this reason, it is perplexing that European consumer advocates have been the most vocal advocates of a position that most likely increases effective prices to consumers. J. Scott Marcus, *New Network Neutrality Rules in Europe: Comparisons to Those in the U.S.*, 14 COLO. TECH. L.J. 259, 279 (2016).

Wikipedia¹⁷ as well as “e-government” services¹⁸ thereby promoting more widespread use and creating incentive for people to acquire computers, and master their use.¹⁹

A. Zero Rating in the Context of the Broader Debate About Government Intervention to Promote an Open Internet

Broadband access subsidies have become part of the larger debate about Internet neutrality and openness.²⁰ Zero rating opponents consider subsidies an attractive Trojan horse that stimulates interest in accessing the Internet, but only in ways that perpetuate the status quo and favor powerful incumbents.²¹ Such an emphasis on market domination and societal control ignores how zero rating can promote universal broadband access. Broadband subsidy advocates

¹⁷ “We estimate that more than 309 million people can now access Wikipedia free of data charges. Our goal is to work with every mobile operator on the planet.” *Wikipedia Zero*, WIKIMEDIA FOUNDATION, https://wikimediafoundation.org/wiki/Wikipedia_Zero (last visited Feb. 27, 2017).

¹⁸ For example, the Facebook Free Basics platform provides zero rated access in many developing countries to web site offering information on health, business development and childcare. *See* FACEBOOK, *supra* note 5, Success Stories.

¹⁹ *See*, DARRELL M. WEST, DIGITAL DIVIDE: IMPROVING INTERNET ACCESS IN THE DEVELOPING WORLD THROUGH AFFORDABLE SERVICES AND DIVERSE CONTENT (2015).

²⁰ Network neutrality refers to regulatory initiatives requiring ISPs to operate as neutral, non-discriminating conduits prohibited from prioritizing, blocking and slowing traffic absent compelling network management justifications. *See* Justin S. Brown & Andrew W. Bagley, *Neutrality 2.0: The Broadband Transition to Transparency*, 25 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 639 (2015); Rob Frieden, *What’s New in the Network Neutrality Debate*, 2015 MICH. ST. L. REV. 739 (2015); Barbara van Schewick, *Network Neutrality and Quality of Service: What a Nondiscrimination Rule Should Look Like*, 67 STAN. L. REV. 1 (2015); Marvin Ammori, *The Case for Net Neutrality: What’s Wrong with Obama’s Internet Policy*, 93 FOREIGN AFFAIRS, July-Aug. 2014, at 62; Tejas N. Narechania & Tim Wu, *Sender Side Transmission Rules for the Internet*, 66 FED. COMM. L.J. 467 (2014); Adam Candeub & Daniel McCartney, *Law and the Open Internet*, 64 FED. COMM. L.J. 493 (2012); Philip J. Weiser, *The Next Frontier for Network Neutrality*, 60 ADMIN. L. REV. 273, 280 (2008); Christopher S. Yoo, *Network Neutrality and the Economics of Congestion*, 94 GEO. L.J. 1847, 1901 (2006); Christopher S. Yoo, *Beyond Network Neutrality*, 19 HARV. J.L. & TECH. 1 (2005); Tim Wu, *Network Neutrality, Broadband Discrimination*, 2 J. TELECOM. & HIGH TECH. L. 141 (2003).

²¹ Who has decided what constitutes what is a free and a basic internet? Mr. Zuckerberg? What gives him the sole right to determine what we as people need? What makes him think that connecting the Indian poor to Facebook will give her education and health? What makes him believe that the internet is a substitute for schools, colleges and hospitals? . . . Instead of accepting the Trojan horse of Free Basics, we need to create the right set of policies so that data services are cheap and easily accessible. Prabir Purkayastha, *The Trojan Horse of Free Basics*, NEWSCLICK INDIA (Jan. 7, 2016), <http://newsclick.in/international/trojan-horse-free-basics>.

believe zero rating absolutely generates consumer welfare enhancements, despite the fact that underwriters fully expect to accrue a return on their investment.²²

Both sides might offer valid points. Ventures such as Facebook are for-profit and have plenty to gain by mining the data of subscribers and by extending their penetration of largely untapped markets in the longer term. On the other hand, subsidies providing even limited and curated Internet access, provide opportunities for unconnected people that might not otherwise exist.

This article will examine the opportunities and threats presented by subsidized broadband Internet access. It will examine the different reasons nations have outlawed such options even though it appears that near term, welfare enhancements can accrue, particularly in lesser developed nations. The article concludes that even though ISPs and content providers have self-serving goals in offering subsidies, the practice can have positive spillover effects including more access by impoverished users and more interest in using broadband access to create content as well as consume it. Sponsored data plans provide first time access opportunities, particularly for individuals least able to afford even extremely low cost wireless handset and broadband access options available in many lesser developed countries. Additionally, zero rating can

²² The estimated results demonstrate that, controlling for factors such as price and per capita income, zero-rating can be associated with additional growth in broadband demand and increased social welfare, as measured by consumer surplus. Furthermore, the results indicated that zero-rating has a larger impact on low-income countries. In addition, it can be concluded that, with zero-rating, it has been possible to serve unattended portions of the market. One possible explanation for the results lies in the series of initiatives that have accompanied the promotion of zero-rating. Based on the literature review, it is important to stress that zero-rating could also be a way to recoup investment in networks, which has been one of the main concerns in the net-neutrality debate. Oscar Saenz De Miera Berglind, *The Effect of Zero-Rating on Mobile Broadband Demand: An Empirical Approach and Potential Implications*, 10 INT'L J. OF COMM. 18, 29 (2016); See also, Augusto Preta & Peng Peng, *Discrimination and Neutrality on the Internet: the Zero Rating Case*, ACADEMIA.EDU, http://www.academia.edu/24293750/Discrimination_and_Neutrality_on_the_Internet_the_Zero_Rating_Case (last visited Feb. 8, 2017).

stimulate interest by consumers financially able to afford unsubsidized access, but heretofore uninterested in, or uninformed about the benefits.

The article conditionally supports zero rating plans, particularly in lesser developed countries. The article proposes limited and well calibrated government oversight to ensure that subsidies primarily support universal access initiatives rather than merely provide ways for existing subscribers to conserve their data plans and avoid overcharges, or throttled service, when carriers deliberately slow data transmission speeds, or degrade video screen resolution after subscribers exceed a monthly data allowance. The article further suggests that government regulatory authorities apply the same qualification requirements used to target existing universal telephone service subsidies. This calibration will conserve funds and limit marketplace distortions.

II. A Fair and Open Internet Marketplace

Advocates for network neutrality have emphasized the need for National Regulatory Authorities (“NRAs”) to impose nondiscrimination requirements on ISPs to prevent these carriers from creating fast and slow broadband traffic lanes based on corporate affiliation, or the willing to pay surcharges for preferential delivery of content. Rather than interconnect, switch, and route traffic on an unbiased “best efforts” basis, network operators can opt to block and drop content packets, or intentionally slow traffic on the false claim of network congestion.

The FCC has expressed concern that without muscular, common carrier regulatory oversight, ISPs would create fast lanes,²³ offering “better than best efforts” traffic prioritization

²³ 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.

at a surcharge, while relegating everyone else to intentionally slow lanes,²⁴ possibly unable to handle even ordinary traffic volumes.²⁵ 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.²⁶ Content providers and distributors, unable or unwilling to pay surcharges, would experience artificial congestion and quality of service 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 decline that prevents the seamless display of "must see," "mission critical" content.

NRAs, such the FCC, anticipate ISP price and quality of service discrimination that could harm competition and consumers rather than provide different service tiers and price points.

2015 Open Internet Order, *supra* note 5, at 5690.

²⁴ 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. *Id.* at 5608.

²⁵ 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. S. DEREK TURNER, NET NEUTRALITY: INVESTMENT AND ECONOMICS 3–4 (2010).

²⁶ "Broadband providers 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." *Verizon v. FCC*, 740 F.3d 623, 645–46 (D.C. Cir. 2014). 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. *2015 Open Internet Order*, *supra* note 5, at 5608.

With an eye toward foreclosing harm, the FCC relies on ex ante safeguards to prevent and sanction anticipated market distortions rather than

using ex post remedies if and when such abuses occur.²⁷ Ex ante and ex post remedies have costs, particularly when they fail to detect and remedy a marketplace distortion—a false negative—and when they identify and sanction reasonable price and quality of service discrimination—a false positive.²⁸

Rigid ex ante safeguards make it difficult for NRAs to assess whether an access pricing arrangement harms content competition and consumers, or provides customized solutions at a premium price to defray the higher costs incurred in providing better quality of service. The FCC prohibits ISPs from blocking traffic, throttling delivery speeds and demanding surcharges for prioritizing traffic.²⁹ While such practices typically evidence unreasonable discrimination, the possibility exists that some forms of preferred status provide lawful and desirable enhancements, particularly when real network congestion increases the odds for degraded network performance and consumer dissatisfaction.

A near absolute, or complete prohibition on traffic prioritization precludes last mile ISPs from offering enhanced routing of certain traffic streams prone to congestion such as video streaming of a movie, or live sporting event carried by a broadcast or cable television network..³⁰

²⁷ See Jasper Sluijs, *Network Neutrality Between False Positives and False Negatives: Introducing a European Approach to American Broadband Markets*, 62 FED. COM. L.J., no. 1, 2010, at 77.

²⁸ See Rob Frieden, *Ex Ante Versus Ex Post Approaches to Network Neutrality: A Comparative Assessment*, 30 BERKELEY TECH. L.J. 2, 1562 (2015).

²⁹ “[W]e adopt carefully-tailored rules that would 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.” *2015 Open Internet Order*, *supra* note 5, at 5603.

³⁰ See Rob Frieden, *Network Neutrality and Consumer Demand for “Better Than Best Efforts” Traffic Management*, 26 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 71 (2015).

Similarly, the prohibition possibly prevents specific content providers and distributors from securing better and more traffic interconnection opportunities like that achieved by Netflix with Comcast as the parties settled a compensation and traffic exchange dispute that already had triggered consumer irritation.³¹

Ex ante safeguards prevent or substantially burden the offering of reasonable, premium service options that enhance the quality of experience for broadband consumers and offer a higher quality of service to content providers. Ex ante regulation can impose unneeded remedies for specialized service arrangements, but ex post remedies may arrive too late, well after the harm, so that monetary damages, or other sanctions prove inadequate.

On three occasions, the FCC has opted to apply ex ante regulatory oversight.³² The FCC's 2015 initiative reclassified broadband Internet access as common carriage thereby securing jurisdiction to apply muscular, ex ante measures. In 2016, an appellate court approved the FCC's reclassification of broadband access opting not to second guess the Commission's new rationales for expanding its regulatory reach.

Reclassification offered the FCC the opportunity to establish clear jurisdiction to apply common carrier regulatory oversight of ISPs. However, it also has generated vigorous

³¹ Drew Fitzgerald & Shalini Ramachandran, *Netflix-Traffic Feud Leads to Video Slowdown*, WALL ST. J. (Feb. 18, 2014), <http://www.wsj.com/articles/SB100014240527023048997045793912232498965>; 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/>.

³² *Formal Complaint of Free Press and Public Knowledge Against Comcast Corp. for Secretly Degrading Peer-to-Peer Applications*, Memorandum Opinion and Order, EB-08-IH-1518, Memorandum Opinion & Order, 23 FCC Rcd. 13,028 (2008); *Comcast Corp. v. FCC*, 600 F.3d 642 (D.C. Cir. 2010) (vacating this Memorandum Opinion and Order because the FCC was deemed to have exceeded its statutory authority when responding to a complaint and imposing network neutrality rules); *Preserving the Open Internet*, GN Dkt. No. 09-191, WC Dkt. No. 07-52, Report & Order, 25 FCC Rcd. 17,905 (2010) [hereinafter *2010 Open Internet Order*] (*aff'd in part, vacated and remanded in part sub nom. Verizon v. FCC*, 740 F.3d 623 (D.C. Cir. 2014)); *Protecting and Promoting the Open Internet*, GN Dkt. No. 14-28, Notice of Proposed Rulemaking, 29 FCC Rcd. 5,561 (2014); *2015 Open Internet Order*, *supra* note 5 (*affirmed sub nom. affirmed sub nom. United States Telecom Ass'n. v. FCC*, 825 F.3d 674 (D.C. Cir. 2016); pet. for en banc rehearing denied.

opposition to the FCC’s initiative even though the Commission has volunteered to forbear from applying many regulations absent compelling circumstances.³³

The FCC has 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.”³⁴ The Commission emphasized 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 insight of 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.³⁵

The FCC considers it essential that ISPs not have the ability to exploit Internet access in anticompetitive ways that would reduce demand for Internet services.³⁶ In implementing that

³³ [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. *2015 Open Internet Order*, *supra* note 5, at 5603. The new Republican majority of FCC Commissioners will seek to eliminate, or substantially reduce network neutrality regulations. “[P]roof of market failure should guide the next Commission’s consideration of new regulations. And the FCC should only adopt a regulation if it determines that its benefits outweigh its costs.

The *Title II Order* [also referred to as the 2015 Open Internet Order], of course, failed to respect these principles. There was no evidence of systemic failure in the Internet marketplace.

... On the day that the Title II Order was adopted, I said that ‘I don’t know whether this plan will be vacated by a court, reversed by Congress, or overturned by a future Commission. But I do believe that its days are numbered.’ Today, I am more confident than ever that this prediction will come true.” Ajit Pai, Commissioner, FCC, Remarks Before The Free State Foundation’s Tenth Anniversary Gala Luncheon, Washington, D.C. (Dec. 7, 2016), <https://www.fcc.gov/document/commissioner-pai-remarks-free-state-foundation-luncheon>.

³⁴ *Id.* at 5603.

³⁵ *Id.* at 5608.

³⁶ 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

value, the Commission established a clear, ISP nondiscrimination rule in the 2015 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.³⁷

The nondiscrimination rule establishes 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.

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 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. *Id.* at 5629.

³⁷ *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.

The nondiscrimination rule and prohibition on prioritizing traffic also generate uncertainty about what ISPs can and cannot do to tier and differentiate service. For example, the FCC has expressed concerns that zero rating of the wireless traffic generated by a corporate affiliate and subset of competing content providers.³⁸ 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.

The FCC also clarified and strengthened its requirement that ISPs operate with transparency³⁹ so that both retail broadband subscribers and upstream carriers and sources of content understand the manner in which they can acquire broadband services.⁴⁰ However, the FCC specified that its Internet access requirements only apply to the retail practices of ISPs, vis a vis downstream end users, and not to the terms and conditions of interconnection between ISPs and other upstream carriers and sources of content.⁴¹

³⁸ 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 particular, 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. WIRELESS TELECOMMUNICATIONS BUREAU REPORT: POLICY REVIEW OF MOBILE BROADBAND OPERATORS' SPONSORED DATA OFFERINGS FOR ZERO-RATED CONTENT AND SERVICES 17 (2017).

³⁹ The enhanced transparency requirements include the duty to disclose prices, including the full monthly subscription charge, other fees and data caps and downloading allowances. Additionally, ISPs will have to report on actual network performance and disclose network practices, including congestion management, application-specific behavior, device attachment rules and security. *See 2015 Open Internet Order*, *supra* note 5, at 5672–78.

⁴⁰ A person engaged in the provision of broadband Internet access service shall publicly disclose accurate information regarding the network management practices, performance, and commercial terms of its broadband Internet access services sufficient for consumers to make informed choices regarding use of such services and for content, application, service, and device providers to develop, market, and maintain Internet offerings. *Id.* at 5609.

⁴¹ “[B]roadband Internet access service does not include virtual private network (VPN) services, content delivery networks (CDNs), hosting or data storage services, or Internet backbone services (to the extent those services are separate from broadband Internet access service).” *Id.* at 5684–85.

The FCC now considers ISPs as gatekeepers standing between end users, who rely on common carriage, telecommunications service, and upstream content and applications still treated as information services.⁴² While the Commission determined that the common carrier classification applies to both upstream and downstream interconnections,⁴³ it will refrain from applying the access restrictions on upstream interconnection unless and until anticompetitive conduct arises.⁴⁴ Similarly, the FCC specified that it will not apply its open Internet access rules on data services provided by upstream ISPs and Content Distribution Networks, whose traffic traverse the same networks used for Internet access.⁴⁵ The FCC has created regulatory

⁴² Based on this updated record, this 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 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. *Id.* at 5615.

⁴³ [W]e find that broadband Internet access service is a ‘telecommunications service’ and subject to sections 201, 202, and 208 (along with key enforcement provisions). As a result, commercial arrangements for the exchange of traffic with a broadband Internet access provider are within the scope of Title II, and the Commission will be available to hear disputes raised under sections 201 and 202 on a case-by-case basis: an appropriate vehicle for enforcement where disputes are primarily over commercial terms and that involve some very large corporations, including companies like transit providers and Content Delivery Networks (CDNs), that act on behalf of smaller edge providers. *Id.* at 5610.

⁴⁴ “[W]e find that the best approach is to watch, learn, and act as required, but not intervene now, especially not with prescriptive rules. This Order—for the first time—provides authority to consider claims involving interconnection, process that is sure to bring greater understanding to the Commission.” *Id.* at 5611.

⁴⁵ We adopt our tentative conclusion in the 2014 Open Internet NPRM that broadband Internet access service does not include virtual private network (VPN) services, content delivery networks (CDNs), hosting or data storage services, or Internet backbone services (to the extent those services are separate from broadband Internet access service). The Commission has historically distinguished these services from ‘mass market’ services.” *Id.* at 5684, para. 190. However, the Commission stated that it does have jurisdiction to resolve carriage disputes between CDNs and downstream ISPs providing content delivery to broadband subscribers. “commercial arrangements for the exchange of traffic with a broadband Internet access provider are within the scope of Title II, and the Commission will be available to hear disputes raised under sections 201 and 202 on a case-by-case basis: an appropriate vehicle for enforcement where disputes are primarily over commercial terms and that involve some very large corporations, including companies like transit providers and Content Delivery Networks (CDNs), that act on behalf of smaller edge providers. *Id.* at 5610.

uncertainty about the scope and reach of its oversight by establishing different regulatory triggers and evaluative criteria.⁴⁶

The FCC emphasized that while subjecting ISPs to Title II,⁴⁷ common carrier oversight, it will use statutory authority quite narrowly as evidenced by the decision to forbear⁴⁸ from applying “27 provisions of Title II of the Communications Act, and over 700 Commission rules and regulations.”⁴⁹ The Commission recognized the need to explain how the new requirements satisfy pressing needs, but did so in a narrow and calibrated manner,⁵⁰ in light of virulent opposition from most ISPs and the two Republican Commissioners. The Order reports that:

There will be fewer sections of Title II applied than have been applied to Commercial Mobile Radio Service (CMRS), [the regulatory classification for wireless voice telecommunications service] where Congress expressly required the application of

⁴⁶ “The Commission expressly reserves the authority to take action if a service is, in fact, providing the functional equivalent of broadband Internet access service or is being used to evade the open Internet rules.” *Id.*

⁴⁷ 47 U.S.C. §§ 201–276 (2012).

⁴⁸ The FCC has the authority to streamline the scope of its Title II oversight by forbearing from applying many common carrier requirements:

[T]he Commission shall forbear from applying any regulation or any provision of this chapter to a telecommunications carrier or telecommunications service, or class of telecommunications carriers or telecommunications services, in any or some of its or their geographic markets, if the Commission determines that— (1) enforcement of such regulation or provision is not necessary to ensure that the charges, practices, classifications, or regulations by, for, or in connection with that telecommunications carrier or telecommunications service are just and reasonable and are not unjustly or unreasonably discriminatory; (2) enforcement of such regulation or provision is not necessary for the protection of consumers; and (3) forbearance from applying such provision or regulation is consistent with the public interest.

⁴⁹ 47 U.S.C. § 160(a) (2012).

⁴⁹ *2015 Open Internet Order*, *supra* note 5, at 5603. The major provisions of Title II that the Order will apply are: nondiscrimination and no unjust and unreasonable practices under Sections 201 and 202; authority to investigate complaints and resolve disputes under section 208 and related enforcement provisions, specifically sections 206, 207, 209, 216 and 217; protection of consumer privacy under Section 222; fair access to poles and conduits under Section 224, protection of people with disabilities under Sections 225 and 255; and providing universal funding for broadband service, but not the requirement to collect contributions to such funding through partial application of Section 254.

⁵⁰ In finding that broadband Internet access service is subject to Title II, we simultaneously exercise the Commission's forbearance authority to forbear from 30 statutory provisions and render over 700 codified rules inapplicable, to establish a light-touch regulatory framework tailored to preserving those provisions that advance our goals of more, better, and open broadband. *Id.* at 5616.

Sections 201, 202, and 208, and permitted the Commission to forbear from others. In fact, Title II has never been applied in such a focused way.”⁵¹

The FCC opted not to construct an order applying Section 706 of the Communications Act ⁵² as the sole foundation for creating narrowly calibrated non-common carrier rules applicable to ISPs in their capacity as information service providers. The Commission interpreted the Circuit Court of Appeals for the District of Columbia as limiting the scope and efficacy of Section 706 based on the court’s determination that the FCC could not impose common carrier duties, even though the court acknowledged that ISPs perform a traffic carriage function for upstream sources of content, commonly referred to as edge providers:

[A]bsent a classification of broadband providers as providing a ‘telecommunications service,’ the Commission could only rely on section 706 to put in place open Internet protections that steered clear of regulating broadband providers as common carriers per se. Thus, in order to bring a decade of debate to a certain conclusion, we conclude that the best path is to rely on all available sources of legal authority—while applying them with a light touch consistent with further investment and broadband deployment. Taking the Verizon decision’s implicit invitation, we revisit the Commission’s classification of the retail broadband Internet access service as an information service and clarify that this service encompasses the so-called ‘edge service.’” ⁵³

The FCC established “clear, bright-line rules” ⁵⁴ prohibiting ISPs from blocking lawful traffic, deliberately slowing traffic down absent legitimate network management requirements and

⁵¹ *Id.* at 5612.

⁵² 47 U.S.C. § 1302 (2012).

⁵³ *2015 Open Internet Order*, *supra* note 5, at 5614.

⁵⁴ “We accordingly adopt bright-line rules banning blocking, throttling, and paid prioritization by providers of both fixed and mobile broadband Internet access service.” *Id.* at 5647.

offering to managed and deliver traffic on a preferential basis, commonly known as “paid prioritization.”⁵⁵ The Commission’s ban on traffic blocking uses clear-cut language:

A person engaged in the provision of broadband Internet access service, insofar as such person is so engaged, shall not block lawful content, applications, services, or non-harmful devices, subject to reasonable network management.⁵⁶

The FCC also established an absolute ban on throttling absent legitimate network management requirements:

A person engaged in the provision of broadband Internet access service, insofar as such person is so engaged, shall not impair or degrade lawful Internet traffic on the basis of Internet content, application, or service, or use of a non-harmful device, subject to reasonable network management.⁵⁷

To prevent ISPs from dividing the Internet into fast-lanes offered at a premium with slow lanes constituting an inferior baseline, the FCC prohibits paid prioritization:

A person engaged in the provision of broadband Internet access service, insofar as such person is so engaged, shall not engage in paid prioritization. ‘Paid prioritization’ refers to the management of a broadband provider’s network to directly or indirectly favor some traffic over other traffic, including through use of techniques such as traffic shaping, prioritization, resource reservation, or other forms of preferential traffic management, either (a) in exchange for consideration (monetary or

⁵⁵ No Paid Prioritization. Paid prioritization occurs when a broadband provider accepts payment (monetary or otherwise) to manage its network in a way that benefits particular content, applications, services, or devices. To protect against ‘fast lanes,’ this Order adopts a rule that establishes that: A person engaged in the provision of broadband Internet access service, insofar as such person is so engaged, shall not engage in paid prioritization. ‘Paid prioritization’ refers to the management of a broadband provider’s network to directly or indirectly favor some traffic over other traffic, including through use of techniques such as traffic shaping, prioritization, resource reservation, or other forms of preferential traffic management, either (a) in exchange for consideration (monetary or otherwise) from a third party, or (b) to benefit an affiliated entity. *Id.* at 5607–08.

⁵⁶ *Id.* at 5607. The FCC did opt to eliminate rules that would establish a baseline, minimum broadband access standard. It acknowledged practical and technical difficulties associated with setting any such minimum level of access. Additionally the Commission concluded that the no blocking and throttling rules would “allow broadband providers to honor their service commitments to their subscribers without relying upon the concept of a specified level of service to those subscribers or edge providers . . .” *Id.* at 5650.

⁵⁷ *Id.* at 5607.

otherwise) from a third party, or (b) to benefit an affiliated entity⁵⁸

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 will consider on a case-by-case basis whether an ISP has 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.”⁵⁹ The Commission applied a more open-ended evaluation than its previously proposed legal standard prohibiting commercially unreasonable practices contained in its 2014 Open Internet NPRM.⁶⁰ 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

⁵⁸ *Id.* Even though one can anticipate instances where a broadband subscriber would want ISPs to provide higher quality of service to reduce the potential for degraded service in the delivery of “must see” video content, the FCC largely forecloses this option. ISPs cannot offer paid prioritization, even at the voluntary request or approval of subscribers based on the Commission’s apprehension that ISPs would abuse the opportunity by imbedding blanket authorization in subscription service agreements. “[T]here 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.” *Id.* at 5608. However the FCC will allow exceptions on an ad hoc basis using rigorous criteria. “The Commission may waive the ban on paid prioritization only if the petitioner demonstrates that the practice would provide some significant public interest benefit and would not harm the open nature of the Internet.” *Id.* at 5658.

First, the applicant must demonstrate that the practice will have some significant public interest benefit, such as providing evidence that the practice furthers competition, innovation, consumer demand, or investment. Second, the applicant must demonstrate that the practice does not harm the nature of the open Internet, including, but not limited to, providing evidence that the practice:

- does not materially degrade or threaten to materially degrade the broadband Internet access service of the general public;
- does not hinder consumer choice;
- does not impair competition, innovation, consumer demand, or investment; and
- does not impede any forms of expressions, types of service, or points of view.

Id. Note that the FCC “anticipate[s] granting such relief only in exceptional cases.” *Id.* (citing extremely bandwidth intensive telemedicine applications as an example worthy of an exception).

⁵⁹ *Id.* at 5659.

⁶⁰ “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.” *Id.* at 5665.

not limited to whether a practice is agreeable to commercial parties.”⁶¹

The FCC reported that it would use a “no-unreasonable interference/disadvantage”⁶² standard to evaluate controversial subjects including the lawfulness of sponsored data arrangements where an ISP accepts advertiser payment in exchange for an agreement not to meter and debit the downstream traffic delivery.⁶³ The Commission also will use this standard to consider the lawfulness of data caps that tier service by the amount of permissible downloading volume. In both instances, the FCC sees 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. Additionally, the Commission worries that data caps have the potential for disadvantaging competitors by creating disincentives for consumers to try new video

⁶¹ *Id.* at 5665. 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. *Id.* at 5661–65.

⁶² 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, or devices available to end users. Reasonable network management shall not be considered a violation of this rule. *Id.* at 5609.

⁶³ 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. *Id.* at 5667–68.

programming options, particularly if a zero rated ISP option exists. On the other hand, the Commission also recognizes that service tiering can promote innovation and new, customized services.

The 2015 Open Internet Order expresses the view that reclassifying Internet access as a telecommunications service provides the strongest legal foundation for the Open Internet regulations, coupled with a secondary reference to Section 706 of the Telecommunications Act of 1996 and Title III, which addresses the use of radio spectrum and applies common carriage regulation to wireless voice carriers.⁶⁴ By using the stronger Title II foundation, the FCC asserts that it can establish clear and unconditional statutory authority, but also use the flexibility contained in Title II to forbear from applying most common carrier requirements not relevant to modern broadband service just as occurs for wireless telephone service. However, with a Title II regulatory foundation, the Order makes it possible for the FCC to create an open Internet conduct standard that ISPs cannot harm consumers or edge providers with enforcement tools available to sanction violations.⁶⁵

⁶⁴ We ground the open Internet rules we adopt today in multiple sources of legal authority—section 706, Title II, and Title III of the Communications Act. We marshal all of these sources of authority toward a common statutorily-supported goal: to protect and promote Internet openness as platform for competition, free expression and innovation; a driver of economic growth; and an engine of the virtuous cycle of broadband deployment. We therefore invoke multiple, complementary sources of legal authority. As a number of parties point out, our authority under section 706 is not mutually exclusive with our authority under Titles II and III of the Act. *Id.* at 5720–21.

⁶⁵ With an eye toward providing timely, certain and flexible enforcement of its open Internet rules, the FCC announced its intention to use advisory opinions similar to those issued by the Department of Justice’s Antitrust Division:

Advisory opinions will enable companies to seek guidance on the propriety of certain open Internet practices before implementing them, enabling them to be proactive about compliance and avoid enforcement actions later. The Commission may use advisory opinions to explain how it will evaluate certain types of behavior and the factors that will be considered in determining whether open Internet violations have occurred. Because these opinions will be publicly available, we believe that they will reduce the number of disputes by providing guidance to the industry.

Id. at 5706.

While the debate over network neutrality has become quite contentious and hyperbolic,⁶⁶ the three core requirements imposed by the Order have generated much popular support.⁶⁷ With the common carrier reclassification, the FCC considers it lawful to impose explicit requirements that ISPs not: block, legal content, applications, services, or non-harmful devices; throttle, impair or degrade lawful Internet traffic on the basis of content, applications, services, or non-harmful devices; or offer paid prioritization that would favor some lawful Internet traffic over other lawful traffic in exchange for additional compensation, or based on corporate affiliation.

The Order addresses the need for ISPs to have the ability to manage their networks and to offer specialized services not available to all users, but without creating a loophole for practices that violate network neutrality. Coupled with requirements that ISPs operate transparently in terms of how they provide service, the FCC will permit deviations from absolute neutrality on a case-by-case basis taking into consideration the particular engineering attributes of the technology used as well as the rationale supporting the legitimacy of the practice.

On appeal to the District Court of Appeals for the District of Columbia, the FCC defended its legal right to reclassify services in light of changed circumstances. The Commission

⁶⁶ So why is the FCC changing course? Why is the FCC turning its back on Internet freedom? Is it because we now have evidence that the Internet is not open? No. Is it because we have discovered some problem with our prior interpretation of the law? No. We are flip-flopping for one reason and one reason alone. President Obama told us to do so. *2015 Open Internet Order*, *supra* note 5, at 5921 (dissenting statement of Commissioner Ajit Pai). Several commenters, as well as the dissenting statements, claim that an unbroken line of Commission and court precedent, dating back to the *Stevens Report* in 1998, supports the classification of Internet access service as an information service, and that this classification is effectively etched in stone. These commenters ignore not only the Supreme Court but our precedent demonstrating that the relevant statutory definitions are ambiguous, and that classifying broadband Internet access service as a telecommunications service is a permissible interpretation of the Act. Indeed, several of the most vocal opponents of reclassification previously argued that the Commission not only may, but should, classify the transmission component of broadband Internet access service as a telecommunications service. *2015 Open Internet Order*, *supra* note 5, at 5736.

⁶⁷ See, e.g., Doug Aamoth, *John Oliver's Net Neutrality Rant Crashes FCC Servers*, TIME (June 3, 2014), <http://time.com/2817567/john-oliver-net-neutrality-fcc/>.

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 regulator expectations, the D.C. Circuit Court of Appeals rejected all challenges to the FCC's Open Internet Order.⁶⁸ The majority consider 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.⁶⁹ In a nutshell, the majority opted not to second guess the FCC and 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.⁷⁰ This decision supports a rare instance where the FCC substantially expands its regulatory wingspan, despite the general trend toward less government oversight.⁷¹

⁶⁸ *United States Telecom Ass'n. v. FCC*, 825 F.3d 674 (D.C. Cir. 2016); pet. for en banc rehearing denied.

⁶⁹ “[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.” *Id.* 825 F.3d at 696–97, (quoting *Ass’n of American Railroads v. Interstate Commerce Comm’n*, 978 F.2d 737, 740 (D.C. Cir. 1992)). “Our job is to ensure that an agency has acted “within the limits of [Congress’s] delegation” of authority, *Chevron, U.S.A. Inc. v. Nat. Res. Defense Council, Inc.*, 467 U.S. 837, 865 (1984), and that its action is not “arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law,” 5 U.S.C. § 706(2)(A). 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.” *Ass’n of American Railroads*, 978 F.2d at 740 (alteration and internal quotation marks omitted). 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.” *City of Los Angeles v. U.S. Dep’t of Transp.*, 165 F.3d 972, 977 (D.C. Cir. 1999).

⁷⁰ The court supported the FCC’s determination that Broadband Internet Access constitutes a separate and standalone service vis a 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.” *United States Telecom Ass’n*, 825 F.3d 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.

⁷¹ That brings us to our 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.’” *Id.* at 770 (Williams, J., concurring in part and dissenting in part). We are unmoved. The Act, by its terms, aimed to “encourage the rapid deployment of new telecommunications technologies.” Telecommunications Act of 1996, Pub. L. 104–104, 110 Stat. 56. If, as we reiterate here (and as the partial

The partial dissent chided the FCC for poor economic analysis and its failure to provide adequate notice to affected parties, citing *F.C.C. v. Fox Television Stations, Inc.*, 556 U.S. 502, 515 (2009). Additionally, the partial dissent took an activist posture suggesting that the FCC wrongly applied common carriage obligations on a market that it wrongly considered as having monopoly characteristics.⁷²

The court majority rejected claims that the FCC lacked legal authority to reclassify broadband Internet access as a common carrier telecommunications service provided via either fixed or mobile carriers. The court noted that while the FCC previously had deemed broadband access an information service, it did reserve the option to revisit its classification⁷³ and had good reason to do so.⁷⁴

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. *United States Telecom Ass'n*, 825 F.3d at 734.

⁷² Given the Commission's assertions elsewhere that competition is limited, and its lack of economic analysis on either the forbearance issue or the Title II classification, the combined decisions to reclassify and forbear—and to assume sufficient competition as well as a lack of it—are arbitrary and capricious. The Commission acts like a bicyclist who rides now on the sidewalk, now the street, as personal convenience dictates. *United States Telecom Ass'n*, 825 F.3d at 777 (Williams, J., dissenting in part).

⁷³ *Id.* at 700.

Although the Commission's classification decisions spared broadband providers from Title II common carrier obligations, the Commission made clear that it would nonetheless seek to preserve principles of internet openness. In the 2005 Wireline Broadband Order, which classified DSL as an integrated information service, the Commission announced that should it "see evidence that providers of telecommunications for Internet access or IP-enabled services are violating these principles," it would "not hesitate to take action to address that conduct." 2005 Wireline Broadband Order, 20 F.C.C.R. at 14,904 ¶ 96. Simultaneously, the Commission issued a policy statement signaling its intention to "preserve and promote the open and interconnected nature of the public Internet." *In re Appropriate Framework for Broadband Access to the Internet over Wireline Facilities*, 20 F.C.C.R. 14,986, 14,988 (2005). *Id.* at 693.

⁷⁴ The FCC concluded that in light of the *Verizon* case, which reversed the Commission on grounds that it could not impose common carrier regulations on information services, the Commission had to reclassify broadband access explicitly and not rely on Section 706 of the Telecommunications Act of 1996 that provided general authority to take affirmative steps to promote access to advanced telecommunications services throughout the nation.

[I]n light of *Verizon*, the Commission explained, 'absent a classification of broadband providers as providing a 'telecommunications service,' the Commission could only rely on section 706 to put in place open Internet protections that steered clear of regulating broadband providers as common carriers per se.' [citing 2015 Open Internet Order, 30 F.C.C.R. at 5614 ¶ 42]. This, in our view, represents a perfectly "good reason" for the Commission's change in position.

Additionally, the court did not consider it a fatal flaw that the FCC extended its telecommunications service jurisdiction to include the upstream links from so-called last mile Internet Service Providers to content providers and distributors. The court noted that in the Supreme Court’s *Brand X* review of the FCC’s determination that last mile access fits within the information service classification, the case applied the *Chevron* doctrine analysis and determined that the definitions of telecommunications service and information service were ambiguous and the FCC’s interpretation and policy prescriptions were reasonable.⁷⁵

The court accepted the FCC’s rationale for reclassification, considering it reasonable ⁷⁶ in light of how consumers rely on telecommunications links to access information services, 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, 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

Id. at 707.

The partial dissent did not challenge the legal right of the FCC to interpret and apply the ambiguous definitions of telecommunications service and information service in the Telecommunications Act of 1996. The majority considered the interpretation and reclassification as reasonable, but the partial dissent vigorously disagreed.

⁷⁵ [E]ven if the *Brand X* decision was only about the last mile, the Court focused on the nature of the functions broadband providers offered to end users, not the length of the transmission pathway, in holding that the “offering” was ambiguous. As discussed earlier, the Commission adopted that approach in the Order in concluding that the term was ambiguous as to the classification question presented here: whether the “offering” of broadband internet access service can be considered a telecommunications service. In doing so, the Commission acted in accordance with the Court’s instruction in *Brand X* that the proper classification of broadband turns “on the factual particulars of how Internet technology works and how it is provided, questions *Chevron* leaves to the Commission to resolve in the first instance. *Id.* at 702 (citing *Nat’l Cable & Telecomm. Ass’n v. Brand X Internet Serv.*, 545 U.S. 967, 991 (2005)).

⁷⁶ 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. *Id.* at 713.

investors than increased demand.”⁷⁷ 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.⁷⁸

The majority decision 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 service made available to the public. The court considered mobile broadband as now generally available to the public as evidenced by the widespread use of smartphones that provide both voice and data services.⁷⁹

The majority decision strongly rejected the argument that the FCC’s Open Internet rules impermissibly constrain Internet Service Provider 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.⁸⁰

⁷⁷ *Id.* at 710.

⁷⁸ *Gas Transmission Nw. Corp. v. FERC*, 504 F.3d 1318, 1322 (D.C. Cir. 2007) (“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.”).

⁷⁹ “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.’” *Id.* at 715–16.

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. *Id.* at 716–17.

⁸⁰ *Id.* at 740.

The court noted that telephone companies, railroads, and postal services have borne equal access obligations like that now applied to Internet Service Providers “without raising any First Amendment issue.”⁸¹

A. Do Broadband Subsidies Offer Lawful Price and Quality of Service Discrimination?

Zero rating and sponsored data arrangements reduce or eliminate out of pocket costs borne by retail broadband subscribers for the content switching, routing, and transmission services of an ISP. ISPs providing last mile delivery of Internet traffic operate in a two-sided market⁸² and have flexibility in deciding how to recoup costs from both downstream retail broadband subscribers and upstream ventures such as ISPs, Content Distribution Networks (“CDNs”) and content creators. Like credit card companies, last mile ISPs can strategically allocate financial burdens between two payment categories to maximize revenues. Credit card companies may provide consumers with “free” cards and even ones that provide a financial

⁸¹ *Id.* at 730. The court did note that in some instances, ISPs do create and distribute content, but in such instances common carriage requirements do not apply. 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.

⁸² Platform businesses compete in ‘multi-sided markets.’ For example, video game console companies such as Sony, Nintendo, and Microsoft compete for game developers and users, while payment card companies such as American Express, MasterCard, and Visa compete for merchants and cardholders. Platform businesses must deal with interdependent demand when devising pricing, production, and investment strategies. These strategies can be quite different from non-platform businesses that do not serve mutually dependent customer groups. The optimal price on a particular side of the market, whether measured socially or privately, does not follow marginal cost on that side of the market. Many platform businesses charge one side little or nothing; for example, most operating system vendors collect scant revenue from software developers who use their intellectual property. In many cases, the joint provision of a good that services multiple groups of customers makes the assignment of costs to any one side arbitrary. David S. Evans, *The Antitrust Economics of Multi-Sided Platform Markets*, 20 YALE J. ON REG. 325, 328 (2003); *See also*, LAYTON & ELALUF-CALDERWOOD, *supra* note 6; Inge Graef, Sih Yuliana Wahyuningtyas & Peggy Valcke, *Assessing Data Access Issues in Online Platforms*, 39 TELECOM. POL’Y, no. 5, 2015, at 375; Daniel M. Tracer, *Overcharge But Don’t Overestimate: Calculating Damages for Antitrust Injuries in Two-Sided Markets*, 33 CARDOZO L. REV., no. 2, 2011, at 807.

rebate with use. For consumers who pay on time, the credit card company must rely solely on the revenues generated from upstream vendors who pay a fee each time a card is used.

Broadband subsidies offset payments from retail subscribers by stopping the meter that otherwise would debit a monthly data downloading/uploading allowance. Subscribers exceeding their monthly data rate incur a surcharge for such an overage, or they have to make do with throttled service until the next month of service begins. Wireless data plans typically provide only a few gigabytes of content per month that subscribers will exhaust with the streaming of a few full length movies.⁸³ With skimpy data service allowances, zero rating options appear particularly attractive.

In many developed countries, zero rating provides a way for wireless subscribers to conserve a meagre monthly data allowance. Carriers offer different tiers of service based on content delivery speeds and monthly data rates. In an environment where wireless ISPs ration content downloading allotments, zero rating helps subscribers avoid exceeding their data allowance, which would trigger a surcharge.

In many developing countries, zero rating primarily offers inducements for new broadband subscriptions. While existing subscribers can conserve their data allowance just like what customers do in developed nations, ISPs and content aggregators, such as Facebook, offer zero rating initiatives to attract new users who previously lacked discretionary income, or interest in subscribing.

⁸³ See, e.g., *About Data Packages*, VERIZON WIRELESS, <https://www.verizonwireless.com/b2c/includes/plans/dataInfoOverlay.jsp> (last visited on Feb. 18, 2017).

Recently, the NRAs of several nations, including Canada, Chile, Egypt, India, Japan and several nations in the European Union, have prohibited zero rating.⁸⁴ However, the option exists in many other developed and developing nations. Zero rating constitutes a form of price discrimination, but is it unreasonable and undesirable? The answer to this question depends on how one frames the analysis because narrow application of economics principles favor subsidies, while normative goals, such as promoting openness, suggests that incumbents should not have options that likely will result in bolstered control over Internet access.

1) The Economics of Zero Rating

Massive demand for downloading and streaming video, along with other “over the top”⁸⁵ applications has strengthened last mile ISP negotiation leverage with both downstream subscribers and upstream sources and distributors of content. These ISPs have network access pricing power, particularly in nations lacking robust broadband competition, which includes the United States and most developing countries.⁸⁶ Even where adequate facilities-based competition exists, broadband subscribers typically select only one retail ISP to handle all of their broadband traffic. The FCC considers the state of limited competition and consumer selection of one carrier

⁸⁴ See Christopher T. Marsden, *Comparative Case Studies in Implementing Net Neutrality: A Critical Analysis of Zero Rating*, 13 SCRIPTED, no. 1, May 2016; BEREC, BEREC GUIDELINES ON THE IMPLEMENTATION OF EUROPEAN NET NEUTRALITY RULES BY NATIONAL REGULATORS (2016); ANTONIOS DROSSOS, THE REAL THREAT TO THE OPEN INTERNET IS ZERO-RATED CONTENT (2015); *Zero-rating of Video and Other Apps in EU and OECD Mobile Markets*, DIGITAL FUEL MONITOR, <http://dfmonitor.eu/zero-rating/> (last visited on Feb. 17, 2017); *2015 Open Internet Order*, *supra* note 5, at 5666–67; *United States Telecom Ass’n. v. FCC*, 825 F.3d 674 (D.C. Cir. 2016) (pet. for en banc rehearing pending).

⁸⁵ “Over-the-top VoIP [and other] services require the end user to obtain broadband transmission from a third-party provider, and providers of over-the-top [services] can vary in terms of the extent to which they rely on their own facilities.” *2010 Open Access Order*, *supra* note 51, at 17905.

⁸⁶ “We find that advanced telecommunications capability is not being deployed to all Americans in a reasonable and timely fashion.” *Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996, as Amended by The Broadband Data Improvement Act*, GN Dkt No. 15-191, 2015 Broadband Progress Report & Notice of Inquiry on Immediate Action to Accelerate Deployment, 31 FCC Rcd. 699, para. 1 (2016).

for all broadband service as validating the conclusion that retail ISPs have both the incentive and the ability to exploit their last mile “terminating monopoly”⁸⁷ in ways that can harm competition and consumers.

Last mile ISPs have raised broadband subscription rates and have sought surcharge payments from major upstream generators of traffic.⁸⁸ Rate increases help defray the substantial investment made to handle ever growing traffic volume, particularly full motion video, but they also can evidence the ability of last mile ISPs to raise rates without suffering subscriber churn, because no lower cost competitive alternative exists that offers comparable bit transmission speed and monthly data allowance.

The last mile broadband marketplace lacks facilities-based alternatives in some nations, including the United States, where cable television operators dominate.⁸⁹ While other wired and

⁸⁷ The Commission also convincingly detailed how broadband providers’ position in the market gives them the economic power to restrict edge-provider traffic and charge for the services they furnish edge providers. Because all end users generally access the Internet through a single broadband provider, that provider functions as a ‘terminating monopolist,’ with power to act as a ‘gatekeeper’ with respect to edge providers that might seek to reach its end-user subscribers. *Verizon v. FCC*, 740 F.3d at 646 (quoting *2010 Open Access Order*).

⁸⁸ Fitzgerald & Ramachandran, *supra* note 50.

⁸⁹ On January 29, 2016, we released the 2016 Broadband Progress Report, which found that advanced telecommunications capability was not being deployed to all Americans in a reasonable and timely fashion. We based our finding on the determination that, despite some advances in the deployment and availability of advanced telecommunications capability, these advances were not occurring broadly enough, or quickly enough, to satisfy the goals of section 706. In particular, the 2016 Broadband Progress Report noted that approximately ten percent of the population — nearly 34 million Americans — lacked access to fixed advanced telecommunications capability. Further, the 2016 Broadband Progress Report found a persistent urban-rural divide in access to broadband services, with Americans in rural areas and on Tribal lands approximately ten times more likely than those Americans in urban areas to lack access to services able to provide advanced telecommunications capability. The 2016 Broadband Progress Report separately concluded that deployment of advanced telecommunications capability to schools and classrooms continued to lag behind the needs of American students and educators. *Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996, As Amended By the Broadband Data Improvement Act*, GN Dkt. No. 16-245, Twelfth Notice of Inquiry, 31 FCC Rcd. 9140–41 (2016) (citations omitted); *See also, Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996, as Amended by the Broadband Data Improvement Act*, GN Dkt. No. 15-191, 2016 Broadband Progress Report, 31 FCC Rcd. 699 (2016).

wireless options exist, they each have quality of service and cost handicaps. Most telephone companies have retrofitted copper wire telephone lines to provide slow speed Digital Subscriber Line broadband service that cannot accommodate multiple, simultaneous video users. Some of these companies, such as AT&T and Verizon, now offer a faster and higher capacity option, using fiber optic cables, exclusively or in combination with existing copper wire plant. However, these companies operate in selected metropolitan areas that collectively do not come close to establishing a national service footprint. Wireless options offering increasing transmission speeds, but have monthly data caps, or “unlimited” data service plans that nevertheless trigger throttling after subscribers exceed a data consumption threshold. Satellite options generally have initial receiving equipment costs, comparatively higher monthly rates and lower data allowances than wired options. Additionally, the length of time it takes to send and receive satellite traffic causes signal delay (latency) problems for some applications.

Zero rating enables last mile ISPs to shift some or all of the total content delivery cost away from retail consumers and onto upstream carriers and sources of content. This strategy can maximize social welfare by increasing the number of broadband users, which in turn increases the value of access, and outcome economists label as positive network externalities.⁹⁰ With more and more subscribers joining the bandwagon, Internet content, accessibility, and value increases.⁹¹ Additional subscribers, including ones that require subsidy inducements, also help

⁹⁰ See JEFFREY EISENACH, THE ECONOMICS OF ZERO RATING (Mar. 2015); DOUG BRAKE, MOBILE ZERO RATING: THE ECONOMICS AND INNOVATION BEHIND FREE DATA (2016).

⁹¹ Broadband networks achieve positive network externalities as the number of access points and subscribers increase. For background on this economic concept, see John Farrell & Garth Saloner, *Standardization, Compatibility and Innovation*, 16 RAND J. OF ECON. 70 (1985); Michael L. Katz. & Carl Shapiro, *Network Externalities, Competition and Compatibility*, 75 AM. ECON. REV. 424 (1985); See also Mark A. Lemley & David McGowan, *Legal Implications of Network Economic Effects*, 86 CAL. L. REV. 479 (1998); Carl Shapiro, *Exclusivity in Network Industries*, 7 GEO. MASON L. REV. 673 (1999).

carriers recoup substantial sunk costs incurred in erecting a robust network capable of handling peak traffic requirements generated by consumer streaming of video content. Broadband infrastructure requires substantial initial investment, but the marginal cost of traffic switching and transmission traffic from one additional subscriber approaches zero.

On the other hand, uncalibrated subsidies and surcharge demands can distort the marketplace of ideas by creating discounts for accessing specific, curated content in a walled garden. Network neutrality advocates fear the next “killer application,” or source of “must see” content would not get a fair marketplace trial if such new ventures cannot afford to pay surcharges.⁹² In this scenario, incumbents maintain, or possibly strengthen their market dominance not by offering superior products and services, but by reducing opportunities for startup ventures to acquire market share.⁹³ Zero rating “hurts consumers because it allows providers to create artificial scarcity of choice and ‘corrupt[s] the growth of online services’”⁹⁴

2) Normative Concerns

Sponsored data can become part of a venture’s strategic campaign to stimulate interest in Internet-mediated services. For example, Facebook, had both public service and private profit objectives in mind when it devised its Internet Basics, subsidized access arrangement. The

⁹² See, e.g., Susan Crawford, *Introducing the Comcast Tax*, BLOOMBERG VIEW (Feb. 24, 2014, 3:24 PM), <http://www.bloombergvew.com/articles/2014-02-24/introducing-the-comcast-tax>; Tim Wu, *Comcast Versus the Open Internet*, NEW YORKER (Feb. 24, 2014), <http://www.newyorker.com/tech/elements/comcast-versus-the-open-internet>.

⁹³ Rebecca Curwin, *Unlimited Data, But a Limited Net: How Zero-Rated Partnerships Between Mobile Service Providers and Music-Streaming APPs Violate Net Neutrality*, 17 COLUM. SCI. & TECH. L. REV. 204 (2015); Jeremy Gillula & Jeremy Malcolm, *Internet.org is Not Neutral, Not Secure, and Not the Internet*, ELEC. FRONTIER FOUND. (May 18, 2015), <https://www.eff.org/deeplinks/2015/05/internetorg-not-neutral-not-secure-and-not-internet>.

⁹⁴ Richard A. Starr, *Net Neutrality: On Mobile Broadband Carriers and the Open Internet, the Commercially Reasonable Network Management Standard, and the Need for Greater Protection of the Open Internet*, 11 J. BUS. & TECH. L. 89, 103 (2016) (quoting Gautham Nagesh, *Mobile Networks Caught in the Open Internet Debate*, WALL ST. J. (Sept. 16, 2014, 8:05 PM), <http://www.wsj.com/articles/net-neutrality-heats-up-again-over-mobile-data-1410905961>).

company reaps at least some immediate and positive public relations dividends. In the longer term, its subsidized service may generate more subscribers, including ones previously unable to afford a subscription and others unwilling to allocate discretionary income for a paid subscription. At least some subscribers to a small portion of freely available Internet content may become paying customers for access to the entire inventory. Facebook can reasonably expect that at least some of today's free riders will become tomorrow's paying customers for both broadband Internet access and Internet-advertised goods and services. Facebook and others companies have emphasized altruistic reasons for subsidizing Internet access, while opponents emphasize ulterior motives including a strategy to dislodge, or neuter open Internet, network neutrality objectives. Opponents also note that zero rating sponsors reap ample benefits including the ability to generate more data for identifying Internet content interests and trends as well as usage dossiers of individual subscribers.⁹⁵ "[T]his smacks to some of calculated corporate self-interest dressed up as humanitarian rhetoric."⁹⁶

Opponents also identify a number of distortions zero ratings impose on the marketplace for ideas. Broadband access subsidies create incentives for consumers to migrate from metered to unmetered services. Opponents consider this migration as evidence that unmetered content sites achieve an unfair competitive advantage simply by being included in a limited walled garden of free content. Additionally, the subsidizing venture can specify the terms and conditions

⁹⁵ *Open Letter to Mark Zuckerberg Regarding Internet.org, Net Neutrality, Privacy, and Security*, FACEBOOK (May 18, 2015, 7:34 AM), <https://www.facebook.com/notes/access-now/open-letter-to-mark-zuckerberg-regarding-internetorg-net-neutrality-privacy-and-/935857379791271/>.

⁹⁶ *How to Win Friends and Influence People*, ECONOMIST (Apr. 9, 2016), <http://www.economist.com/news/briefing/21696507-social-network-has-turned-itself-one-worlds-most-influential-technology-giants>.

for such access quite possibly prohibiting, or limiting consumers' use of security and privacy safeguards such as encryption and software that blocks all or some advertising.⁹⁷

Opponents also have grave concerns that subsidies will bolster the ongoing concentration of control and centralization of power by Internet gatekeepers able to rewrite open Internet rules and thwart “best efforts,” neutral and non-discriminatory access to content:

By turning service providers into gatekeepers—even benevolent ones—zero rating helps transform the Internet from a permissionless environment (in which anyone can develop a new app or protocol and deploy it, confident that the Internet treats all traffic equally) into one in which developers effectively need to seek approval from ISPs before deploying their latest groundbreaking technology.⁹⁸

Broadband subsidies can help perpetuate the status quo where large companies like Facebook and specific nations, such as the United States, continue to dominate and extend their control.⁹⁹ However, consumers can and will pay for compelling content even when ample free content exists. Similarly, zero rating can incubate and nurture interest in the Internet, without molding subscribers into consumers with a taste only for foreign content produced by specific

⁹⁷ [D]espite his claims to the contrary Free Basics clearly runs against the idea of net neutrality by offering access to some sites and not others. While the service is claimed to be open to any app, site or service, in practice the submission guidelines forbid JavaScript, video, large images, and Flash, and effectively rule out secure connections using HTTPS. This means that Free Basics is able to read all data passing through the platform. The same rules don't apply to Facebook itself, ensuring that it can be the only social network, and (Facebook-owned) WhatsApp the only messaging service, provided. Mark Graham, *Facebook Is No Charity, and the 'Free' in Free Basics Comes at a Price*, CONVERSATION (Jan. 11, 2016, 1:19 AM), <https://theconversation.com/facebook-is-no-charity-and-the-free-in-free-basics-comes-at-a-price-52839>.

⁹⁸ Jeremy Malcolm, Corynne McSherry & Kit Walsh, *Zero Rating: What It Is and Why You Should Care*, ELEC. FRONTIER FOUND. (Feb. 18, 2016), <https://www.eff.org/deeplinks/2016/02/zero-rating-what-it-is-why-you-should-care>.

⁹⁹ “[Facebook, the] world’s largest social network has 1.6 billion users, a billion of whom use it every day for an average of over 20 minutes each. In the Western world, Facebook accounts for the largest share of the most popular activity (social networking) on the most widely used computing devices (smartphones); its various apps account for 30% of mobile internet use by American. And it is the sixth-most valuable public company on Earth, worth some \$325 billion.” *Imperial Ambitions*, ECONOMIST (Apr. 9, 2016), <http://www.economist.com/news/leaders/21696521-mark-zuckerberg-prepares-fight-dominance-next-era-computing-imperial-ambitions>.

companies whose marketing agenda dovetails with the political, industrial policy, and foreign relations interests of their host countries.

Most opponents of zero rating emphasize their opposition to selective and targeted subsidies whereby only specific web sites and applications qualify. Few would oppose discounted, or free access to the entire Internet cloud ¹⁰⁰ at bit transmission speeds below what paying subscribers can secure. Most zero rating arrangements do not offer complete Internet access, because doing so would reduce the demand aggregation and funneling process achieved when a curated and limited number of web site options exist. In developed nations, where ISPs might offer unlimited data plans, the attractiveness of zero rating would diminish, as would the concerns it can generate. Until that time, opportunity to stop the data meter will have a significant impact on the broadband consumption behavior of users in developed and developing countries alike.

Opponents to zero rating also assert that it contributes to the dismantling of fundamental design goals that support an open and neutral Internet. ¹⁰¹ The Internet's operating standards and protocols support "end-to-end" connectivity¹⁰² from content source at the edge of the Internet

¹⁰⁰ 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. "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." William Jeremy Robison, *Free at What Cost?: Cloud Computing Privacy Under The Stored Communications Act*, 98 GEO. L. J. 1195, 1199 (2010).

¹⁰¹ Zero-rating is the concept that ISPs do not count the data used from certain applications against users' data caps. In a way, it is a different means to the same end: instead of paying more to have faster lanes, ISPs charge less for users to access certain sites. Unlike fast lanes, many view zero-rating as a solution to the problem that many face: users cannot access websites because they cannot afford them. Unfortunately in the long run, it involves the same underlying concept: big companies are paying ISPs to have their content 'favored' over others. Therein lies the problem. Sara Kamal, *If It Isn't Broken, You're Not Looking Hard Enough: Net Neutrality and Its Impact on Minority Communities*, 68 FED. COM. L.J. 329, 350 (2016).

¹⁰² See Mark Lemley & Lawrence Lessig, *The End-of End-to-End: Preserving the Architecture of the Internet in the Broadband Era*, 48 UCLA L. REV. 925 (2001).

cloud all the way through it and onward to individual subscribers. If ISPs can serve as gatekeepers and even controllers of essential, bottleneck facilities, then they can exploit the power to close off and balkanize the Internet by creating incentives for consumers to “make do” with subsidized content. Just as the network neutrality debate addresses whether ISPs can create fast and slow lanes for accessing content, the zero rating debate considers whether ISPs can offer subsidized access to a limited number of sites whose owners have agreed to subsidize such access. Zero rating critics “are fearful that [companies like Facebook] might control poor people’s use of the internet, giving access only to a few sites including Facebook but not introducing them to an ‘open’ web.”¹⁰³

As Internet access becomes increasingly important to individual and national welfare, one can consider broadband access subsidies an effective strategy for sharing an essential, global resource and medium for free expression.¹⁰⁴ The International Telecommunication Union and other inter-governmental organizations have explored ways to link broadband access with fundamental human rights that should be universally recognized and promoted.¹⁰⁵ This association links Internet access with larger guarantees for freedom of expression and non-discrimination. Depending on how one frames this matter, zero rating can promote first time, sustainable access to Internet-mediated forums, where poverty, network constraints, and the lack

¹⁰³ *How to Win Friends and Influence People*, ECONOMIST (Apr. 9, 2016), <http://www.economist.com/news/briefing/21696507-social-network-has-turned-itself-one-worlds-most-influential-technology-giants>.

¹⁰⁴ Arturo J Carrillo, *Having Your Cake and Eating It Too? Zero-Rating, Net Neutrality and International Law*, 19 STAN. TECH. L. REV. 364 (2016).

¹⁰⁵ See, e.g., BROADBAND COMMISSION FOR DIGITAL DEVELOPMENT, THE STATE OF BROADBAND 2015: BROADBAND AS A FOUNDATION FOR SUSTAINABLE DEVELOPMENT (Sept. 2015); Council of Europe, *The Right to Internet Access*, PARLIAMENTARY ASSEMBLY (2014); OFFICE OF THE U.N. HIGH COMM’R FOR HUMAN RIGHTS, REPORT OF THE SPECIAL RAPPORTEUR ON THE PROMOTION AND PROTECTION OF THE RIGHT TO FREEDOM OF OPINION AND EXPRESSION (2011).

of digital literacy have thwarted progress. Alternatively, it risks condemning many people to an inferior and limited walled garden of sites selected by corporations driven by mostly commercial motivations.

While supporters of zero rating applaud free access by segments of the population otherwise unlikely to achieve any sort of connectivity, opponents emphasize risks to the fundamental premise that ISPs must treat all online data and content equally “to guarantee the free flow of information as well as unfettered access to it.”¹⁰⁶ Opponents of zero rating believe that intergovernmental agreements supporting freedom of expression in legacy media such as broadcasting and print media should extend to Internet-mediated forums. Arguably, “the right to access the Internet, or ‘connectivity,’ is an equal normative imperative to the realization of freedom of expression.”¹⁰⁷ In this context, zero rating would constitute a flawed initiative that creates a comparatively inferior Internet for poor people, unable to afford the far more robust Internet ecosystem that requires a paid, broadband subscription.

A conversation about Internet access in the context of human rights readily dovetails with the recognized mission of governments to promote available and affordable access to both voice telephone and data services. Advocates for zero rating consider an advertiser subsidy much like a tax payer, or service consumer payment into a fund earmarked for telecommunications development and universal service. These universal subsidy funds provide access opportunities for people otherwise unwilling, or unable to pay for access. Facebook asserts that its Free Basics zero rating campaign has “brought 25 million people online who otherwise would not be.”¹⁰⁸

¹⁰⁶ Carrillo, *supra* note 105, at 3.

¹⁰⁷ *Id.* at 35.

¹⁰⁸ *Our Impact*, INTERNET.ORG, <http://info.internet.org/en/impact/> (last visited on Feb. 17, 2017).

Founder and Chairman Mark Zuckerberg expressed the view that zero rating initiatives could support network neutrality while achieving measurable universal access progress:

If we accept that everyone deserves access to the internet, then we must surely support free basic internet services. That's why more than 30 [now 42 as of October, 2016] countries have recognized Free Basics as a program consistent with net neutrality and good for consumers. Who could possibly be against this? . . .
If people lose access to free basic services they will simply lose access to the opportunities offered by the internet today. ¹⁰⁹

Advocates for zero rating consider it a means to “jump start a virtuous feedback loop that moves the local economy into a high connectivity equilibrium”¹¹⁰ by first stimulating interest in popular content from foreign nations, but later increasing demand for local content which in turn creates incentives for more investment in infrastructure and even more local content as a higher share of the population seeks online access.

Opponents of zero rating have expressed concerns that corporate subsidies may create disincentives for national governments to pursue universal service funding initiatives, or to extend, or replace voice telephone subsidies to include broadband access: “[P]roviding limited access, as a policy matter, may dissuade governments and others from working towards solutions to affordable full access.”¹¹¹ Reducing or eliminating more ambitious access goals risks complacency and satisfaction that enlightened corporate interests will suffice. Absent more robust and expansive universal access initiatives, zero rating only will support access to a tiny fraction of what the Internet has to offer by a population far smaller than that targeted by nationwide universal funding initiatives.

¹⁰⁹ Mark Zuckerberg, *Free Basics Protects Net Neutrality*, TIMES OF INDIA (Dec. 28, 2015, 12:01 AM), <http://blogs.timesofindia.indiatimes.com/toi-edit-page/free-basics-protects-net-neutrality/>.

¹¹⁰ DIANA CAREW, ZERO-RATING: KICK-STARTING INTERNET ECOSYSTEMS IN DEVELOPING COUNTRIES (Mar. 2015).

¹¹¹ ROSSINI & TAYLOR MOORE, *supra* note 6, at 12.

The full benefits from the Internet accrue when all segments of society have affordable broadband access options via devices that equally support downloading content as well as creating and uploading it. When compared to personal computers and wired broadband access, wireless options typically offer consumers comparatively inferior and more expensive upstream access.¹¹² Wireless access typically combines carrier metering and higher per unit of capacity charges as compared to wireline options. Similarly, small screens and keypads, as well as limited plugs and interfaces for using larger, external equipment appear to create disincentives for wireless broadband users to create and disseminate content.

Even if ergonomics, cost and interface limitations did not exist, zero rating opponents worry that ISPs can bolster their role as content gatekeepers. Cost allocation and recovery decisions can have a major impact on consumer incentives to embrace a free, walled garden of content versus costlier and possibly harder to reach sources. When ISPs opt to recover comparatively more capital and operating expenses from upstream content and services providers than end users, the zero rated access option becomes even more attractive.

Perhaps unavoidably, questions about access to the Internet also raise issues of its control, particularly by governments. Inter-governmental forums assessing how to make the Internet more accessible and democratic ironically also trigger interest by governments concerned about such access and keen on limiting it. Such nations actively seek to reduce United States dominance, particularly in the context of Internet governance issues such as who shall manage the registration of domain names and the online look up function used to determine

¹¹² Phillip Napoli & Jonathan Obar, *The Emerging Mobile Internet Underclass: A Critique of Mobile Internet Access*, 30 INFO. SOC'Y J. 323 (2014).

optimal routing of traffic.¹¹³ Currently, it remains unclear whether these governments would welcome more active and intrusive traffic management by ISPs. On one hand, this can facilitate government monitoring and control of the Internet as well as the ability to identify what network management and surveillance tactics ISPs can implement. On the other hand, this can make the Internet more accessible, porous and competitive thereby reducing the effectiveness of government monitoring, filtering and censorship.

B. Concerns in Developing Nations

While many developing nations have embraced zero rating plans, other governments have not.¹¹⁴ The highly-publicized rejection in India provides a case study in how some national government appear to conclude that the costs and harms resulting from zero rating schemes outweigh the benefits.

India's telecommunications and Internet regulator has prohibited zero-rating for at least two years. After releasing a consultation paper in December, 2015¹¹⁵ the Telecom Regulatory Authority of India ("TRAI") soon decided to prohibit zero rating based on the conclusion that such arrangements constitute a type of tariff discrimination for similar data services that would interfere with the duty of ISPs to keep the Internet open and non-discriminatory.¹¹⁶

¹¹³ See e.g., LAURA DENARDIS, *THE GLOBAL WAR FOR INTERNET GOVERNANCE* (2014); MILTON L. MUELLER, *NETWORKS AND STATES* (2013); Laura DeNardis, *Five Destabilizing Trends in Internet Governance*, 12 I/S: J.L. & POL'Y FOR INFO. SOC'Y 113 (2015); Vint Cerf, Patrick Ryan & Max Senges, *Internet Governance is Our Shared Responsibility*, 12 I/S: J.L. & POL'Y FOR INFO. SOC'Y 113 (2016).

¹¹⁴ See ARIEL FUTTER & ALISON GILLWALD, *ZERO-RATED INTERNET SERVICES: WHAT IS TO BE DONE?* (2015); Susan Chalmers & Ginger Paque, eds., *Internet Global Forum 2015: A Dialogue on Zero Rating and Network Neutrality*, INTERNET GOVERNANCE FORUM (Nov. 12, 2015), <http://www.intgovforum.org/cms/documents/igf-meeting/igf-2015-joao-pessoa/igf2015-reports/583-igf2015a-dialogue-on-zero-rating-and-network-neutrality/file>.

¹¹⁵ TELECOM REGULATORY AUTH. OF INDIA, *CONSULTATION PAPER ON DIFFERENTIAL PRICING FOR DATA SERVICES*, CONSULTATION PAPER NO. 8/2015 (2015).

¹¹⁶ *Id.*

TRAI determined that offering a subsidy for service to some, but not all broadband subscribers, would violate Section 11 (2) of the Telecom Regulatory Authority of India (Amendment) Act of 2000¹¹⁷ that authorizes TRAI to examine telecommunications service rates to ensure that they comport with “regulatory principles of non-discrimination, transparency, non-predatory, non-ambiguous, not anti-competitive and not misleading”¹¹⁸ Because sponsored data results in differential pricing for data usage based on which website, application, or platform a subscriber accesses, TRAI concluded that it should prohibit any such arrangement.

TRAI acknowledged that “differential tariff offerings have positive as well as negative impact.”¹¹⁹ Using what appears to be a cost/benefit analysis, the Indian regulator concluded that zero rating, constituted a form of harmful differential pricing. The regulator prohibited the practice, because of the anticipated harm resulting when telecommunications service providers can offer “different tariffs based on content, service, application or other data that a user is accessing or transmitting on the internet”¹²⁰ “[A] consumer cannot be charged differently based on whether she is browsing social media site A or B, or on whether she is watching streaming videos or shopping on the internet.”¹²¹

TRAI acknowledged, but subsequently appears to have discounted, consumer welfare enhancements including zero rating promotion of product innovation, investment in broadband infrastructure, competition and more Internet subscriptions. The Authority emphasized the potential for anticompetitive conduct, reduction in positive network externalities and alteration in

¹¹⁷ Telecom Regulatory Authority of India (Amendment) Ordinance, 2000, § 11(2).

¹¹⁸ *Id.* at 5.

¹¹⁹ *Id.* at 6.

¹²⁰ *Id.* at 14.

¹²¹ *Id.*

consumers' online behavior. Rather than adopt an ex post regulatory regime for investigating complaints on a case-by-case basis, TRAI chose an absolute, ex ante bar on differential tariffs.¹²² It emphasized the need for clarity, the view that ad hoc investigations would be costly and time consuming, and the conclusion that well-financed actors could take advantage of the regulatory process and "tilt the playing field against those who do not have the resources to pursue regulatory to legal actions" such as "end users, low-cost innovators, start-ups, non-profit organizations, etc."¹²³

C. Concerns in Developed Nations

Stakeholders in developed nations largely consider zero rating the latest wave of issues raised in the network neutrality debate.¹²⁴ ISPs and wireless carriers have devised many types of zero rating offers with an eye toward devising flexible and attractive pricing plans.¹²⁵ The emphasis appears to lie in upselling existing subscribers to a more expensive service tier offering a higher data allotment, reducing subscriber cancellation of service (churn) and stimulating greater interest in streaming video and music services rather than promoting universal service objectives. Most zero rating plans offer reduced out of pocket costs to paying subscribers for

¹²² See Erik Stallman, *A Hard Look at India's Ban on Zero Rating*, CDT (Feb. 10, 2016), <https://cdt.org/blog/a-hard-look-at-indias-ban-on-zero-rating/>.

¹²³ The Telecom Regulatory Authority of India (Amendment) Ordinance, 2000, § 11(2), specified that its prohibition only applies to discounts available for accessing specified web sites and applications. Internet access providers can offer discounts for access to the entire Internet and during emergencies.

¹²⁴ See, e.g., BEREK, ABOUT BEREK'S NET NEUTRALITY GUIDELINES (2016).

¹²⁵ See, e.g., *Sponsored Data*, AT&T, <http://www.att.com/att/sponsoreddata/en/index.html> (last visited on Feb. 17, 2017); *Introducing Binge On*, T-MOBILE, <http://www.t-mobile.com/offer/binge-on-streaming-video.html> (last visited on Feb. 17, 2017); *Go90 FAQs*, VERIZON WIRELESS, <https://www.verizonwireless.com/support/go90-faqs/> (last visited on Feb. 17, 2017); *Stream TV FAQs*, COMCAST, <https://customer.xfinity.com/help-and-support/cable-tv/stream-faqs> (last visited on Feb. 17, 2017); Comcast has announced plans to offer Netflix access via the company's set top box. See Klint Fintley, *Comcast's Netflix Deal Could Open a New Front in the Net Neutrality War*, WIRED (July 8, 2016, 7:00 AM), <http://www.wired.com/2016/07/comcasts-netflix-deal-open-new-front-net-neutrality-war/>. This arrangement may create new network neutrality enforcement issues if the streaming of Netflix content qualifies for zero rating, or access without a broadband subscription.

access to video and music programming as opposed to offering a zero cost opportunity for prospective, low income consumers.

In the United States, many zero rating options currently exist, despite vocal opposition by some network neutrality advocates.¹²⁶ In its 2015 Open Internet Order, the FCC did not explicitly ban zero-rating, opting instead to use a case-by-case examination whether the tactic harms competition and consumers.¹²⁷ This evaluation assesses whether zero rating violates a general prohibition on practices “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”¹²⁸

Stanford Law Professor Barbara van Schewick has made presentations to officials at the FCC asserting that zero rating plans, like that offered by wireless carrier TMobile violate network neutrality principles.¹²⁹ She asserts that the arrangement achieves many of the harmful outcomes resulting from practices outlawed by the FCC, e.g., deliberate traffic blocking and slowing as well as offering to prioritize specific traffic for additional compensation. Professor van Schewick argues that zero rating distorts competition, limits user choice, stifles free expression and harms innovation. She suggests that TMobile could avoid violating network neutrality principles by offering a zero rating option, at a lower bit transmission speed for all

¹²⁶ As of early 2017, AT&T, Verizon and TMobile had zero rating options available to their millions of wireless subscribers. See WIRELESS TELECOMMUNICATIONS BUREAU ZERO RATING REPORT, *supra* note 37, at 8–10.

¹²⁷ 2015 Open Internet Order, *supra* note 5, at 5668.

¹²⁸ *Id.* at 5659; 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.” *Id.* at 5666.

¹²⁹ BARBARA VAN SCHEWICK, T-MOBILE’S BINGE ON VIOLATES KEY NET NEUTRALITY PRINCIPLES, (Jan. 29, 2016); See also, Barbara van Schewick, *Network Neutrality and Quality of Service: What a Non-Discrimination Rule Should Look Like*, 67 STAN. L. REV. 1 (2015).

traffic, offering unlimited video service, or expanding the monthly data allowance for subscribers.

Senior management at the FCC have sent mixed messages to stakeholders. On one hand, FCC Chairman Thomas Wheeler¹³⁰ has expressed support for specific zero rating plans, including ones that offer unmetered access to popular video programming sources such as Netflix, YouTube, HBO, ESPN and Hulu as well as music content from such popular sources as Pandora, Rhapsody, iHeartRadio, iTunes Radio, Slacker and Spotify. On the other hand, the FCC have send formal queries to ventures offering zero rating plans with an eye toward understanding whether and how these arrangements comply with network neutrality rules and requirements.¹³¹ In yet another twist, FCC Chairman Ajit Pai unilaterally ordered the termination of further examination of wireless carriers' zero rating offers.¹³²

III. Is Zero Rating Akin to a Toll-free Telephone Number?

Advocates for zero rating analogize the service as the Internet-equivalent to a toll-free telephone number. The analog makes sense in some ways, but not in others. Both pricing arrangements eliminate, or reduce consumers' direct, out of pocket costs for accessing a service. Both use payments by an upstream vendor to defray the costs incurred by downstream consumers. As well, each model shows how, in a two-sided market, consumers can avoid, or

¹³⁰ Jon Bodkin, *T-Mobile's Data Cap Exemption For Video Gets FCC Chairman's Approval*, ARS TECHNICA (Nov. 19, 2015, 12:28 PM), <http://arstechnica.com/business/2015/11/t-mobiles-data-cap-exemption-for-video-gets-fcc-chairmans-approval/>.

¹³¹ Cecilia Kang, *F.C.C. Asks Comcast, AT&T and T-Mobile About 'Zero-Rating' Services*, N. Y. TIMES (Dec. 17, 2015, 10:19 PM), http://bits.blogs.nytimes.com/2015/12/17/f-c-c-asks-comcast-att-and-t-mobile-about-zero-rating-services/?_r=0; See also WIRELESS TELECOMMUNICATIONS BUREAU ZERO RATING REPORT, *supra* note 37.

¹³² Thomas Gryta, *FCC Ends 'Zero-Rating' Review*, WALL ST. J. (Feb. 3, 2017), <https://www.wsj.com/articles/fcc-ends-zero-rating-review-1486157682>.

reduce costs when some vendors agree to defray both the cost of content creation and its delivery. Few object when a “bricks and mortar” vendor offers to waive shipping, handling and other delivery charges that would have raised consumers’ out of pocket costs.

On the other hand, one can readily differentiate the mass media broadcast of advertising to a large audience and a selective subsidy aiming to increase traffic to specific Internet-mediated content and service by individuals. Providers of toll free telephone numbers operate in a robustly competitive marketplace. Some vendors of products and services see a marketing advantage in removing a minor cost which typically constitutes more of an irritant than a barrier to consummation of the transaction. Similarly, removal of a long-distance telephone charge does not explicitly seek to expand the socio-economic range of prospective customers. Vendors absorb telephone toll charges much like they might reimburse customers for vehicle parking fees, or offer to waive shipping and handling fees for customers reaching an aggregate purchase threshold.

A. Differentiating Free Wi-Fi From Free or Reduced Cost Broadband

Zero rating plans have some parallels with free Wi-Fi access, but significant differences exist as well. Both use subsidies to provide broadband access, and both types of subsidizers expect to accrue something of value in return. Commercial and non-commercial Wi-Fi subsidizers expect to generate either quantifiable benefits, e.g., more coffee sales, or less measurable public benefits, e.g., a more vibrant central business district. Likewise, zero rating providers seek to increase revenues, both in terms of subscriber numbers and revenues as well as advertising revenues. Non-quantifiable benefits include improved public relations and image as a venture that can jointly enhance value for shareholders while also promoting social welfare.

Wi-Fi and zero rated broadband access substantially differ in geographical scope and overall impact. Typically, Wi-Fi access occurs in small islands of connectivity having no way to serve mobile users. Wi-Fi hotspots provide broadband access in specific, fixed commercial (coffee shops) and non-commercial (libraries) locations. Zero rated service offers subsidies to wireless mobile users as well as fixed wireline subscribers throughout a nation. Free Wi-Fi increasingly has become a welcomed amenity while zero rated service is mostly a new marketing strategy. Most Wi-Fi hotspot users like having the opportunity to avoid debiting their expensive monthly wireless data plan as opposed to having first time access to broadband services.

Wi-Fi access typically occurs on an ad hoc, occasional basis, when a user happens to be located within the small “footprint” of access. Subscribers to zero rated services typically use the service frequently and in many locations. Arguably, Wi-Fi access provides a free option to many users who otherwise could resort to metered service, while zero rated service may constitute the only affordable option available.

IV. The Challenge for National Regulatory Authorities

Zero rating offers identifiable and possibly measurable advantages, but also presents harms that are not as easily detected, or assessed. Advocates for zero rating may eventually be able to prove an aggregate increase in broadband wireless access as well as produce statistics identifying improved market penetration. Opponents can identify several negative consequences, but they cannot readily prove causality, nor quantify the harms caused to existing and potential content providers and broadband subscribers.

NRAs face a quandary in balancing measurable positive effects against plausible, but not quantifiable negative impacts. “The clear benefits of providing even limited access at an

affordable price must be balanced against the potential harms both to those individuals receiving access and the macro effects on the Internet and competition as a whole.”¹³³

A. Recommended Balancing Safeguards

The significant benefits accruable from zero rating warrant inclusion in the collection of government and corporate strategies for promoting universal access to affordable broadband service. Zero rating creates new incentives on the demand side, while most governmental initiatives have concentrated on supply-side stimulation with financial subsidies flowing to carriers.¹³⁴ NRAs should embrace zero rating as one of many demand-side stimulation strategies to raise interest in broadband services by people lacking discretionary income, or an understanding of the individual and societal benefits generated by Internet access.

Embracing and supporting zero rating parallels ongoing efforts to promote universal service with cross-subsidies, typically flowing from existing consumers to some prospective, or impoverished ones. Governments structure universal service funding initiatives to achieve the greatest progress with the least amount of marketplace distortion. Such calibration and attention to detail also should apply to governmental assessment of zero rating initiatives.

1. Apply Qualifying Criteria

Currently, many zero rated services require nothing more than the downloading of application software that provide access to anyone at the click of an icon. The absence of a qualification process has adverse effects that a more calibrated method would eliminate, or

¹³³ ROSSINI & MOORE, *supra* note 6, at 12.

¹³⁴ Mark Cooper, *The Long History and Increasing Importance of Public-Service Principles for 21st Century Public Digital Communications Networks*, 12 J. TELECOM. & HIGH TECH. L. 1 (2014); Rob Frieden, *Assessing the Need for More Incentives to Stimulate Next Generation Network Investment*, 7 I/S: J. L. & POL’Y INFO. SOC’Y 207 (2012); Krishna Jayakar & Harmeet Sawhney, *Universal Service: Beyond Established Practice to Policy Space*, TRPC (2003).

reduce. Without a vetting procedure, anyone can tap an access subsidy, including people with ample income. Marketplace distortions increase and positive benefits decrease when a universal service subsidy mechanism is not limited to low income prospective users and other qualified groups. The absence of a process for qualifying zero rating applicants provides subsidized access to users simply looking for ways to conserve their monthly data plan allocation and avoid service throttling or surcharges.¹³⁵ NRAs should consider creating and implementing a simple and short application process that limits zero rating opportunities to low income, prospective broadband subscribers.

The process by which NRAs administer universal service funding programs provides an easily applied model for implementing a better calibrated zero rating program. Existing universal service subsidizes for voice, telephone, and broadband service are typically limited to individuals who otherwise could not afford service, with some funds earmarked to promote computer literacy which in turn can enhance the perceived value in accessing the Internet. Universal service funding administrators need to conserve subsidies in light of caps on available funds. Accordingly, funding programs seek to limit fraud, waste, inefficiency, and funding users fully capable of paying for service. As these programs have the primary mission of increasing market penetration, neither service providers nor consumers can credibly balk at initiatives designed to serve specific, under-served segments of the population.

¹³⁵ Increasingly even wireline broadband services have caps on data usage, thereby creating incentives for subscribers to find and use zero rating options. *See, e.g., Terabyte Internet Data Usage Plan*, COMCAST, <https://dataplan.xfinity.com/faq/> (last visited on Feb. 17, 2017); Thomas Gryta & Shalini Ramachandran, *Broadband Data Caps Pressure 'Cord Cutters*, WALL ST. J. (Apr. 21, 2016, 12:57 PM), <http://www.wsj.com/articles/broadband-data-caps-pressure-cord-cutters-1461257846>.

Most universal service funding programs target impoverished, non-subscribers.¹³⁶ Zero funding sources might want to attract and serve anyone, particularly ones with ample discretionary income to consume advertised goods and services. Indeed, most zero rating offers in developed countries are not limited to non-subscribers and the poor. Incumbent carriers and market entrants alike see zero rating as a vehicle to stimulate aggregate demand and also to create an incentive for existing subscribers to upgrade to a more expensive service tier that qualifies for zero rated content access. For example, before it emphasized many data service tiers, including “unlimited” access subject to throttling, TMobile limited access to its zero rated Binge On service to subscribers paying for more expensive service tiers.¹³⁷ NRAs should emphasize the assertions by zero rating advocates that the primary purpose lies in promoting access by poor and neglected prospective users.

NRAs should reduce data plan conservation strategies by existing subscribers, or at least consider this user group separately from the smaller set of qualified, low-income subscribers. The most robust and greatest subsidy amount should be limited to the most financially challenged users. Qualification criteria should examine the prospective user’s income and not simply age, location and subsidy-free market penetration.

In the United States, universal service subsidies are available to carriers serving rural areas and low income residents.¹³⁸ Carriers qualify by operating in areas with low population

¹³⁶ See, e.g., Stephanie Mariani, *Universal Internet Access as a Tool to Fight Poverty: The FCC’s Lifeline Program*, 23 GEO. J. ON POVERTY L. & POL’Y 551 (2016); Olivier Sylvain, *Network Equality*, 67 HASTINGS L.J. 443 (2016); Jodie Griffin, *Universal Service in an All IP World*, 23 COMMLAW CONCEPTUS 346 (2015); Brooke Menschel, *One Web to Unite Us All: Bridging the Digital Divide*, 29 CARDOZO ARTS & ENTMT’L L.J. 143 (2011).

¹³⁷ TMobile now offers most subscribers zero rating access to over 100 music and video services, but throttles video service to 480 lines of resolution. See *TMobile One*, T-MOBILE, <http://www.t-mobile.com/cell-phone-plans.html> (last visited Feb. 26, 2017).

¹³⁸ *Lifeline Support for Affordable Communications*, FCC, <https://www.fcc.gov/consumers/guides/lifeline-support-affordable-communications> (last visited on Feb. 17, 2017).

density and high operating costs. Individual consumers qualify by showing an income at or below 135% of federal Poverty Guidelines, or participation in certain assistance programs. The Lifeline assistance program provides a discount on monthly voice wireline or wireless service of \$9.25 per month. In the near future, the program will support broadband and broadband-voice bundles, but only one subsidy per household.

Best practices in universal service subsidy programs include strict adherence to qualification criteria; vigilance for fraudulent registrations and other wasteful practices; specified time periods, subject to renewal; limiting service to one handset per household; and the goal of promoting transition to unsubsidized access. Best practices for zero rating include efforts to encourage the broadest possible sponsorship and web sites and close scrutiny of broadband service throttling penalties to ensure they are cost-based and not designed to force migration to more costly data plans.

A sophisticated assessment of zero rating broadband access rejects exaggerated claims that subsidies will dismantle an open Internet, thwart innovation and eliminate incentives for innovation. Such scrutiny also dispels the summary conclusion that zero rating cannot possibly cause any harm to consumers, competition and the marketplace of ideas. If completely left to the whims and marketing strategies of major incumbent carriers and content providers, subsidies can bolster the status quo and make it even more unlikely for a disruptive technology, content source or application creator to acquire a sustainable market share. On the other hand, a complete prohibition prevents creative and welfare enhancing pricing arrangements and strategies to stimulate demand.

NRAAs should not rely on ex ante rules that bar subsidies and provide definitions that attempt to identify harmful practices. Instead, they should provide a forum for timely resolution of complaints when and if they arise. NRAAs will continue to struggle to find a lawful way to impose open Internet rules calibrated to sanction only harmful quality of service and price discrimination without creating investment disincentives. Rather than concentrate on setting rules, they should emphasize dispute resolution.