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Federal Communications Commission
Washington, D.C. 20554**

In the Matter of)
) WC Docket No. 17-108
Restoring Internet Freedom)

**Policy Comments
of the
International Center for Law & Economics**

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Executive Summary

- **The *2015 OIO* fails to employ even the most fundamental elements of “reasoned decisionmaking”**

Federal administrative agencies are required to engage in “reasoned decisionmaking” based on a thorough review and accurate characterization of the record. Their analysis must be based on facts

and reasoned predictions; it must be rooted in sound economic reasoning; it must be logically coherent; it must not entail subterfuge or misleading statements. On even these most basic grounds the 2015 OIO falls short.

The entire open Internet rulemaking enterprise is an exercise in *post hoc* rationalization – the formulation of *policy*, not statutory interpretation. Net neutrality was determined by certain activists to be “necessary;” proponents were unable to get it from Congress; the FCC was willing; and it tried at least three times to cobble together some statutory basis to justify its preference for open Internet rules, as opposed to determining that such rules were necessary to enforcing a particular statutory provision.

The *post hoc/ultra vires* problem with the 2015 OIO is disturbingly similar to the one at issue in *State Farm*, which sets the standard by which the sufficiency of the Commission’s analysis is judged. In that case, the Court held that an agency’s (NHTSA’s) decisionmaking did not follow from the analysis it undertook, nor the statutory purpose it purported to further. The same is true here.

If *deployment* really were the aim of the 2015 OIO, the FCC could have directly encouraged it through any number of more direct (and almost certainly more effective) means. Instead, the Commission concocted a regulatory Rube Goldberg apparatus to do so only, at best, indirectly – and in a way that happened also to further a different, arguably *ultra vires* objective.

Perhaps most tellingly, the Commission was forced to undertake a series of actions, superficially independent of the 2015 OIO, in order to engineer several of the factual predicates necessary to enable it to justify its rule under the statute. An agency properly acting within the scope of its authority would not have to work so hard to fit the round peg of its chosen policy into the square hole of its statute.

- **The defective economics and unsupported assertions of the “virtuous cycle”**

Having manufactured a factual predicate sufficient to justify a solution, the Commission set about in the 2015 OIO to justify its *preferred* “solution.” Its primary and overarching argument in support of the 2015 OIO’s reclassification of broadband access under Title II and adoption of specific rules is the “virtuous cycle” borrowed from the 2010 OIO.

But the virtuous cycle fails to justify the Commission’s chosen course of action. Despite a purported history of abuse, the Commission itself discusses only a handful of examples that could even plausibly be considered conduct that was both harmful and amenable to prevention or even mitigation by the *Order*. But a little economics would tell you that that is not surprising. There are numerous incentives for ISPs to adopt net neutrality as the norm if indeed it benefits consumers – *i.e.*, if it is, as the virtuous cycle theory requires, viewed by consumers as a quality enhancement.

Absent an assessment of the actual or likely welfare effects, it is impossible to say *ex ante* that consumer welfare in general, and content production in particular, is best served by policies aimed at encouraging innovation and investment in content over networks.

The flimsiness of the Commission's virtuous circle theory is evident throughout the 2015 OIO's efforts intended to establish its veracity. The Order's connection between the need for *rules* to protect openness and the flourishing described is not, in fact, on evidence in the record. Investment and innovation have demonstrably flourished both with and without rules; openness has also been the norm both with and without rules. Absent careful statistical analysis to demonstrate a causal relationship connecting rules to openness to investment and innovation, there is *not*, in fact, evidence on the record to support the need for rules.

Economist George Ford has provided the only statistically valid analysis of the current investment data, which strongly suggests that the threat and reality of Title II reclassification reduced broadband investment. Ford finds that, but for the threat of Title II reclassification, capital investment would have been \$30B - \$40B larger each year, and this result holds even *with* the threat of net neutrality rules that did *not* apply Title II.

But this should come as no surprise. Even *if* the costs of Title II's regulatory risks are outweighed by benefits accruing to edge providers and consumers, if the net gain is distributed in such a way that it lowers expected returns for ISPs, it will reduce their incentive to make risky investments. To suggest that the virtuous circle offers only prospective benefits to everyone at all times is absurd.

The relationship between edge providers and ISPs has always been one of both cooperation and competition. But simply pointing out that the value of edge providers might go up as a result of regulation, and that some of that value might be captured by ISPs, does not fully explain the relationship. Asserting that increased edge provider value will *necessarily* increase demand for broadband access and thus infrastructure investment assumes a non-existent, monotonic relationship between edge provider fortunes and those of ISPs. But reality is decidedly more complicated.

The reality is that if there are gains in the system, all parties will be vying to capture them, with varying degrees of success. The virtuous cycle theory glosses over this complicating factor. Further complicating matters, it is inevitably the case that even if there are net gains for, say, edge providers as a group, they will not be evenly distributed among all edge providers, nor will all users be similarly affected. Overall, the literature suggests that when content providers are significantly heterogeneous, regulations like those in the 2015 OIO are likely to lower consumer welfare on net.

Similarly, while regulation that constrains ISPs' profit opportunities is certain to impose costs on broadband providers and change their investment calculus, it may not simply result in an overall *reduction* in investment. Rather, regulatory pressure will likely lead to a *reprioritization* of investment in addition to (or instead of) a reduction. The net effect may be a shift in investment to more remunerative areas – like urban centers or higher-income suburbs – at the expense of riskier investment

in rural and low-income communities. Pretending that these tradeoffs do not exist, or that the asserted net gains will overwhelm the costs does not make it so.

- **Correcting the record on the economics of paid prioritization and nonlinear pricing**

The 2015 OIO's essential rejection of economics and an economically informed understanding of market realities extends beyond the fundamental underpinnings of the virtuous circle theory. In particular, the *Order's* approach to prioritization and non-linear pricing models is similarly ill-informed by the basic economics of networks.

Only through gross oversimplification and neglect of economics could the Commission assert the confidence in its position sufficient to saddle the Internet with such an invasive regulatory regime. But for myriad reasons its confidence is misplaced.

The ban on paid prioritization and the prohibition on levying terminating access fees on content providers fail to address whether the asserted benefits of mandated "openness" outweigh the possible forsaken benefits to consumers, infrastructure investment, and competition from prohibiting discrimination. Had the Commission actually engaged with the substantial relevant economic literature it would have been forced to confront the poverty of its assumptions, analysis, predictions, and conclusions.

The *Order* demonstrates a fundamental misunderstanding of the economics of two-sided markets. The "two-sidedness" of markets does not inherently confer increased ability to earn monopoly profits, and, in fact, the literature suggests that the availability of subsidization *reduces* monopoly power and increases welfare. In the broadband context, as one study notes, "[i]mposing rules that prevent voluntarily negotiated multisided prices will never achieve optimal market results, and... can only lead to a reduction in consumer welfare."

Some critics have argued that paid prioritization creates "artificial scarcity," which allows ISPs to fleece their users, resulting in less broadband usage. To the extent that "artificial scarcity" is another way of saying "optimization through price-based rationing," the assertion is correct – but the criticism is misplaced.

Particularly where there is congestion, the socially optimal solution is for broadband providers to encourage users to *prioritize*, not necessarily to maximize, their data usage. Deterring or prohibiting innovative broadband business models that seek to offer content via programs like zero rating and sponsored data undermines not only optimal policymaking, but also net neutrality proponents' own stated aim to enhance "the value of [] broadband to consumers."

Prioritization schemes offer a means to both a) limit data usage and relieve congestion, whether there are caps or not; and b) still permit users to pay to avoid whatever limits caps would place on their usage in a much more useful way, allowing them to pick and choose which types of data or even

content providers are most important to them. Such arrangements facilitate the optimal use of scarce data, enable network management practices that alleviate congestion overall, and allow ISPs to reduce the risk of infrastructure investment by speeding up the rate at which they realize returns.

The deepest problem with the 2015 OIO is that the one thing it *does* prioritize is the *status quo*, deterring not only new network access models but also novel business and pricing models at all levels of the Internet.

Banning prioritization and nonlinear pricing by ISPs doesn't mean there's no rationing – it just moves it elsewhere. The 2015 OIO's failure to grapple in any way with the economics of rationing by ISP-mediated price (on both sides of the market), and its failure to recognize that there will *always* be rationing of some sort, call into question the entire apparatus of the *Order's* policy justification for the rules it adopts.

Scarcity on the Internet (as everywhere else) is a fact of life – whether it arises from network architecture, search costs, switching costs, or the fundamental limits of physics, time and attention. If rationing isn't performed by the price mechanism, it will be performed by something else. There is good reason to think that a neutral Internet will substantially favor incumbents and larger competitors, imposing greater costs than would paying for prioritization. Viewed properly, ISPs are not by any means the only possible sources of friction between content and its potential consumers.

As always, the crucial question is, “compared to what?” Paying for priority may seem like a costly barrier to entry by start-ups and new innovators, but it's nothing compared to the costs of trying to gain a foothold in an established market *without* it; new entrants are naturally at a considerable disadvantage relative to incumbents.

More fundamentally, how does it help anyone if VoIP providers, for example, are *not* able to buy a latency guarantee that email providers would have no interest in paying for anyway, when the alternative (given enough congestion) is that email remains unaffected but VoIP is unusable? And on the multi-purpose Internet this also necessarily means that email providers and users must subsidize the provision of a network with high enough average quality to accommodate the performance demands of the VoIP providers and users with whom they share it, even though they do not benefit from the incremental increase in quality.

Edge providers are already constructing what amounts to their own version of Internet fast lanes. Netflix, for example – one of the very largest content providers on the Internet – uses peering to store locally available copies of its service within ISP's networks. And many sites use CDN services to speed up delivery of their website content. Edge providers are shaping network traffic in order to generate what amounts to a “fast lane” for their own benefit.

- **The Internet Conduct Standard is a vague, all-encompassing regulation that will not promote consumer welfare**

In similar fashion, the 2015 OIO's purported support for its catch-all "Internet Conduct Standard" is economically insufficient.

Expanding the reach of the FCC's authority implemented through a vague list of non-exhaustive factors is a terrible way to determine the rules of conduct for firms that have to invest billions of dollars in infrastructure over the course of decades.

Theoretically, such a case-by-case standard should be focused on the ability of competition to mitigate any alleged harms, and on the existence (if any) of identifiable harmful effects. The Internet Conduct Standard instead contains no guidance regarding which factors will be most important in its execution, how the agency will resolve the inevitable conflicts among factors, or even if the factors are dependent on one another or disjunctive. And it sacrifices sensible, effects-based competition analysis (as under the antitrust laws) for unnecessary over-inclusiveness.

On the flimsy basis of a single footnote containing cites to only two papers on vertical arrangements to source its theories on vertical conduct, the FCC determined that two zero rating deals "likely obstruct competition." Had the Bureau more thoroughly engaged with the literature, it would have found that such vertical arrangements not only very rarely result in consumer harm, but generally provide substantial benefits to consumers. Presumably the actual competitive effects would have supported this conclusion, but the Commission made no effort to assess them.

An ex post enforcement framework, while desirable if properly circumscribed, must be grounded in sound economics to facilitate a consistent, principled basis for intervention. Regulatory uncertainty caused by an unknowable scope of regulatory authority accompanied by unpredictable exercises of discretion, as under the Internet Conduct Standard, are a significant disincentive for investment.

Introduction

The 2015 *Open Internet Order*¹ stands as a great monument to the indelible truth of F.A. Hayek's observation that "the curious task of economics is to demonstrate to men how little they really know about what they imagine they can design."² Indeed, the *Order* is an initiative so audacious, so willfully deaf to the immense complexity of the enterprise, that it could only have been conceived in what was rightfully deemed the "economics-free zone"³ of former Chairman Wheeler's FCC.

Egged on by a coalition of rent-seeking industry groups, self-proclaimed "consumer advocates," and a late-night TV comedian or two, Chairman Wheeler and his staff set out to regulate something they knew, and could know, very little about: not just the sprawling Internet of today, but the ever-evolving, unfathomable Internet of tomorrow. The resulting *Order*, with its reclassification of broadband providers under Title II, is a towering manifestation of the delusion of technocrats everywhere: that government can surely "design" a better future if only it pulls the right levers.⁴

In theory, the goal of the 2015 endeavor was to "save the Internet" from big corporations, ensuring that (in Free Press' words) "it will remain a medium for free expression, economic opportunity and innovation."⁵ Some startup investors saw it as an opportunity to lock in yesterday's business models, saying that they wanted new Internet applications to "be able to afford to [make] their service freely available and then build a business over time as they better understand the value consumers find in their service."⁶ In other words, proponents of the *OIO* want to ensure that the Internet will stop evolving and remain exactly as it is, in perpetuity.⁷ And handing the FCC the unrivaled power embodied in Title II seemed like a great way to ensure the static and predictable "neutrality" necessary to achieve this artificial parity.

¹ *In the Matter of Protecting and Promoting the Open Internet*, Report and Order on Remand, Declaratory Ruling, and Order, 33 FCC Rcd. 5601 [hereinafter, "2015 OIO"].

² F.A. HAYEK, *THE FATAL CONCEIT: THE ERRORS OF SOCIALISM* 76 (W.W. Bartley, III ed. 1991).

³ L. Gordon Crovitz, 'Economics-Free' Obamanet, WALL ST. J. (Jan. 31, 2016), <https://www.wsj.com/articles/economics-free-obamanet-1454282427>.

⁴ See VIRGINIA POSTREL, *THE FUTURE AND ITS ENEMIES* 16 (1998) ("Technocrats are 'for the future,' but only if someone is in charge of making it turn out according to plan.").

⁵ Free Press, *Keeping The Internet Open For Everyone* (2015), https://www.freepress.net/sites/default/files/resources/net_neutrality_primer_05_2014.pdf.

⁶ See Tim Sampson, *50 Venture Capitalists Firms Take Stand Against FCC Net Neutrality Plans*, THE DAILY DOT (May 8, 2014), <https://www.dailydot.com/layer8/tech-investors-venture-capitalist-fcc-net-neutrality/>; "Open Internet Investors Letter" (May 8, 2014), available at https://docs.google.com/document/d/1v34_bFesbfyF_MbQgtZtUQNfSByAgUK-TICEB9pjH3jk/pub.

⁷ See Geoffrey Manne, *That startup investors' letter on net neutrality is a revealing look at what the debate is really about*, TRUTH ON THE MARKET (May 14, 2014), <https://truthonthemarket.com/2014/05/14/that-startup-investors-letter-on-net-neutrality/>.

As political slogans go – and make no mistake, this was a deeply political process – the phrase “net neutrality” has been enormously effective, inciting the passions of both professional advocates and regular Joes, dividing formerly allied constituencies, and ultimately forcing a sea change in the FCC’s decades-old, hands-off approach to regulating the Internet. But whatever its success as a battle cry, net neutrality as an organizing principle for Internet governance is dangerously misguided; this is *especially* true of Title II reclassification.

Title II backers traffic in fear; they warn of rapacious cable operators who seek to control online media and other content by “picking winners and losers” on the Internet. They proclaim that this unprecedented regulation is the only way to stave off “fast lanes” that would render consumers’ favorite websites “invisible.” Only Title II, they say, can shelter startups, guarantee free expression, and preserve the great, egalitarian “openness” of the Internet.

But the reality is that even without government’s guiding hand, architects of the Internet have long observed some form of neutrality. The engineers who first started connecting computers to one another decades ago embraced the so-called “end-to-end principle” – a component of network architecture design holding that the network itself should interfere as little as possible with traffic flowing from one end-user to another.⁸ Yet the idea that this network “intelligence” should reside only at the *ends* of the network, has never been – and could never be – an absolute. Effective network management has always required exceptions to the end-to-end principle – the flexibility required to accommodate continual innovation.

The designers the Internet’s early software protocols recognized that not all bits are created equal: some bits are more time-sensitive than others, some bits need to arrive at their destination in sequence, while others can turn up in any order. Live streaming video, interactive gaming, and VoIP calls won’t work if the data arrive out of order or with too much delay between data packets,⁹ while email, software updates, and even downloaded videos do not require preferential treatment, as long as all the bits eventually end up where they are supposed to go. Thus, anticipating the needs of future real-time applications, early Internet engineers developed differentiated services (“DiffServ”) and integrated services (“IntServ”) protocols, which have discriminated among types of Internet traffic for

⁸ Richard Bennett, *Designed for Change: End-to-End Arguments, Internet Innovation, and the Net Neutrality Debate*, ITIF WHITE PAPER 2 (2009), available at <http://www.itif.org/files/2009-designed-for-change.pdf>.

⁹ See, e.g., Peter Sevcik & Rebecca Wetzel, *Out-of-Order Packets Trash Voice and Video*, NETWORK WORLD (Mar. 11, 2009), <http://www.networkworld.com/article/2234820/data-center/out-of-order-packets-trash-voice-and-video.html>; *Broadband Service for the Home: A Consumer’s Guide*, FED. COMM’NS COMM’N (last accessed July 17, 2017), <https://www.fcc.gov/research-reports/guides/broadband-service-home-consumers-guide> (explaining that a delay in packet delivery, latency, “can be a problem with applications that require real-time back-and-forth communication, such as online phone calls, video conferencing, or gaming.”).

decades.¹⁰ Significantly, the effect on less time-sensitive applications has gone virtually, if not entirely, unnoticed.

But these are *engineering* prioritizations operating without an associated price mechanism. As a result, there is little incentive for anyone to mark these packets accurately: In the face of network congestion, everyone wants the highest priority as long as it is free. Here, as throughout the economy, prices would reveal the value of a transaction, enable the efficient allocation of scarce resources, and deliver returns on innovation and investment.

An Internet characterized by *commercial* prioritization – e.g., CDNs, zero rating, sponsored data, and other sophisticated versions of the facile “fast and slow lanes” so derided by proponents of Title II – could (and, even now, often do) make all applications work better, significantly increasing consumer satisfaction while promoting broadband adoption and deployment.¹¹ Mandated zero-price neutrality means that congestion costs fall on *everyone*, and the high-bandwidth content provider has limited incentive to optimize content or its users’ demand for bandwidth to reduce congestion. Differential pricing, on the other hand, encourages content providers to internalize at least some of the costs they may impose on other network users.

When broadband providers can charge for high-usage content directly, content providers have an incentive to optimize their content and their business models to account not only for their own interests, but for those of the network more broadly. And with a regulatory overlay like a minimum service guarantee in place, ISPs that offer priority service are likely to actually *increase* network capacity as a consequence of prioritization (in order to offer more priority service).

Even today, ISPs offer consumers varying tiers of service, large content providers prioritize their own content through the use of CDNs, and mobile broadband providers are increasingly experimenting with prioritization schemes (AT&T’s Sponsored Data program¹² and T-Mobile’s Music Freedom¹³ and Bing On).¹⁴ Consumers undoubtedly benefit from these forms of prioritization, and there is good reason to think (as we discuss below in detail), that they would benefit from other business models prohibited or discouraged under the current rules.

¹⁰ See *Integrated Services*, CISCO SYSTEMS, <http://www.cisco.com/c/en/us/products/ios-nx-os-software/integrated-services/index.html> (last visited July 17, 2017).

¹¹ See *infra* Section III for a discussion of the economics of prioritization – a discussion almost entirely absent from the 2015 OIO. The benefits of market pricing and discriminatory treatment are particularly acute when (as in the real world) consumers and edge providers are heterogeneous groups whose members have different product preferences, different budgets, different risk preferences, and the like. A one-size-fits-all rule to govern such complexity necessarily entails redistribution of surplus within and between groups, and not necessarily in socially desirable ways.

¹² See *Sponsored Data*, AT&T, <https://www.att.com/att/sponsoreddata/en/index.html> (last visited July 17, 2017).

¹³ See *Music Freedom*, T-MOBILE, www.t-mobile.com/musicfreedom (last visited July 17, 2017).

¹⁴ See *Bing On*, T-MOBILE, www.t-mobile.com/bingeon (last visited July 17, 2017).

Most significantly, for consumers and Internet businesses alike, the unknown innovations of tomorrow (say, holographic video streaming)¹⁵ will most likely lead to, and benefit from, new forms of prioritization — as long as they are not outlawed. Indeed, in some cases, such applications may not even exist at all if the business models that would ensure their viability are banned.

It is, of course, conceivable that vertically integrated ISPs might see some content providers as a threat to their affiliated content or services and employ mechanisms to favor their own content (or impair competing content). But such a risk justifies, *at most*, only a limited, rebuttable presumption of commercial unreasonableness in such circumstances, and not the invasive, indiscriminately applicable, and costly apparatus of Title II and the 2015 OIO's other provisions.¹⁶

Ultimately, what animates regulatory proponents everywhere — from John Oliver to millions of irate FCC commenters to the advocates who riled them up in the first place — has been the suspicion that rich corporations are on the verge of hijacking the Internet's architecture to profit themselves at the expense of everyone else. For these activists, Title II and the other strictures of the 2015 OIO are the only things that can, in John Oliver's memorable words, “prevent[] cable company f**kery.”¹⁷

What Oliver and his ilk miss is that the 2015 OIO (and the anodyne version of the Internet it promises) is simply *government f**kery*: Impeding cable companies from efficiently managing broadband infrastructure investment and experimenting with welfare enhancing innovations will only lead to higher prices and less choice for consumers.

And the problem is not simply one of less investment overall. While un-nuanced regulation will constrain ISPs' profit opportunities and change their investment calculus, it may not result simply in an overall *reduction* in investment. Instead, the effect may be a shift in investment to more remunerative areas — like wealthy urban centers or higher-income suburbs — at the expense of riskier investment in rural and low-income communities. Pretending that these tradeoffs and harmful consequences do not exist does not make it so. The complex realities of the Internet and the infrastructure that supports it do not lend themselves to overly broad, inflexible, and convoluted regulations like Title II.

¹⁵ Geoffrey Manne & Berin Szoka, *Net Neutrality's Hollow Promise To Startups*, COMPUTERWORLD (Sep. 16, 2014), <http://www.computerworld.com/article/2684174/net-neutralitys-hollow-promise-to-startups.html>.

¹⁶ And even then, it must be noted, the antitrust law and economics literature on vertical foreclosure suggests that the *presumption* should be *in favor* of vertical restraints (i.e., review under the antitrust Rule of Reason). See Thomas W. Hazlett & Joshua D. Wright, *The Law and Economics of Network Neutrality*, 45 IND. L. REV. 767 (2012). This does not mean harmful conduct should be permitted; it means that often seemingly harmful conduct is not actually harmful, and that well-established antitrust principles can and should effectively govern.

¹⁷ Mike Masnick, *John Oliver: Stop Calling It Net Neutrality; It's "Preventing Cable Company F**kery"*, TECHDIRT (June 2, 2014), <https://www.techdirt.com/articles/20140602/05510527434/john-oliver-stop-calling-it-net-neutrality-its-preventing-cable-company-fkery.shtml>.

Indeed, the technical and economic realities of building, operating, and constantly improving a flexible, modern communications network would be a daunting challenge for even the most capable and fair-minded of administrators. And as the 2015 OIO process aptly demonstrated, doing so at the behest of ideologically motivated partisans, in contravention of economics, and by manufacturing the legal authority under a statute that does not provide it, is a recipe for disaster. As one group of economists charitably put it:

[T]he situation involves multiple participants in complementary economic relationships where they share the costs and benefits of actions, and users benefit from improvement and investment. It should come as no surprise, therefore, that the thrust of the conclusions from economic analysis tilt against simplistic declarations in favor or against net neutrality. This suggests that *bold and sweeping recommendations and interventions, given the current state of empirical knowledge, have a substantial chance of being misguided.*¹⁸

As more Americans (especially minorities and low-income populations) increasingly rely on smartphones as their only source of Internet access,¹⁹ and, more broadly, as mobile and fixed Internet access services compete more directly with each other,²⁰ the constraints imposed by the 2015 OIO will be ever-more problematic, and ever-more pointless.

I. The 2015 OIO fails to employ even the most fundamental elements of “reasoned decisionmaking”

As the Supreme Court recently admonished, “[o]ne of the basic procedural requirements of administrative rulemaking is that an agency must give adequate reasons for its decisions.”²¹ While “adequate” may be an ill-defined and fairly minimal standard (especially given the deference with which courts review agency rulemaking), it plainly contemplates some basic criteria: The analysis must be based on a thorough review and accurate characterization of the record; it must be based on facts and reasoned predictions; it must be rooted in sound economic reasoning; it must be logically coherent; it must not entail subterfuge or misleading statements. Among numerous examples, the Supreme Court recently struck down an agency rulemaking, holding that:

Federal administrative agencies are required to engage in “reasoned decisionmaking.” “Not only must an agency’s decreed result be within the scope of its lawful authority, but

¹⁸ Shane Greenstein, Martin Peitz & Tommaso Valletti, *Net Neutrality: A Fast Lane to Understanding the Trade-offs*, 30 J. ECON. PERSPECTIVES 127, 146-47 (2016) (emphasis added).

¹⁹ See *Internet/Broadband Fact Sheet*, PEW RESEARCH CENTER, <http://www.pewinternet.org/fact-sheet/internet-broadband/>.

²⁰ See Giulia McHenry, *Evolving Technologies Change the Nature of Internet Use*, NAT’L TELECOMM. & INFO. ADMIN. (April 19, 2016), <https://www.ntia.doc.gov/blog/2016/evolving-technologies-change-nature-internet-use>.

²¹ *Encino Motorcars, LLC v. Navarro*, 136 S. Ct. 2117, 2125 (2016).

the process by which it reaches that result must be logical and rational.” It follows that agency action is lawful only if it rests “on a consideration of the relevant factors....”²²

On even these most basic grounds, however, the 2015 OIO falls short. In particular, the analysis supporting the 2015 OIO ignores or dismisses without analysis crucial economics literature, sometimes completely mischaracterizing entire fields of study as a result. It also cherry picks from among the comments, ignoring or dismissing without analysis fundamental issues raised by many commenters. And, finally, the purported justification for the 2015 OIO is based on a manufactured set of facts and wholly unsupported predictions that do not accurately represent the current state and competitive dynamics of the markets it regulates.

The harsh evaluation of the 2015 OIO made by several telecom economists (including former FCC chief economists Michael Katz and Michelle Connolly) in a recent discussion of the topic is telling:

Hal Singer: In his dissent, Judge Stephen Williams lamented how the FCC’s 2015 OIO gave three former chief economists of the FCC, including Michael [Katz], the “silent treatment.” How would you grade the prior FCC’s performance from the perspective of an economics professor?

Michael Katz: Fail.

Michelle Connolly: They would not pass.

Singer: Yikes. Not even a D? How about the old “college try”?

Katz: Nope.

Connolly: No. *Knowingly ignoring economics isn’t deserving of a pass.*

Jodi Beggs: I’m not convinced that they had economics as a top priority, so they may have been successful in what they were explicitly trying to accomplish. [Though i]n general, price ceilings, especially ones with a “zero price,” shouldn’t be put in place without a lot of thought about the economic implications.²³

Tim Brennan, chief economist of the FCC during the 2015 OIO’s drafting, infamously declared the 2015 OIO an “economics-free zone.”²⁴ He subsequently retracted the “off-hand joke” in part – but

²² *Michigan v. Envtl. Prot. Agency*, 135 S.Ct. 2699, 2706 (2015) (quoting *Allentown Mack Sales & Service, Inc. v. NLRB*, 522 U. S. 359, 374 (1998) and *Motor Vehicle Mfrs. Assn. of United States, Inc. v. State Farm Mut. Automobile Ins. Co.*, 463 U. S. 29, 43 (1983)).

²³ Hal Singer et al., *Bringing Economics Back Into The Net Neutrality Debate*, Washington Bytes, FORBES.COM (Jul. 12, 2017), <https://www.forbes.com/sites/washingtonbytes/2017/07/12/bringing-economics-back-into-the-net-neutrality-debate/#370e80d369da> (emphasis added).

²⁴ L. Gordon Crovitz, ‘Economics-Free’ Obamanet, WALL ST. J. (Jan. 31, 2016), <https://www.wsj.com/articles/economics-free-obamanet-1454282427>.

only in part.²⁵ As he writes, “[e]conomics was in the Open Internet Order, but a fair amount of the economics was wrong, unsupported, or irrelevant.”²⁶ Most troublingly, he deemed unsupported the “virtuous circle” (or “cycle”) that forms the very core of the FCC’s theory connecting its rules to its claimed authority under Section 706:

The FCC claims that[, through] a “virtuous circle[,]” preventing broadband providers from charging content suppliers for delivery will lead to more content suppliers, driving up demand for broadband. But the circle can work in reverse – charging content suppliers for delivery creates incentives to attract subscribers by cutting retail rates. The FCC didn’t use its best supporting evidence – that broadband providers had already largely adopted net neutrality – as that would have undermined the necessity of regulation.²⁷

The former point – that the theory itself was at best unsupported or at worst incomplete – is problematic enough. But the latter point – that the FCC intentionally withheld “its best supporting evidence” because doing so would have undermined its desired result – is not only a matter of poorly supported economics; it is a matter of deliberate manipulation of the evidentiary record.

Arguably that alone should have obviated the deference that courts typically show to well-supported agency actions;²⁸ it surely provides a sufficient basis for the Commission’s current effort to correct the problems of the 2015 OIO.

The fact is, there is no good evidence that myopically regulating “in favor” of content providers over infrastructure owners is beneficial even to content providers themselves, let alone to consumers. In particular, the notion inherent in the virtuous cycle that preventing ISPs from charging content providers (whether at different rates or even at all) will benefit consumers and incentivize broadband deployment is tenuous, at best. As Michael Katz recently, and succinctly, put it, “if an ISP can earn revenues from edge providers serving the ISP’s end users, then attracting end users becomes more valuable to the ISP. One way to attract end users is to lower the prices charged to them.”²⁹

And there is ample evidence from analogous industries, as well as a substantial theoretical and empirical economics literature, to support the idea that discrimination of the sort banned by the 2015

²⁵ Tim Brennan, *Is the Open Internet Order an “Economics-Free Zone”?*, FREE STATE FOUND. PERSPECTIVES 11-22 (Jun. 28, 2016), available at http://freestatefoundation.org/images/Is_the_Open_Internet_Order_an_Economics_Free_Zone_062816.pdf.

²⁶ *Id.* at 2.

²⁷ *Id.*

²⁸ *Encino Motorcars, LLC*, 136 S. Ct. at 2125 (stating that agencies “must give adequate reasons for its decisions [and] must examine the relevant data and articulate a satisfactory explanation for its action including a rational connection between the facts found and the choice made.”) (citation omitted).

²⁹ Hal Singer, *et al.*, *Bringing Economics Back Into The Net Neutrality Debate*, *supra* note 23.

OIO at the very least *can* be beneficial (thus undermining the imposition of a *per se* ban),³⁰ and, in fact, is very frequently beneficial (thus undermining the very logic of the virtuous cycle).³¹ There is even abundant literature from *this* industry making these points.³² “What the theoretical literature and empirical evidence demonstrates [] is that vertical contracts, including those captured by the [2015 OIO], are not always anticompetitive and in most cases are procompetitive.”³³

That quite literally *none* of this literature was even cited, let alone assessed, in the 2015 OIO is a testament to the poverty of its reasoning. In fact, as we discuss below, the 2015 OIO is replete with such evidentiary and analytical defects. As a result, it is at least arguable that, as a matter of law, the court should have determined that the 2015 OIO fails to advance the kind of reasoning adequate to support the regulation. There is no question that it fails as a matter of economics.

The *locus classicus* for the Court’s statement of the “adequate reasoning” standard in agency rulemaking is its 1983 *State Farm* decision.³⁴ Under the Administrative Procedures Act, an “agency’s [enactment or revocation of an informal rulemaking] may be set aside if found to be ‘arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law.’”³⁵ For the Court this means that

the agency must examine the relevant data and articulate a satisfactory explanation for its action including a “rational connection between the facts found and the choice

³⁰ See, e.g., OLIVER E. WILLIAMSON, *MARKETS AND HIERARCHIES: ANALYSIS AND ANTITRUST IMPLICATIONS* (1975); Oliver E. Williamson, *Assessing Vertical Market Restrictions: Antitrust Ramifications of the Transaction Cost Approach*, 127 U. PA. L. REV. 953 (1979); Francine Lafontaine & Margaret Slade, *Vertical Integration and Firm Boundaries: The Evidence*, 45 J. ECON. LIT. 629 (2007); Benjamin Klein & Joshua D. Wright, *The Economics of Slotting Contracts*, 50 J.L. & ECON. 421 (2007); Benjamin Klein & Andres V. Lerner, *The Expanded Economics of Free-Riding: How Exclusive Dealing Prevents Free-Riding and Creates Undivided Loyalty*, 74 ANTITRUST L.J. 473 (2007); Benjamin Klein & Kevin M. Murphy, *Vertical Restraints as Contract Enforcement Mechanisms*, 31 J.L. & ECON. 265 (1988); Howard Marvel, *Exclusive Dealing*, 25 J.L. & ECON. 1 (1982).

³¹ See, e.g., Francine Lafontaine & Margaret Slade, *Exclusive Contracts and Vertical Restraints: Empirical Evidence and Public Policy*, HANDBOOK OF ANTITRUST ECONOMICS, 391, 409 (Paolo Buccirossi ed., 2008); James C. Cooper, Luke M. Froeb, Daniel O’Brien & Michael G. Vita, *Vertical Antitrust Policy as a Problem of Inference*, 23 INT’L J. INDUS. ORG. 639 (2005); Daniel O’Brien, *The Antitrust Treatment of Vertical Restraint: Beyond the Possibility Theorems*, in REPORT: THE PROS AND CONS OF VERTICAL RESTRAINTS 40 (2008).

³² See, e.g., Hazlett & Wright, *The Law and Economics of Network Neutrality*, *supra* note 16; Robert W. Crandall, et al., *Vertical Separation of Telecommunications Networks: Evidence from Five Countries*, 62 FED. COMM’NS. LAW J. 493 (2010); Marc Bourreau, Frago Kourandi, & Tommaso Valletti, *Net Neutrality with Competing Internet Platforms*, 63 J. INDUS. ECON. 30 (2015); Gerald R. Faulhaber, *Economics of Net Neutrality: A Review*, 3 COMM. & CONVERGENCE REV. 53 (2011).

³³ Joshua D. Wright, *Broadband Policy & Consumer Welfare: The Case for an Antitrust Approach to Net Neutrality Issues*, Remarks delivered at the Information Economy Project’s Conference on US Broadband Markets (2013), available at <http://bit.ly/2gNkYnj>.

³⁴ *Motor Vehicle Mfrs. Assn. of United States, Inc. v. State Farm Mut. Automobile Ins. Co.*, 463 U. S. 29 (1983) [hereinafter, “*State Farm*”].

³⁵ *Id.* at 41 (1983) (quoting 5 U.S.C. § 706(2)(A)).

made.” In reviewing that explanation, we must “consider whether the decision was based on a consideration of the relevant factors and whether there has been a clear error of judgment.” Normally, an agency rule would be arbitrary and capricious if the agency has relied on factors which Congress has not intended it to consider, entirely failed to consider an important aspect of the problem, offered an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise.”³⁶

As discussed below, it seems axiomatic that in order to form a “rational connection” between facts and regulatory choices, the agency must engage with the facts in good faith – by, at minimum, not manufacturing or cherry-picking evidence to bias its presentation, and by eschewing faulty or misleadingly incomplete reasoning in order to justify a particular regulatory course.

A. The inappropriateness of the appeal to the D.C. Circuit as authority to support the 2015 OIO’s faulty logic

To begin with, precisely because of the degree of deference courts give agencies, purported judicial support for the “analysis” contained in the 2015 OIO does not, in fact, demonstrate much at all about the quality of its claims or analysis. Not surprisingly, however, the first authority to which the Commission appeals in the *Order* is the court:

[T]he *Verizon* court upheld the Commission’s finding that Internet openness drives a “virtuous cycle” in which innovations at the edges of the network enhance consumer demand, leading to expanded investments in broadband infrastructure that, in turn, spark new innovations at the edge. The *Verizon* court further affirmed the Commission’s conclusion that “broadband providers represent a threat to Internet openness and could act in ways that would ultimately inhibit the speed and extent of future broadband deployment.”³⁷

It is deeply problematic to characterize the court as “upholding” or “affirming” those claims in a manner meant to imply not the minimal, technical legal import of those words, but rather a sort of objective gut check. The court’s review of the 2010 OIO in *Verizon* and its specific statements with respect to the virtuous circle constitute nothing more than a finding that the agency met its minimal burden of supporting those assertions given the lax standard of review.

³⁶ *Id.* at 43 (internal citations omitted). The Court continues: “The reviewing court should not attempt itself to make up for such deficiencies; we may not supply a reasoned basis for the agency’s action that the agency itself has not given. We will, however, ‘uphold a decision of less than ideal clarity if the agency’s path may reasonably be discerned.’” *Id.* (internal citations omitted). See also *Nat’l Cable & Telecommunications Ass’n v. Brand X Internet Servs.*, 545 U.S. 967, 981 (2005) (“Unexplained inconsistency is... a reason for holding an interpretation to be an arbitrary and capricious change from agency practice under the Administrative Procedure Act.”).

³⁷ 2015 OIO at ¶ 7.

Chevron (or APA) review is not academic peer review. It is not even *agreement* with the analysis or claims. It is merely a legal conclusion that is *related* to the kind of informed corroboration suggested by the FCC’s appeal to authority – yet not nearly the same thing. In short, it is a *very* low bar:

Consistent with prior studies, the vast majority of agency interpretations (817 interpretations, or 70.0%) made it to step two. ***And an even greater percentage of interpretations that made it to step-two (766 interpretations, or 93.8%) were upheld.***³⁸

The standards in *Chevron*, *State Farm*, and elsewhere (and reiterated in both *Verizon* and *USTelecom*) make clear that the court’s endorsement is – and must be – based on nothing more than its determination that the agency’s claims are within the boundaries of its authority, given the standard of review. It is *explicitly* irrelevant whether they are particularly *good* (let alone the best) arguments that the agency could make. As the court forcefully noted in *USTelecom*:

[O]ur “role in reviewing agency regulations... is a limited one.” Our job is to ensure that an agency has acted “within the limits of [Congress’s] delegation” of authority, and that its action is not “arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law,” Critically, **we do not “inquire as to whether the agency’s decision is wise as a policy matter; indeed, we are forbidden from substituting our judgment for that of the agency.” Nor do we inquire whether “some or many economists would disapprove of the [agency’s] approach” because “we do not sit as a panel of referees on a professional economics journal, but as a panel of generalist judges obliged to defer to a reasonable judgment by an agency acting pursuant to congressionally delegated authority.”**³⁹

For purposes of the review in *Verizon* or *USTelecom*, the court did not inquire whether the arguments might be undermined by evidence excluded from the *Order* or briefs, or by an equally or even-more valid interpretation of the evidence. The FCC was not obligated even to convince the court that there was at least a 50.1% likelihood that its interpretation of the facts and its predictions of future effects were accurate. Thus, in order to pass muster before the *Verizon* court, all the Commission had to do was offer merely “adequate” support for *some* set of rules “*such as* those set forth in the [2010 OIO]” (not necessarily the ones the agency actually adopted), based on *any non-zero degree* of threat to Internet openness arising from the *possibility* that ISPs “*may be motivated*” to act as the agency suggests they *might*.⁴⁰ Who would have “reason to doubt” such minimally “adequate” claims as those? But with respect to their actual veracity, the soundness of the logic purporting to support them, and the desirability of the particular rules the FCC claims they support, the court’s imprimatur is not an affirmation in the normal sense of the word.

³⁸ Kent Barnett & Christopher J. Walker, *Chevron in the Circuit Courts*, 115 MICH. L. REV. *32-33 (forthcoming 2017) (July 2016 draft available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2808848).

³⁹ *United States Telecomm. Ass’n v. Fed. Commc’ns Comm’n*, 825 F.3d 674, 696-97 (D.C. Cir. 2016) (emphasis added) [hereinafter, “*USTelecom*”].

⁴⁰ *Verizon v. Fed. Commc’ns Comm’n*, 740 F.3d 623, 645 (D.C. Cir. 2014) (emphasis added).

B. The problem of agency deference when none is due

It is exceedingly difficult to maintain an argument that a congressional policy of net neutrality exists anywhere within the Communications Act. It is insufficiently acknowledged in the ongoing debates, but the entire open Internet rulemaking enterprise is an exercise in *post hoc* rationalization – the formulation of policy, not statutory interpretation. Net neutrality was determined by certain activists to be “necessary;” proponents were unable to get it from Congress; the FCC was willing; and it tried at least three times to cobble together some statutory basis to justify its preference for open Internet rules, as opposed to determining that such rules were necessary to enforcing a particular statutory provision.

As a result, the entire effort to enact net neutrality rules (absent congressional action) rests on shaky constitutional ground. Justice Thomas described the extent of the problem in a recent concurrence:

In reality, as the Court illustrates in the course of dismantling [the agency’s] interpretation [of the provision at issue], agencies “interpreting” ambiguous statutes typically are not engaged in acts of interpretation at all. Instead, as *Chevron* itself acknowledged, they are engaged in the “formulation of policy.” *Statutory ambiguity thus becomes an implicit delegation of rule-making authority, and that authority is used not to find the best meaning of the text, but to formulate legally binding rules to fill in gaps based on policy judgments made by the agency rather than Congress.*

* * *

These cases bring into bold relief the scope of the potentially unconstitutional delegations we have come to countenance in the name of *Chevron* deference. *What [the agency] claims for itself here is not the power to make political judgments in implementing Congress’ policies, nor even the power to make tradeoffs between competing policy goals set by Congress. It is the power to decide – without any particular fidelity to the text – which policy goals [the agency] wishes to pursue.*⁴¹

One can, perhaps, assert (as the FCC has done) that certain provisions in the Communications Act can theoretically be furthered by net neutrality. But it is self-evident that the provisions offered up as the basis for its authority are not the real impetus for the effort. The process instead runs in reverse, and the statute is little more than an *impediment* that must be navigated in order to enact the agency’s preferred policy. As the Supreme Court put it, with charming understatement: “[W]hen an agency claims to discover in a long-extant statute an unheralded power to regulate ‘a significant portion of the American economy,’ we typically greet its announcement with a measure of skepticism.”⁴²

⁴¹ *Michigan v. Envtl. Prot. Agency*, 135 S.Ct. 2699, 2712-13 (2015) (Thomas, J., concurring) (emphasis added) (citing *Dep’t of Transp. v. Ass’n of Am. Railroads*, 135 S. Ct. 1225, 1250-1252) (Thomas, J., concurring)).

⁴² *Utility Air Regulatory Group v. Envtl. Prot. Agency*, 134 S.Ct. 2427, 2444 (2014) (quoting *Brown & Williamson v. Food & Drug Admin.*, 529 U.S. 120, 159 (2000)).

Through all the evidentiary machinations, shifting standards, changing statutory interpretations, and guileful legal arguments, the one constant has been the unyielding policy decision to implement open Internet rules – come hell or high water. A process characterized by adherence to the rule of law and fealty to congressional authority would not unfold in that fashion.

But it is more troubling than “mere” *ultra vires* agency action. The agency appears to be acting – across a remarkably wide range of chairmen and shifting combinations of commissioners – toward an otherwise-implausibly-consistent objective being pushed by a small subset of self-described consumer advocates. Whatever deference is owed the *agency*, there is no basis for what functionally may amount to deference to a small, but vocal (and well-funded) cadre of activist outsiders.

The problem with untoward influence – regulatory capture – in a framework so deferential to agency decisionmaking as under APA arbitrary and capricious review, *Chevron*, and related doctrines is that a regime that insufficiently deters *ultra vires* agency conduct effectively rewards and encourages just such rent seeking, thus potentially undermining the basis for agency deference in the first place:

Expert discretion is the lifeblood of the administrative process, but “unless we make the requirements for administrative action strict and demanding, *expertise*, the strength of modern government, can become a monster which rules with no practical limits on its discretion.”⁴³

This is particularly true where an agency pushes the bounds of its discretion to effectively legislate for itself new statutory authority, and all the more so if it does it at the behest of or in deference to a particular stakeholder’s preferences – even if doing so can rhetorically be disguised as consistent with the relevant statute. Properly considered, the saga of the FCC’s efforts to impose net neutrality regulations, culminating (for now) with the 2015 OIO, presents just such a risk.

C. The story of *State Farm*: A cautionary tale for the 2015 OIO

It is worth summarizing the circumstances at issue in *State Farm* at some length because they are pointedly analogous to those surrounding the 2015 OIO in a number of ways.

Like net neutrality regulation at the FCC, “[t]he regulation... at issue [in *State Farm*] bears a complex and convoluted history.”⁴⁴ The rule at issue was a Department of Transportation (“USDOT”) vehicle safety rule, promulgated by the National Highway Traffic Safety Administration (“NHTSA”), initially mandating installation of seat belts in all cars, but eventually evolving in fits and starts to incorporate a passive restraint (meaning air bags or automatic seatbelts) requirement. “Over the course of approximately 60 rulemaking notices [from the late 1960s through the early 1980s], the requirement

⁴³ *Burlington Truck Lines, Inc. v. United States*, 371 U.S. 156, 167 (1962) (quoting *New York v. United States*, 342 U.S. 882, 884 (1951) (dissenting opinion)).

⁴⁴ *State Farm*, 463 U.S. at 34.

has been imposed, amended, rescinded, reimposed, and now rescinded again,”⁴⁵ sometimes occasioned by a change in approach accompanying a change in presidential administration. Congress and the courts were also involved on several occasions.

The relevant regulation was ostensibly aimed at identifying the best means to reduce motor vehicle deaths. In 1978, NHTSA, under the Carter Administration, ultimately settled on a rule (reversing course from the previous administration) implementing a phased-in requirement that passive restraints – *either* air bags or automatic seatbelts, at the manufacturer’s discretion – be installed in all new cars. The rule was upheld by the D.C. Court of Appeals in 1979 against an APA challenge,⁴⁶ and manufacturers prepared for the rule’s implementation.

But in February of 1981, the new Reagan Administration Secretary of Transportation first extended certain aspects of the rule’s phase-in period and, ultimately, rescinded the passive restraint requirement entirely:

In a statement explaining the rescission, NHTSA maintained that it was no longer able to find, as it had in 1977, that the automatic restraint requirement would produce significant safety benefits. This judgment reflected not a change of opinion on the effectiveness of the technology, but a change in plans by the automobile industry. In 1977, the agency had assumed that airbags would be installed in 60% of all new cars and automatic seatbelts in 40%. By 1981 it became apparent that automobile manufacturers planned to install the automatic seatbelts in approximately 99% of the new cars. For this reason, the lifesaving potential of airbags would not be realized. Moreover, it now appeared that the overwhelming majority of passive belts planned to be installed by manufacturers could be detached easily and left that way permanently. Passive belts, once detached, then required “the same type of affirmative action that is the stumbling block to obtaining high usage levels of manual belts.” For this reason, the agency concluded that there was no longer a basis for reliably predicting that the Standard would lead to any significant increased usage of restraints at all.⁴⁷

In *State Farm* the Supreme Court rejected the rescission of the rule as arbitrary and capricious.⁴⁸

In rejecting NHTSA’s decision, the Court noted that it had “frequently reiterated that an agency must cogently explain why it has exercised its discretion in a given manner.”⁴⁹ NHTSA relied primarily upon a set of largely indeterminate studies to support its action. These studies *may* have been sufficient to support the agency’s claim that the rescinded rule would not have furthered the required safety (and cost) objectives, but they did *not* support the specific solution adopted (*i.e.*, rescinding

⁴⁵ *Id.*

⁴⁶ *Pac. Legal Found. v. Dep’t of Transp.*, 593 F.2d 1338, cert. denied, 444 U.S. 830 (1979).

⁴⁷ *State Farm*, 463 U.S. at 38-39.

⁴⁸ *Id.* at 46.

⁴⁹ *Id.* at 48.

the rule entirely rather than, say, revising it to mandate air bags or “continuous loop” seatbelts that could not be disabled (as opposed to detachable automatic seatbelts that could)):

The first and most obvious reason for finding the rescission arbitrary and capricious is that NHTSA apparently gave no consideration whatever to modifying the Standard to require that airbag technology be utilized.... The agency has now determined that the detachable automatic belts will not attain anticipated safety benefits because so many individuals will detach the mechanism. Even if this conclusion were acceptable in its entirety, standing alone it would not justify any more than an amendment of [the rule] to disallow compliance by means of the one technology which will not provide effective passenger protection. It does not cast doubt on the need for a passive restraint standard or upon the efficacy of airbag technology.⁵⁰

In essence, NHTSA allowed the automotive industry to lead the agency toward the industry’s own preferred outcome under color of compliance with the statute. Although the Court did not go so far as to describe NHTSA’s action as bad faith, its finding of arbitrariness was plainly grounded upon a suspicion that NHTSA was engaging in *post hoc* rationalization to pursue an *ultra vires* agenda, yet justify it under the operative statute:

The automobile industry has opted for the passive belt over the airbag, but surely it is not enough that the regulated industry has eschewed a given safety device. For nearly a decade, the automobile industry waged the regulatory equivalent of war against the airbag and lost – the inflatable restraint was proved sufficiently effective. Now the automobile industry has decided to employ a seatbelt system which will not meet the safety objectives of [the rule]. This hardly constitutes cause to revoke the [rule] itself. Indeed, the Act was necessary because the industry was not sufficiently responsive to safety concerns.⁵¹

Although it must be regarded more as a subplot than the main narrative in *State Farm*, the Court’s concern with not just impermissible conduct, but impermissible conduct under the influence of an agency stakeholder, is unmistakable. It is, of course, impossible to tell from the decision itself, but it seems likely that even though questionable industry influence did not directly factor into the Court’s holding it may have influenced the justices’ receptivity to petitioner’s arguments.

⁵⁰ *Id.* at 46-47.

⁵¹ *Id.* at 49. In fact, it is worth noting, the facts underlying NHTSA’s justification for its rescission were themselves a product of earlier, industry influence – somewhat reminiscent of the anticipatory machinations under both Chairman Genachowski and Chairman Wheeler to establish the factual predicates for their desired course of action on net neutrality. See *infra*, Section I.D. From *State Farm*: “[T]he agency’s original proposed standard contemplated the installation of inflatable restraints in all cars. Automatic belts were added as a means of complying with the standard because they were believed to be as effective... At that time, the passive belt approved by the agency could not be detached. Only later, at a manufacturer’s behest, did the agency approve of the detachability feature—and only after assurances that the feature would not compromise the safety benefits of the restraint.” *Id.* at 46-47.

D. The manufactured, post-hoc justification for the 2015 OIO

The *post hoc/ultra vires* problem with the 2015 OIO is disturbingly similar to the one at issue in *State Farm*.

NHTSA could have amended the existing rule to mandate only air bags (instead of allowing manufacturers to choose between air bags and detachable automatic seatbelts) and entirely avoided the impermissible basis on which its rescission of the entire rule rested. Importantly, this conclusion is decidedly not a function of the Court substituting its own judgment for that of the agency; rather, it is a function of the Court identifying the approach that the agency's proffered justifications (and the purpose of the statute) *did* support.

Similarly, the questions revolving around the FCC's attenuated and problematic "virtuous cycle" theory could be avoided if the agency adopted a more direct, obvious, and consistent approach to accomplishing what it claims the 2015 OIO is intended to do: "encourage the deployment on a reasonable and timely basis of advanced telecommunications capability to all Americans."⁵² If *deployment* really were the aim, the FCC could have directly encouraged it through any number of more direct (and almost certainly more effective) means. Instead, the Commission concocted a regulatory Rube Goldberg apparatus to do so only, at best, indirectly – and in a way that happened also to further a different, arguably *ultra vires* objective.

Perhaps most tellingly, the Commission (like NHTSA), was forced to undertake a series of actions, superficially independent of the 2015 OIO, in order to engineer several of the factual predicates necessary to enable it to justify its rule under the statute. An agency properly acting within the scope of its authority would not have to work so hard to fit the round peg of its chosen policy into the square hole of its statute.

I. Section 706 as independent grant of authority

In 2005 then-Chairman Powell issued the *Internet Policy Statement*, the Commission's first effort to adopt broadly applicable net neutrality principles.⁵³ At that point Title II and the other, more-invasive elements of the 2015 OIO were not on the table, and the FCC remained within its authority to adopt policy guidelines without direct regulatory effect. But in 2008 the Commission, then under Commissioner Martin, decided to attempt to convert the *Internet Policy Statement* into an operative

⁵² 47 U.S. Code § 1302(a).

⁵³ See *In the Matter of Appropriate Framework for Broadband Access to the Internet over Wireline Facilities*, Policy Statement, CC Docket No. 02-33 (2005) [hereinafter, "*Internet Policy Statement*"].

regulatory mandate.⁵⁴ The FCC’s effort to affirmatively enforce the *Internet Policy Statement* was reviewed by the D.C. Circuit in 2010 in *Comcast v. FCC*.⁵⁵ The case involved the Commission’s issuance of an Order in response to a complaint filed by Free Press and Public Knowledge along with a number of other “consumer advocates” alleging that Comcast interfered with some of its customers’ access to certain peer-to-peer networks in contravention of the *Statement*.⁵⁶ The Commission’s claim of authority rested on its ancillary jurisdiction authority under Section 4(i) of the Communications Act:⁵⁷

Acknowledging that it has no express statutory authority over such practices, the Commission relies on section 4(i) of the Communications Act of 1934, which authorizes the Commission to “perform any and all acts, make such rules and regulations, and issue such orders, not inconsistent with this chapter, as may be necessary in the execution of its functions.” The Commission may exercise this “ancillary” authority only if it demonstrates that its action – here barring Comcast from interfering with its customers’ use of peer-to-peer networking applications – is “reasonably ancillary to the... effective performance of its statutorily mandated responsibilities.” The Commission has failed to make that showing.⁵⁸

Although the court ruled that the Commission acted beyond the scope of its authority, it also indicated that Section 706 (one of the Commission’s claimed sources of its statutory authority) “could at least arguably be read to delegate regulatory authority to the Commission.”⁵⁹ But “the Commission ruled [in an earlier Order] that section 706 ‘does not constitute an independent grant of authority,’” but rather “directs the Commission to use the authority granted in other provisions... to encourage the deployment of advanced services.”⁶⁰ The court found that “*the Commission is seeking to use its ancillary authority to pursue a stand-alone policy objective, rather than to support its exercise of a specifically delegated power.*”⁶¹

⁵⁴ See *In re Formal Compl. of Free Press & Public Knowledge Against Comcast Corp. for Secretly Degrading Peer-to-Peer Applications*, Order, 23 F.C.C. Rcd. 13,028 (2008) [hereinafter “FCC Comcast Order”].

⁵⁵ *Comcast Corp. v. Federal Communications Commission*, 600 F.3d 642 (D.C. Cir. 2010) [hereinafter, “Comcast”].

⁵⁶ See generally FCC Comcast Order; see also *id.*

⁵⁷ 47 U.S. Code § 154(i).

⁵⁸ *Comcast*, 600 F.3d at 113.

⁵⁹ *Id.* at 127.

⁶⁰ *Id.* (citing *In re Deployment of Wireline Servs. Offering Advanced Telecomms. Capability*, 13 F.C.C. Rcd. 24,012, 24,045, ¶ 69 & 24,047, ¶ 77 (1998)).

⁶¹ *Id.* at 128 (emphasis added). It must be noted that nothing has changed since then other than the agency’s characterization of Section 706. The only difference now is that, as a purely technical, legal matter, it is in a better position to pursue its “stand-alone policy objective” without interference from the courts. As Justice Thomas warned, “[i]t is the power to decide – without any particular fidelity to the text – which policy goals [the agency] wishes to pursue.” *Michigan v. EPA*, 135 S.Ct. at 2713.

So the first order of business was to reinterpret Section 706 as an independent grant of authority. Absent this maneuver (as applied to Section 706 or at least one of the other asserted statutory mandates the Commission pointed to in *Comcast*), the Commission would never be permitted by the courts to assert net neutrality authority over ISPs absent their reclassification under Title II. Thus, in its *2010 Open Internet Order*, the Commission simply declared its

present understanding that Section 706(a) authorizes the Commission... to take actions, within their subject matter jurisdiction and not inconsistent with other provisions of law, that encourage the deployment of advanced telecommunications capability by any of the means listed in the provision.⁶²

The Commission further declared, for good measure, that “[t]o the extent the *Advanced Services Order* can be construed as having read Section 706(a) differently, we reject that reading of the statute....”⁶³

Although the Commission in the *2010 OIO* attempted to offer an independent, non-instrumental explanation for its change of heart regarding Section 706, the conclusion is inescapable that its arguments were really a superficial attempt to meet the (low bar of) the courts’ excessive deference, rather than a rigorous and reasoned analysis of the sort of circumstances that might justify its reinterpretation:

[U]nder our reading, Section 706(a) authorizes the Commission to address practices, such as blocking VoIP communications, degrading or raising the cost of online video, or denying end users material information about their broadband service, that have the potential to stifle overall investment in Internet infrastructure and limit competition in telecommunications markets.⁶⁴

This conclusory statement is a rudimentary cousin to the Commission’s “virtuous cycle” theory, not coincidentally first deployed alongside it by the agency in the *2010 OIO*.

Although the effort proved insufficient to meet the court’s (again) low bar to uphold the *2010 OIO* itself, it was enough to convince the court not only to uphold the Commission’s underlying theory of jurisdiction, but also to validate its concocted rationale for its pet policy project:

[T]he Commission has established that section 706... vests it with affirmative authority to enact measures encouraging the deployment of broadband infrastructure. The Commission, we further hold, has reasonably interpreted section 706 to empower it to promulgate rules governing broadband providers’ treatment of Internet traffic, and its justification for the specific rules at issue here – that they will preserve and facilitate the

⁶² *In the Matter of Preserving the Open Internet Broadband Indus. Practices*, Report and Order, 25 F.C.C. Rcd. 17905 at ¶ 119 (2010) [hereinafter, “*2010 OIO*”].

⁶³ *Id.* at note 370.

⁶⁴ *Id.* at ¶ 120.

“virtuous circle” of innovation that has driven the explosive growth of the Internet – is reasonable and supported by substantial evidence.⁶⁵

2. *Manipulation of the Sixth Broadband Progress Report*

Around the same time, the Commission undertook its next step in manufacturing the predicates for net neutrality regulation: manipulation of the Section 706(b) *Broadband Progress Report*.

Up until 2010, the *Broadband Progress Reports* had consistently found broadband deployment to be proceeding at a rapid rate. In fact, the progress had been (and continues to be) remarkable, with availability growing from 15% of Americans in 2003 to 95% in 2010.⁶⁶ And yet, based on the very same (or, if anything, *better*) statistics that had led previous reports to declare deployment to be proceeding expeditiously, the 2010 edition of the *Report* – released just after the Comcast decision and just before the NPRM for the 2010 OIO – inexplicably changed course. For the first time ever, the *Sixth Broadband Progress Report* found that “broadband deployment to all Americans is not reasonable and timely.”⁶⁷ The basic “logic” was: Even though broadband has been deployed to *virtually all* Americans, *virtually all* is not the same as *all*, and thus Section 706’s mandate has not been met. Of course, the provision does not require full coverage, merely “reasonable and timely” progress toward it. And no minimally informed observer could deem the ongoing progress as unreasonable or untimely. Yet the Commission concluded that:

Our analysis shows that... approximately 14 to 24 million Americans do not have access to broadband today. The [] group appears to be disproportionately lower-income Americans and Americans who live in rural areas. The goal of the statute, and the standard against which we measure our progress, is universal broadband availability. We have not achieved this goal today, nor does it appear that we will achieve success without changes to present policies. The evidence further indicates that market forces alone are unlikely to ensure that the unserved minority of Americans will be able to obtain the benefits of broadband anytime in the near future.... [W]e are unable to conclude that broadband is being reasonably and timely deployed to all Americans in this situation.⁶⁸

⁶⁵ *Verizon v. Federal Commc’ns Comm’n*, 740 F.3d at 628 (2014) [hereinafter, “Verizon”].

⁶⁶ *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*, Sixth Broadband Deployment Report, 25 F.C.C. Rcd. 9556, 9693 (2010) (McDowell, R., dissenting) [hereinafter, “Sixth Broadband Deployment Report”].

⁶⁷ *Id.* at ¶ 2.

⁶⁸ *Id.* at ¶ 28. Of course, if deployment to all Americans were truly the agency’s objective, net neutrality in any form – let alone in the form of reclassification under Title II – would not likely further it. The very small percentage of Americans without broadband access live largely in rural areas in which fixed wireline deployment is both extremely expensive and risky, given relatively low uptake rates even once access is available. See *Connecting America: The Nat’l Broadband Plan*, 2010 WL 972375, at *136 (OHMSV Mar. 16, 2010) (“Because service providers in [areas with low population density] cannot earn enough revenue to cover the costs of deploying and operating broadband networks, including

With a few words the Commission altered nearly a decade of broadband progress – not by changing any actual progress, but simply by re-characterizing the self-evident facts on the ground in a cynical effort to trigger Section 706’s operative language. By the end of the same year the Commission had adopted its 2010 OIO.

3. Arbitrary redefinition of “broadband” in the 2015 Broadband Progress Report

Of course, the 2010 OIO still failed to pass the court’s muster. Undeterred, the Commission tried again – and also undertook its final step in manufacturing the rationale to support its effort to enact net neutrality rules. The next iteration of the rules (now expanded to include Title II reclassification), required the Commission to “establish” that deployment was insufficient and that competition was insufficient to prevent broadband providers from harming consumers and edge providers by engaging in non-neutral practices, thereby necessitating radical regulation.

Thus the Commission again made up out of whole cloth a “scarcity” of broadband deployment and penetration sufficient to trigger not only Section 706’s mandate, but also to help sell the Title II reclassification and invasive rules of the 2015 OIO.⁶⁹

Less than a month before the adoption of the 2015 OIO, the FCC arbitrarily changed the standard for “advanced telecommunications capability” (i.e., broadband) from download/upload speeds of 4 Mbps/1 Mbps to 25 mbps/3 Mbps.⁷⁰ Virtually nothing had changed to justify the new standard: the same number of households were able to access the Internet; the same (much smaller) number of people *adopted* high-speed access even though it was accessible to many more; people still used broadband the same way; the technology was the same; average speeds had been increasing but not nearly so significantly, etc. Yet the Commission’s declaration that “broadband” would henceforth connote faster speeds that were not as ubiquitously available entailed a *huge* change for the extent of broad-

expected returns on capital, there is no business case to offer broadband services in these areas. As a result, it is unlikely that private investment alone will fill the broadband availability gap.”). Imposing regulations that constrain broadband providers’ choices and reduce their revenue will not likely help alleviate the investment risk (quite the opposite, in fact). Moreover, deployment alone does not equate with adoption, particularly in these rural areas. More “neutral” access to all edge providers is unlikely to make much difference in adoption – particularly if it precludes price-reducing offerings like sponsored data and zero rating. Given the variation among Internet users and the *actual* dynamics of the market, to point to this *Broadband Progress Report* as justification for the OIO is disingenuous.

⁶⁹ 2015 OIO at ¶¶ 81-84.

⁷⁰ Press Release, *FCC Finds U.S. Broadband Deployment Not Keeping Pace*, FCC (Jan. 29, 2015), https://transition.fcc.gov/Daily_Releases/Daily_Business/2015/db0129/DOC-331760A1.pdf.

band penetration and adoption. By raising its standard more than six-fold, the Commission instantaneously manufactured broadband scarcity and enabled itself to assert the need for action under Section 706:⁷¹

[B]roadband is not being deployed to all Americans in a reasonable and timely fashion, [t]his in turn, triggers a duty under section 706 for the Commission to ‘take immediate action to accelerate deployment.’ Within the statutory framework that Congress established, the Commission ‘possesses significant, albeit not unfettered, authority and discretion to settle on the best regulatory or deregulatory approach to broadband.’⁷²

As then-Chairman Wheeler declared in a Statement accompanying the issuance of the 2015 *Broadband Progress Report* plainly aimed at laying the groundwork for a Section 706 justification for the 2015 OIO:

No doubt, we have seen improvements in our wired and wireless broadband infrastructure that are delivering real benefits for our economy and the American people. But remember what Congress asked: are “advanced telecommunications... being deployed to all Americans in a reasonable and timely fashion?” The first step to answering that question is to define “advanced telecommunications” in 2015. As this report makes clear, it ain’t what it used to be.⁷³

The most remarkable aspect of that statement is the subterfuge entailed in declaring that “[broadband] ain’t what it used to be,” even though absolutely nothing about broadband service had changed (beyond the continuing, consistent *increase* in speed and deployment identified in most previous *Broadband Progress Reports*). The only thing that changed was the Commission’s arbitrary baseline and characterization of the market with respect to speed.⁷⁴

The result of the redefinition was not only that fewer people were deemed to have access to broadband, but also that there was less broadband competition, as providers offering speeds less than 25 Mbps were no longer considered to be broadband providers. As then-Commissioner Pai wrote in dissenting from the *Report*:

But for some time now under this Administration, grounding the new benchmark for broadband in reality hasn’t been the point. No, the ultimate goal is to seize new, virtually limitless authority to regulate the broadband marketplace. Under its interpretation of

⁷¹ *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*, 2015 Broadband Progress Report and Notice of Inquiry on Immediate Action to Accelerate Deployment, 30 F.C.C. Rcd. 1375 (2015) [hereinafter, “2015 Broadband Progress Report”].

⁷² 2015 OIO at ¶ 437.

⁷³ 2015 Broadband Progress Report, Statement of Chairman Tom Wheeler, at 1479.

⁷⁴ See Babette Boliek, *The FCC’s Evidentiary Problem*, 12 I.S.J.L.P. 45, 53 (2015).

section 706 of the Telecommunications Act, the FCC can do that only by determining that broadband is not “being deployed to all Americans in a reasonable and timely fashion” – or, more colloquially, by ignoring the consistent progress in Internet connectivity that’s obvious to anyone with a digital connection and an analog pulse. That explains why the FCC rewrote the statutory test the last time it was considering net neutrality rules. That explains why this Administration has studiously excluded satellite and mobile broadband services from its evaluation. And that explains why the FCC is suddenly upping the benchmark by a factor of six. *A thriving marketplace must be found to have failed so that the agency can regulate it back to health.*⁷⁵

To be fair, Chairman Wheeler does offer some perfunctory justifications for *some* sort of increase, and it is reasonable for the agency to evolve the baseline definition (in the same fashion as the Consumer Price Index, for example) as it had done previously in order that the *Broadband Progress Report* present a more accurate picture based on how people’s usage and expectations evolve. But Chairman Wheeler did not, as he might have if he were actually concerned with such matters, declare a new formula to govern such an evolution going forward, nor did his chosen speed reflect actual usage data or the evidence regarding what was impeding users’ adoption of such high speeds even where they were available. Rather, he simply accomplished his short-term objective by creating a baseline that is no less static than the one it replaced, and thus no more responsive to changing consumer behavior and the evolving marketplace that Wheeler invoked to justify the change.

Of course, the Commission’s abrupt shift to a 25 Mbps baseline was never subjected to real scrutiny by the court. While the *USTelecom* majority opinion simply ignored the absurdity and accepted the 2015 OIO’s assertion that deployment was *not* occurring in a “reasonable and timely” fashion, Judge Williams in his dissent forcefully argued that the 25 Mbps standard was “not grounded in any economic analysis.”⁷⁶ For Judge Williams,

[the FCC’s] explanations seem superficial at best.... The fact that the Commission strains so much to justify its arbitrary criterion shows how out of line with reality such a criterion is. **The weakness of the Commission’s reasoning suggests that its main purpose in setting the “standard” may simply be to make it appear that millions of Americans are at the mercy of only one supplier, or at best two, for critically needed access to the modern world. All without bothering to conduct an economic analysis!**⁷⁷

In sum, the FCC under Chairmen Genachowski and Wheeler undertook a series of maneuvers leading up to both the 2010 and 2015 OIOs that can really only be explained as manipulative pretext, aimed at establishing the necessary predicates for the Commission’s assertion of authority under Section 706 and Title II. It is impossible to conclude that the Commission was responding to observed market conditions that could reasonably be seen to require adoption of the OIOs under the

⁷⁵ 2015 *Broadband Progress Report*, Dissenting Statement of Commissioner Ajit Pai, at 1486 (emphasis added).

⁷⁶ *USTelecom* 825 F.3d at 751 (Williams, J., dissenting).

⁷⁷ *Id.* (emphasis added).

asserted mandates of Section 706, Title II, or any other provision of the Communications Act. Instead, the Commission was manufacturing market *characterizations* that could be used to construct the legal authority to adopt the *OIOs* *regardless* of actual market conditions.

II. The defective economics and unsupported assertions that pass for “reasoned decisionmaking” in the 2015 OIO

Having manufactured a factual predicate sufficient to justify a solution, the Commission set about in the 2015 OIO to justify its *preferred* “solution.” Its primary and overarching argument in support of the 2015 OIO’s reclassification of broadband access under Title II and adoption of specific rules (like the Internet Conduct Standard) is embodied in the concept of the “virtuous cycle,”⁷⁸ (also referred to as the “virtuous circle”) borrowed from the 2010 OIO.

Under anything but the most cursory scrutiny and reflexive deference, the virtuous cycle fails to justify the Commission’s chosen course of action. In the first place, if the theory is correct – that is, if neutrality begets edge providers, which beget users, which beget broadband investment – there is no inherent need for any rule: the requisite incentives for broadband providers to adopt net neutrality are already in place. As Tim Brennan points out:

Even if broadband providers have market power because subscribers are slow to switch broadband services, as the FCC claims, the FCC incorrectly found such providers lack an incentive to provide high-quality service. Broadband providers, in the FCC’s scenario, will raise their prices up to where subscribers will consider switching. The better the broadband service, including content “neutrality” if that’s what consumers want, the higher that switching price will be – establishing the incentive that the FCC denies.⁷⁹

In fact, of course, self-adopted net neutrality has been the norm throughout the Internet’s existence, including in the immediate run up to the 2015 OIO.

This points to another aspect of the *Order*’s “reasoned decisionmaking” misadventure: The Commission could adduce almost no evidence of the actual problem it claimed to be solving. Despite a purported history of abuse, the Commission itself discusses only a handful of examples that could even plausibly be considered conduct that was both harmful and amenable to prevention or even mitigation by the *Order*. Even the most complete catalogue of abuses recently published by Free Press contains only about a dozen, short-lived alleged examples over the past decade.⁸⁰ Most of these would not constitute valid examples of non-neutrality of the sort to be corrected by the 2015 OIO by any

⁷⁸ 2015 OIO at ¶ 7.

⁷⁹ Brennan, *Is the Open Internet Order an “Economics-Free Zone”?*, *supra* note 25, at 2.

⁸⁰ Timothy Karr, *Net Neutrality Violations: A Brief History*, FREEPRESS.NET (Apr. 25, 2017), <https://www.free-press.net/blog/2017/04/25/net-neutrality-violations-brief-history>.

reasonable measure,⁸¹ but, even if they did, it is impossible to credibly characterize the sum total of these examples, measured in terms of *any* valid metric (e.g., percentage of users, ISPs, bits, edge providers, or time) as a pervasive pattern or as evidence of perverse incentives. In an ecosystem as complex and massive as the Internet, one would expect more violations to happen simply by *mistake* than are described there.

But a little economics would tell you that that is not surprising. There are numerous incentives for ISPs to adopt net neutrality as the norm if indeed it benefits consumers – *i.e.*, if it is, as the virtuous cycle theory requires, viewed by consumers as a product quality enhancement. In order for this *not* to be true, the cost (including foregone revenue or foregone expected monopoly profits) to an ISP of implementing neutral principles would have to be greater than the increased revenue resulting from increased adoption or willingness to pay higher prices induced by the quality enhancement. It is theoretically possible that this is the case. But the virtually ubiquitous implementation of neutrality by ISPs even absent a regulatory mandate suggests it is not. More important, however, the OIO nowhere undertakes the analysis to demonstrate it – nor even does it actually evince a recognition that this is one of the fundamental elements of its argument that the agency must show in order to defend its rules.

But even this would not fully suffice. As noted, the Commission asserts that consumers view neutrality as a product enhancement sufficient to increase demand for broadband access services. The virtuous cycle asserts that the source of this enhancement is the increase in quality or quantity of edge providers that neutrality supposedly engenders. But that step is actually not necessary to make the case: If consumers view neutrality as a quality enhancement for *any* reason (say, an aesthetic or ideological preference), its implementation should increase demand at any given price relative to broadband service offered without it.

Of course, framed this way, it becomes apparent that there is nothing particularly unique or special about net neutrality that should require a massive regulatory apparatus. It essentially amounts to the agency asserting that the government must mandate that companies improve their products in order to sell more of them because, absent the mandate, they will not do so themselves. But even the most self-effacing and civic-minded of companies do not typically need regulation to force them to increase their profits.⁸²

⁸¹ See, e.g., Larry Downes, *Unscrambling the FCC's Net Neutrality Order: Preserving the Open Internet - But Which One?*, 20 COMMLAW CONSPPECTUS 83, 101-05 (2011).

⁸² One might argue that this conclusion does not hold where there is insufficient competition to ensure price reductions and/or quality improvements. On the one hand, it is well understood that even monopolies face “competition” from the option not to purchase, and monopolists do not charge infinite prices or lowest possible quality due to demand constraints. See, e.g., Libby Rittenberg & Timothy Tregarthen, *PRINCIPLES OF MICROECONOMICS* 544 (2009). But for broadband providers (whatever the precise extent of competition they face), it is manifestly the case that they are impelled to undertake massive efforts to lower prices and improve quality. Thus, per FCC data, median download

A. The faulty logic connecting open Internet rules to broadband investment and innovation

The flimsiness of the Commission’s virtuous circle theory is evident throughout the 2015 OIO’s efforts intended to establish its veracity. Notice, for instance, the sleight of hand in the first few paragraphs of the *Order*. First the Commission asserts that an open Internet has remarkable benefits – most crucial among them, “significant investment and groundbreaking innovation”⁸³ – noting that many of these benefits accrued during the period when the previous (2010 OIO) rules were in place. It conveniently leaves out, however, that many of these benefits *also* accrued during the (much longer) period when *no* such rules were in place. In fact, investment during the period *without* open Internet rules was tremendously more significant than during the period with them.⁸⁴

At least on its own simplistic terms (inferring causation from simultaneity), establishing the necessity of open Internet rules is a difficult proposition when investment and innovation coincided with both the existence and the absence of such rules.

Nevertheless, the *Order* goes on to conclude that “[t]he lesson of this period, and the overwhelming consensus on the record, is that *carefully-tailored rules to protect Internet openness will allow investment and innovation to continue to flourish.*”⁸⁵ Yet the connection between the need for *rules* to protect openness and the flourishing described is not, in fact, on evidence in the record. Investment and innovation have demonstrably flourished both with and without rules; openness has also been the norm both with and without rules. Absent careful statistical analysis to demonstrate a causal relationship connecting rules to openness to investment and innovation, there is *not*, in fact, evidence on the record to support the need for rules – the need for *openness* perhaps, but not the need for *rules*.

In an effort to concoct the necessary conditions to support that leap, the OIO goes on to assert:

Consistent with that experience and the record built in this proceeding, today we 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.⁸⁶

speeds, averaged across all participating ISPs, quadrupled from March 2011 (10 Mbps) to September 2015 (41 Mbps), while nominal prices for Internet access services have been virtually constant in the U.S. for a decade. See, e.g., Kenneth Flamm & Carlos Herrera, *Price and Quality Change in U.S. Broadband Service Markets*, Working Paper (Aug. 2017) at 3, available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2757429.

⁸³ 2015 OIO at ¶ 2.

⁸⁴ See, e.g., *Historical Broadband Provider Capex*, USTELECOM (last visited Jul. 13, 2017), <https://www.ustelecom.org/broadband-industry-stats/investment/historical-broadband-provider-capex>.

⁸⁵ 2015 OIO at ¶ 4.

⁸⁶ *Id.*

But, again, this is a non-sequitur. The FCC claims to be adopting rules to prevent practices that it “knows” are harmful. Yet it does not *know* that (or at least does not demonstrate it in the record), and, as we discuss below, a substantial body of economic knowledge (none of it cited in the *OIO*) calls the claim into question.

The problem is not necessarily one of the *factual* record (although that is a problem, as well): it is one of the limits of the factual record to support the decisionmaking process leading to the specific rulemaking. As the Court held in *State Farm*:

The agency’s explanation for [its conduct] is not sufficient to enable us to conclude that [it] was the product of reasoned decisionmaking. To reach this conclusion, we do not upset the agency’s view of the facts, but we do appreciate the limitations of this record in supporting the agency’s decision.⁸⁷

This distinction between evidence sufficient to support certain factual predicates (leaving aside the FCC’s manipulation of some of that evidence discussed above), and evidence sufficient to support the proffered justification for the agency’s decisionmaking is crucial – and largely missed by the panel majority in *USTelecom*.

B. Toward a proper assessment of the effect of the 2015 OIO on broadband investment

Despite a welter of unreliable analyses purporting to show that the 2015 *OIO* led to a reduction in investment⁸⁸ – as well as an even greater number of *horrendous* analyses purporting to show the opposite⁸⁹ – the truth is more complicated. This is because the effects on network investment can be ambiguous when, for instance, practices like paid prioritization are banned.⁹⁰ But there is reason to believe that such regulations do have a negative effect on investment.⁹¹

And there is every reason to believe that, as an empirical matter, the current, Title II regime is particularly problematic. Economist Georg Ford has provided the only statistically valid analysis of the

⁸⁷ *State Farm*, 436 U.S. at 52.

⁸⁸ See, e.g., Michael Horney, *Broadband Investment Slowed by \$5.6 Billion Since Open Internet Order*, THE FREE STATE FOUNDATION (May 5, 2017), <http://freestatefoundation.blogspot.com/2017/05/broadband-investment-slowed-by-56.html>.

⁸⁹ See, e.g., S. Derek Turner, *It’s Working: How the Internet Access and Online Video Markets Are Thriving in the Title II Era*, FREEPRESS (May 2017), <https://www.freepress.net/sites/default/files/resources/internet-access-and-online-video-markets-are-thriving-in-title-II-era.pdf>.

⁹⁰ This is largely because the exact outcomes depend on a number of factors, such as consumers’ subjective valuation of network services and the degree to which content providers value faster delivery speeds. See Jay Pil Choi and Byung-Cheol Kim, *Net Neutrality and Investment Incentives*, 41 RAND J. ECON. 446, 446-71 (2010).

⁹¹ Paul Njoroge, *et al.*, *Investment in Two-Sided Markets and the Net Neutrality Debate*, 12 REV. NET. ECON. 355, 361 (2013); Marc Bourreau, *et al.*, *supra* note 32.

current investment data, which strongly suggests that the threat of Title II reclassification (which, of course, came to fruition in the 2015 OIO) has indeed reduced broadband investment.⁹²

As all statistical analyses of this type must, Ford's paper contains a number of necessary estimations. And, no matter what, we are dealing with short timeframes in which to assess long-term investment decisions. But Ford's technique is sound and offers the only truly reliable assessment of the likely effect on investment of net neutrality implemented via Title II reclassification.

Of course, for precisely that reason, his analysis is also not as straightforward or easy to convey as less-reliable efforts. But there has been so much bad analysis, and so many bad criticisms of these investment claims, that it is worthwhile to explain in detail both what Ford claims, and why his analysis is robust.

Ford makes two basic findings:

- **The threat of the imposition of Title II began in an appreciable way in 2010. From 2011 to 2015, that threat reduced capital investment by about 20% to 30%; and**
- **Further, this 20% to 30% reduction in capital investment from what it could have been (all else equal) was due to the threat of Title II reclassification and *not* to net neutrality rules *per se*.**

In other words, Ford finds that, but for the threat of Title II reclassification, capital investment would have been larger (by about \$30B to \$40B each year), and this result holds even *with* the threat (or the actuality) of net neutrality rules that did *not* apply Title II.

Ford's statistical method is a simple and well-accepted "difference in difference":

- First Ford identifies a "control group" of companies in other industries whose investment patterns tracked those of ISPs in the years leading up to 2010. The assumption is that if they tracked the ups and downs of ISPs for years before net neutrality was even a glimmer in Tim Wu's eye, investment in these businesses is likely influenced by the same broader economic variables.
- The "treatment group" comprises companies that offer broadband access. Because net neutrality and the OIO affect only these companies, they are the ones expected to be uniquely affected by FCC regulation. Unlike the control group companies, whatever happens to investment levels at companies in the treatment group should be attributable to *both* general economic conditions *as well as* telecom-industry-specific variables.
- Ford then compares investment levels in the control group and the treatment group from several starting points (1980, 1990, and 2000) through 2015. He focuses on what happens

⁹² See George Ford, *Net Neutrality, Reclassification, and Investment: A Counterfactual Analysis*, PHOENIX CTR. FOR ADVANCED LEGAL & ECON. PUB. POL'Y STUDIES (April 25, 2017), <http://www.phoenix-center.org/perspectives/Perspective17-02Final.pdf>.

to investment by companies in each group both before and after 2010, as well as what happens before 2005 and in the period from 2006 to 2009. (More on this below).

- He finds that investment levels are pretty much aligned between the two groups through 2009, but that there is a significant divergence after 2010.

One of the things that sets Ford's analysis apart from the meaningless "analyses" offered by the likes of Free Press and the Internet Association is that his assessment looks at investment levels before and after 2010, instead of 2015, because 2010 is when the *possibility* of Title II reclassification was first seriously floated by Chairman Genachowski.

As is well-known in event study methodology involving economic decisions with long-term consequences, decisionmaking can be (and always is) affected by *expectations*. That is, if an ISP believed in, say, 2011 that reclassification in the next year or two was significantly likely, for example, it would invest accordingly *starting in 2011*, even though *actual* reclassification had not happened yet.

In other words, by the time *actual* reclassification came around, many investment decisions had already been affected by rational discounting to present value of future risk. It is even possible (not that Ford assesses this specifically) that very little may have changed between, say, 2014 and 2016 (*i.e.*, on either side of the *OIO*), because companies already accurately predicted that reclassification was imminent and most of the risk of Title II on long-term investments was already being incorporated into companies' long-term decision making.

Ford shows that, indeed, the *threat* of reclassification was baked into investment decisions in varying degrees in the years leading up to the *OIO*, and that this threat reduced broadband investment below what it would have been in the absence of the threat (and all else equal).

As noted, Ford's analysis also compared investment levels before 2005 and in the period from 2006 to 2009. In 2005 Chairman Powell introduced the *Internet Policy Statement*. From this point forward, it was reasonable to assume that some form of net neutrality regulation was possible and, up through 2010, increasingly likely. But, key to Ford's analysis, it was not reasonable or likely for companies to assume that those regulations would include Title II reclassification before 2010.

Thus Ford's study relies on two distinct periods: 2006 to 2009, when net neutrality rules were implemented or threatened without any concomitant threat of Title II reclassification; and 2011 to 2015, when Title II reclassification was a real threat, and any informed, long-term investment decisions would be made based on each firm's estimation of the likelihood and timing of reclassification.

By analyzing 2006 to 2009 separately from 2011 to 2015, Ford is able to isolate the investment effects of Title II reclassification (if any) from the effects (if any) of traditional net neutrality regulation. According to his analysis, the threat of net neutrality rules *absent* the threat of reclassification

had no meaningful negative effect on ISPs' capital investments.⁹³ The threat of net neutrality rules accompanied by the threat of reclassification, however, had a substantial negative effect on broadband investment.⁹⁴

Comparisons of investment levels that look at nominal investments of only broadband companies and only in the years immediately preceding and following the 2015 OIO (which is to say, most of them) are not useful because they cannot adequately control for the effect of other regulatory and non-regulatory factors that could have influenced decisionmaking and, in any case, must draw conclusions based on a timeframe that is simply too short to yield meaningful results.

Exemplifying the faulty studies that look at nominal investment rates without even attempting to compare them to what they would likely have been in the absence of Title II is the recent Free Press Report, *It's Working*.⁹⁵ It is utterly meaningless to assert that Title II had or will have no effect on investment simply by looking at raw numbers before and after the 2015 OIO. For one thing, as Ford's analysis points out, companies were already considering the risk of Title II for several years before the 2015 OIO. One would *expect* little to change after *actual* reclassification if companies were already investing as if reclassification were likely. Ford himself has penned a response to *It's Working* that elaborates on its multitude of errors beyond this most fundamental one.⁹⁶ As he notes off the bat, however:

Free Press' analysis, as usual, fails to meet the most basic of professional standards, and involves nothing more than the adding up of nominal total capital expenditures for a sample of [ISPs] and comparing the sums between two periods. Such simple-minded analysis is incapable of measuring the effect of a policy change.⁹⁷

C. Some basic, rational economics of the “virtuous circle”

Ford's conclusion should come as no surprise; indeed, it is difficult to imagine that it could be otherwise. Even if it is small, there is still a non-zero risk with the 2015 OIO regime of, for example:

- Un-forbearance leading to the imposition of some of Title II's more invasive provisions (e.g., mandatory unbundling);
- The Internet conduct standard being unpredictably enforced against profitable activities;

⁹³ It did, in point of fact, appear to have some effect, but the effect was extremely small and not statistically reliable.

⁹⁴ It is possible, of course, that something *else* telecom-specific significantly altered telecom investment decisions in 2010 (other than the threat of Title II), but it is hard to imagine what that could be.

⁹⁵ Turner (Free Press), *It's Working*, *supra* note 89.

⁹⁶ George S. Ford, *Reclassification and Investment: An Analysis of Free Press' "It's Working" Report*, PHOENIX CENTER FOR ADVANCED LEGAL & ECON. PERSPECTIVES 17-04 (May 22, 2017), available at <http://www.phoenix-center.org/perspectives/Perspective17-04Final.pdf>.

⁹⁷ *Id.* at 1.

- The threat of enforcement being used to extract “voluntary” conditions in transaction reviews;
- Consumer-facing rate regulation; and
- Title II acceptance paving the way for nationalization, among other things.

These outcomes may be unlikely (or they may not...), and (for the sake of argument) they may even be net beneficial, taking account of their effects on other participants and users in addition to ISPs. But they would indisputably constrain ISPs, reduce the rate of return on invested capital, and reduce innovation incentives. Even if (again, for the sake of argument) these effects are outweighed by benefits accruing to edge providers and consumers, if the net gain is distributed in such a way that it lowers expected returns for ISPs in at least the short run, it will, on the margin, reduce their incentive to make large, risky investments.⁹⁸ To suggest that the virtuous circle offers only prospective benefits to everyone at all times is absurd (and unnecessary to make the case for reasonable regulation, to boot). As is so often the case in net neutrality fights, some combination of confirmation bias, ulterior motives, and strong emotion seems to blind proponents to some simple, obvious truths.

The relationship between edge providers and ISPs (and content owners and edge providers, etc.) has always been one of both cooperation and competition. Even if it is true, simply pointing out that the value (to users) of edge providers might go up as a result of regulation, and that some of that value might be captured by ISPs, does not fully explain the relationship. Asserting that increased edge provider value will *necessarily* increase demand for broadband access and thus infrastructure investment as if no other variables matter assumes a non-existent, monotonic relationship between edge provider fortunes and those of ISPs. But reality is decidedly more complicated. As former FCC Chief Economist, Michelle Connolly, explains, for example:

In an unregulated market, ISPs are able to extract surplus from CSPs [content service providers] when content providers value the connection to subscribed consumers in the ISP networks more than consumers value the connection to the content that is provided by CSPs. Therefore, in an unregulated market, ISPs have the incentive to transfer some surplus from CSPs to consumers in order both to retain existing customers and to attract new customers. Specifically, ISPs could charge CSPs higher prices in order to lower the last-mile fees for consumers in an attempt to maximize their end-user subscriptions.

However, with current net neutrality regulation as specified in the 2015 OIO, ISPs are not allowed to charge any fees to CSPs. Hence, ISPs are forced to generate revenue solely from last-mile fees, which is likely to result in an increase in the average price that is paid by end consumers. This rebalancing of the tariff is termed the waterbed effect.⁹⁹

⁹⁸ See, e.g., Michelle Connolly, et al., *The Digital Divide and Other Economic Considerations for Network Neutrality*, 50 REV. INDUST. ORG. 537, 548 (2017).

⁹⁹ *Id.* at 544.

The reality is that if there are gains in the system, all parties will be vying to capture them, with varying degrees of success. The virtuous cycle theory glosses over this complicating factor. Instead, it effectively asserts either 1) that there will be no change in relative bargaining power or ability to extract rents as a result of the altered regulatory environment, or else 2) that ISPs' ability to extract surplus from other groups (like end users) will actually *increase* relative to that of edge providers' ability to extract surplus from ISPs (i.e., ISPs will extract offsetting rents elsewhere in the system).¹⁰⁰ Neither is likely to be the case, at least not with any degree of consistency.

Further complicating matters (and similarly ignored by the imprecise and incomplete virtuous circle theory), none of these respective groups is homogenous, which means it is inevitably the case that even if there are net gains for, say, edge providers as a group, they will not be evenly distributed among all edge providers, nor will all users be similarly affected. Michelle Connolly again makes the point:

A key thing to highlight is that both content creators and consumers are heterogeneous groups. Different consumers will find different content valuable. Different content providers will find different quality of service or different speeds valuable. So more content does not necessarily mean more utility for consumers. Moreover, blanket subsidization to all potential edge providers diminishes the role of the market in determining the optimal allocation of bandwidth across different content and services.¹⁰¹

Overall, in fact, the literature suggests that when content providers are significantly heterogeneous, regulations like those in the 2015 OIO are likely to lower consumer welfare on net.¹⁰²

Similarly, while regulation that constrains ISPs' profit opportunities is certain to impose costs on broadband providers and change their investment calculus, it may not simply result in an overall *reduction* in investment. Rather, regulatory pressure will likely lead to a *reprioritization* of investment in addition to (or instead of) a reduction. The net effect *may* be diminished infrastructure investment overall, but it may be a shift in investment to more remunerative areas – like urban centers or higher-income suburbs – at the expense of more costly/risky investment in rural and low-income communities. Pretending that these tradeoffs do not exist, or that the asserted net gains will overwhelm the

¹⁰⁰ This latter dynamic is actually plausible, given the waterbed effect. See *id.* For example, to preserve profitability, ISPs may also (or instead) choose to lower the quality of Internet service, restrict service to more profitable users, or impose data caps on subscriptions, among other things. But it isn't necessarily (or even likely) a complete offset, meaning investment incentives would still fall. And it certainly isn't necessarily a good thing for the parties (e.g., consumers) whose surplus is being extracted.

¹⁰¹ Hal Singer, *et al.*, *Bringing Economics Back Into The Net Neutrality Debate*, *Supra* note 23.

¹⁰² See, e.g., Benjamin E. Hermalin and Michael L. Katz, *The Economics of Product-Line Restrictions with an Application to the Network Neutrality Debate*, 19 INFO. ECON. & POL'Y 215, 215-48 (2007); see generally Paul Njoroge, *et al.*, *supra* note 91.

costs does not make it so. And adopting policies without acknowledging them — let alone attempting to assess them — is sheer folly.

In fact, the heterogeneity among both users and content providers, as well as the ability in some cases of both ISPs and content providers to charge the same users, the existence of congestion externalities and the differing abilities of content providers to evade them, business model and investment optimality that changes over the lifecycle of platforms and networks, and both horizontal and vertical competition among and between some ISPs and various content providers (among many other things) enormously complicate the ability to assess or predict the economic effects of regulatory interventions. Even *with* extensive economic analysis, credibly concluding that the approach embodied in the 2015 OIO is in the public interest would be difficult; with the extent of analysis *actually* undertaken in the *Order* it is an absolute impossibility.¹⁰³

III. Correcting the record on the economics of paid prioritization and nonlinear pricing

The 2015 OIO’s essential rejection of economics and an economically informed understanding of market realities extends beyond the fundamental underpinnings of the virtuous circle theory. In particular, the *Order*’s approach to prioritization and non-linear pricing models is similarly ill-informed by the basic economics (and perhaps engineering, too) of networks. As a result, the 2015 OIO’s treatment of discriminatory pricing practices as something entirely distinct from — and more nefarious than — network management is misguided and counterproductive. In fact, actual economic research demonstrates that under most realistic market conditions, the sort of regulations envisioned in the 2015 OIO lower consumer welfare.¹⁰⁴

The 2015 OIO presents its “No Paid Prioritization” rule as “protect[ing] against ‘fast lanes.’”¹⁰⁵ While the term, “fast lane,” is used colloquially with great frequency, it rarely appears in the economic and

¹⁰³ See generally, Shane Greenstein, et al., *Net Neutrality: A Fast Lane to Understanding the Trade-offs*, *supra* note 18.

¹⁰⁴ See Kevin W. Caves, *Modeling the Welfare Effects of Net Neutrality Regulation: A Comment on Economides and Tag*, 24 INFO. ECON. & POL’Y 288, 288-92 (2012); Bourreau, et al., *supra* note 32, at 63.

¹⁰⁵ 2015 OIO at ¶ 18 (emphasis added). It should be noted that the NPRM for the 2015 OIO did not mention fast lanes (but, then, nor did it include a *per se* ban on paid prioritization). See *Protecting and Promoting the Open Internet*, WC Docket No. 14-28, Notice of Proposed Rulemaking, 29 F.C.C. Rcd. 5561 (2014) (“Although the proposed no-blocking rule only establishes a minimum level of service, and thus allows room for individualized negotiations, the proposed commercial reasonableness rule separately applies to any and all conduct, including by asking whether paid prioritization can be barred outright.”). Chairman Wheeler, however, *did* use the phrase in his statement accompanying the NPRM. See *Id.* at 5646 (Statement of Chairman Tom Wheeler) (“The potential for there to be some kind of ‘fast lane’ available to only a few has many people concerned. Personally, I don’t like the idea that the Internet could become divided into ‘haves’ and ‘have nots.’ I will work to see that does not happen. In this Item we specifically ask whether and how to prevent the kind of paid prioritization that could result in ‘fast lanes.’”). It is not clear if Wheeler actually thought there was a meaningful distinction between “paid prioritization” and “fast lanes” that would enable allowing some version of the former while banning the latter entirely. In any case, by the time the *Order* itself rolled around, any distinction had seemingly disappeared.

technical literature. And for good reason: Reducing the relevant dimension of prioritized data transmissions to speed alone is overly simplistic. Numerous factors determine the ultimate performance of network data flows, including throughput, latency, jitter, and packet loss. Thus, for example, prioritized videoconferencing data arrives with less latency; streaming video data with better throughput. It is more accurate to say that “prioritization” is the application of network management strategies to ensure that prioritized content arrives with properties appropriate to its data type at a higher guaranteed minimum level than minimal “best practices” management would. That’s not as catchy as “fast lane,” but it is more accurate.

The particular defect is emblematic of the more general problem of the *Order’s* lack of sufficient sensitivity to the complexities of the relationships it regulates.

Only through gross oversimplification and neglect of economics could the Commission assert the confidence in its position sufficient to saddle the Internet with such an invasive regulatory regime. But for myriad reasons its confidence is misplaced.

A. Some basic economics of networks, two-sided pricing, and price discrimination

The ban on paid prioritization and the prohibition on levying terminating access fees on content providers in the 2015 OIO fail to address whether the asserted benefits of mandated “openness” outweigh the possible forsaken benefits to consumers, infrastructure investment, and competition from prohibiting discrimination. Had the Commission actually engaged with the substantial relevant economic literature in the 2015 OIO it would have been forced to confront the poverty of its assumptions, analysis, predictions, and conclusions. It is thus no surprise that the *Order* is an economics-free zone.

Interestingly, the question of openness versus welfare *was* considered by Tim Wu, who acknowledged the presence of trade-offs inherent in mandating neutrality. Among other things, prohibiting two-sided pricing and content prioritization (thus precluding user subsidies) invariably raises consumer prices:

Of course, for a given price level, subsidizing content comes at the expense of not subsidizing users, and subsidizing users could also lead to greater consumer adoption of broadband. It is an open question whether, in subsidizing content, the welfare gains from the invention of the next killer app or the addition of new content offset the price reductions consumers might otherwise enjoy or the benefit of expanding service to new users.¹⁰⁶

¹⁰⁶ Robin S. Lee & Tim Wu, *Subsidizing Creativity through Network Design: Zero-Pricing and Net Neutrality*, 23 J. ECON. PERSPECTIVES 61, 67 (2009).

Policy advocates supporting the underlying approach of the 2015 OIO fundamentally misunderstand this dynamic, instead seemingly presuming that content access pricing by ISPs can *only* harm networks. Public Knowledge, for instance, has claimed that:

If Verizon – or any ISP – can go to a website and demand extra money just to reach Verizon subscribers, the fundamental fairness of competing on the internet would be disrupted. It would immediately make Verizon the gatekeeper to what would and would not succeed online. ISPs, not users, not the market, would decide which websites and services succeed.

* * *

Remember that a “two-sided market” is one in which, in addition to charging subscribers to access the internet, ISPs get to charge edge providers on the internet to access subscribers as well.¹⁰⁷

And elsewhere:

Comcast’s market power affords it advantages vis-à-vis recipients of Internet video content as well as creators of Internet video content. For example, Comcast will be able to distribute NBC content through its Xfinity online offering without having to pay itself license fees.

This two-sided market advantage results from Comcast’s position as a gatekeeper: it provides access to customers for content creators and it provides access to content for customers. Control over both directions of this transaction allows Comcast the opportunity for anticompetitive behavior against either content creators or consumers, or both simultaneously.¹⁰⁸

These comments fundamentally misunderstand the economics of two-sided markets. Rather than facilitating anticompetitive conduct or enabling greater exploitation of users or content providers, two-sided markets facilitate otherwise-difficult, efficient economic exchange. Virtually all two-sided markets incorporate subsidies from one side of the market (typically the side with lower price elasticity resulting from its greater reliance on the access to the other afforded by the platform) to the other – not excessive profiteering through charging both sides of the platform.¹⁰⁹

¹⁰⁷ Michael Weinberg, *But For These Rules...*, PUBLIC KNOWLEDGE (Sept. 10, 2013), <https://www.publicknowledge.org/news-blog/blogs/these-rules>.

¹⁰⁸ Public Knowledge Petition to Deny, *In the Matter of Applications of Comcast Corporation, General Electric Company and NBC Universal, Inc. for Consent to Assign Licenses or Transfer Control of Licensees*, MB Docket No. 10-56 (Jun. 10, 2010), available at <https://www.publicknowledge.org/files/docs/PK-nbc-comcast-20100621.pdf>.

¹⁰⁹ See generally Jean-Charles Rochet & Jean Tirole, *Platform Competition in Two-Sided Markets*, 1 J. EUR. ECON. ASSOC. 990 (2003).

The “two-sidedness” of markets does not inherently confer increased ability to earn monopoly profits, and, in fact, the literature suggests that the availability of subsidization *reduces* monopoly power and increases welfare. In the broadband context, as one study notes, “[i]mposing rules that prevent voluntarily negotiated multisided prices will never achieve optimal market results, and... can only lead to a reduction in consumer welfare.”¹¹⁰

Business models frequently coexist where different parties pay for the same or similar services. Some periodicals are paid for by readers and offer little or no advertising; others charge a subscription and offer paid ads; and still others are offered for free, funded entirely by ads. All of these models work. None is necessarily “better” than the other. There is no reason the same isn’t true for broadband and content.

What’s more, the literature directly contradicts the assumption that neutrality improves consumer welfare or encourages infrastructure investment. In fact, the opposite appears far more likely to be true, and non-neutrality actually generally benefits *both* content providers as well as consumers:

Our main result is that a switch from the net neutrality regime to the discriminatory regime would be beneficial in terms of investments, innovation and total welfare. First, when ISPs offer differentiated traffic lanes, investment in broadband capacity increases. This is because the discriminatory regime allows ISPs to extract additional revenues from CPs [Content Providers] through the priority fees. Second, innovation in services also increases: some highly congestion-sensitive CPs that were left out of the market under net neutrality enter when a priority lane is proposed. Overall, discrimination always increases total welfare....¹¹¹

Another paper finds the same result with respect to investment:

All else being equal, the ability of ISPs to maintain differential prices among CSPs [Content Service Providers] enables greater investments and higher quality and coverage of service, including in geographical areas that have low returns on investments. Again this implies that the OIO will likely lead to decreased investment relative to the absence of such regulation and will help to maintain the digital divide by further slowing investment in lower return geographic areas.¹¹²

And yet another paper finds the same result, except in a small subset of cases:

Our results suggest that investment incentives of ISPs, which are important drivers for innovation and deployment of new technologies, play a key role in the net neutrality debate. In the non-neutral regime, because it is easier to extract surplus through appro-

¹¹⁰ Larry F. Darby & Joseph P. Fuhr, Jr., *Consumer Welfare, Capital Formation and Net Neutrality: Paying for Next Generation Broadband Networks*, 16 MEDIA L. & POL’Y 122, 123 (2007).

¹¹¹ Marc Bourreau, *et al.*, *Net Neutrality with Competing Internet Platforms*, *supra* note 32, at 3 (in orig. working paper).

¹¹² Connolly, *et al.*, *supra* note 98 at 547.

appropriate CP pricing, our model predicts that ISPs' investment levels are higher; this coincides with the predictions made by the defendants of the non-neutral regime. On the other hand, because of platforms' monopoly power over access, CP participation can be reduced in the non-neutral regime; this coincides with the predictions made by the defendants of the neutral regime. We find that in the walled-garden model, the first effect is dominant and social welfare is always larger in the non-neutral model. While this still holds for many instances of the priority-lane model, the neutral regime is welfare superior relative to the non-neutral regime when CP heterogeneity is large.¹¹³

While one paper does purport to find a welfare increase from neutrality (although *not* with monopoly platforms, interestingly), this paper does not incorporate infrastructure investment incentives in its model, nor does it consider the effect of price discrimination.¹¹⁴ And a later paper by one of the authors finds that, for monopoly ISPs, the ability to discriminate “unambiguously results in the ISP installing greater bandwidth. This effect is welfare enhancing.”¹¹⁵

Nevertheless, the economic literature does provide some support for the imposition of a minimum-quality standard:

We extend our baseline model to account for the possibility that ISPs engage in quality degradation or “sabotage” of CP's traffic. We find that sabotage never arises endogenously under net neutrality. In contrast, under the discriminatory regime, ISPs may have an incentive to sabotage the non-priority lane to make the priority lane more valuable, and hence, to extract higher revenues from the CPs that opt for priority. Any level of sabotage is detrimental for total welfare, and therefore, a switch to the discriminatory regime would still require some regulation of traffic quality.¹¹⁶

Even here, however, the analysis does not consider disclosure-based (transparency) restraints on quality degradation, and it is entirely possible that a transparency rule (or simply the risk of public disclosure even without such a rule) would be sufficient to deter quality degradation.

Regardless, the literature supports, at most, a minimum quality requirement and perhaps only a transparency requirement; it does not support mandated one-sided pricing or nondiscrimination rules.

¹¹³ Paul Njoroge, *et al.*, *supra* note 91, at 361. Some previous papers have found the opposite result in some instances. All of these models exclude important aspects of the more updated literature, however. *See Id.* at 362-65, for a literature review.

¹¹⁴ See Nicholas Economides & Joacim Tåg, *Network Neutrality on the Internet: A Two-sided Market Analysis*, 24 INFO. ECON. & POL'Y 91 (2012).

¹¹⁵ Nicholas Economides & Benjamin E. Hermalin, *The economics of network neutrality*, 43 RAND J. ECON. 602, 605 (2012).

¹¹⁶ Marc Bourreau, *et al.*, *Net Neutrality with Competing Internet Platforms*, *supra* note 32, at 3-4.

B. The basic economics of network congestion: Pricing is a form of network management

The restraints imposed upon paid prioritization and differential pricing by the 2015 OIO thwart a range of pro-consumer business models on the Internet. Even during the run-up to the 2015 OIO, the Commission’s own Open Internet Advisory Committee (“OIAC”) recognized that different pricing models – even ones incorporating paid prioritization – embody a tradeoff that could have decidedly pro-consumer benefits – even while imposing, or risking imposition of, some costs.¹¹⁷ The OIAC observed, for instance, that while paid prioritization may sometimes have the effect of creating barriers to entry for startups (a debatable point), “[e]nabling content providers to pay for data delivery offers users an incentive to access the sponsored content. In the short run, this is beneficial for consumers of that content, particularly for budget conscious users on smaller data plans.”¹¹⁸

Among other things, and as the *OIAC Report* illustrates in several places, constraining paid prioritization limits the permissible scope of “reasonable network management” in ways that almost necessarily create the need for *more*, not less, network management, increase the risk of congestion, and introduce the likelihood of conflict with the rules themselves.

One key problem is that, without the option (or requirement) to pay for data priority, users have “little incentive or ability (beyond the binary choice between consuming or not consuming) to prioritize their use of data based on their preferences.”¹¹⁹

In other words, the marginal cost to consumers of consuming high-value, low-bit data (like VoIP [transmitting voice over the internet], for example) is the same as the cost of consuming low-value, high-bit data (like backup services, for example), assuming neither use exceeds the user’s allotted throughput. And in both cases, with all-you-can-eat pricing, consumers face a marginal cost of \$0 (at least until they reach a cap). The result is that consumers will tend to over-consume lower-value data and under-consume higher-value data, and, correspondingly, content developers will over-invest in the former and

¹¹⁷ Jonathan Zittrain & David Clark, *Open Internet Advisory Committee 2013 Annual Report*, at 58, available at <http://transition.fcc.gov/cgb/oiaac/oiaac-2013-annual-report.pdf> [hereinafter, “*OIAC Report*”]. The *OIAC Report* continues: “This is clearly an area of ongoing debate.... [T]here is a great deal of experimentation in mobile business models, which is enabling innovation and value to customers and others in the ecosystem. Some business models raise concerns about carriers restricting the way consumers use their mobile devices and about long-term impacts on application and content innovation.” *Id.*

¹¹⁸ *Id.*

¹¹⁹ *USTelecom*, 825 F.3d at 762 (Williams, J., dissenting) (quoting Comments of International Center for Law & Economics and TechFreedom at 17 (July 17, 2014)).

under-invest in the latter. The ultimate result – the predictable consequence of mandated neutrality rules – is a net reduction in the overall value of content both available and consumed, and network under-investment.¹²⁰

Completely missing the point, some critics have argued that paid prioritization creates “artificial scarcity,” which allows ISPs to fleece their users, resulting in less broadband usage – much as bandwidth caps are claimed to do:

Bandwidth caps made it impossible to do all the important stuff [more capacious networks] supposedly let[] you do. T-Mobile provides evidence that users with capped or throttled broadband use 20x-30x less broadband than users with uncapped broadband. T-Mobile has also said that 37% of subscribers don’t use streaming media because they fear going over their bandwidth caps.¹²¹

To the extent that “artificial scarcity” is another way of saying “optimization through price-based rationing,” the assertion is correct – but the criticism is misplaced. *Maximal* use (or over-use) of broadband is not the correct policy aim. Rather, the aim should be the *optimal* use of broadband, which maximizes the value of the Internet for consumers and creates the right incentives for network owners and edge providers to innovate and invest.

To the extent that unlimited use/flat rate billing *are* optimal, they are optimal only with uncongested networks with full penetration.¹²² Ironically, however, the 2015 OIO’s ban on paid prioritization and preference for flat-rate billing (to the extent it is a necessary implication of the Order’s suspicion of alternative billing models) ultimately will deter new network competition, resulting in an increased likelihood of congestion and limited penetration and higher prices for low-volume consumers.¹²³

¹²⁰ *Id.* at 762-63.

¹²¹ Harold Feld, *T-Mobile Data Roaming Petition Proves Wireless Data Caps Are About Market Power*, PUBLIC KNOWLEDGE (Jul. 11, 2014), <https://www.publicknowledge.org/news-blog/blogs/t-mobile-data-roaming-petition-proves-wireless-data-caps-are-about-market-power-and-that-they-seri>.

¹²² See, e.g., Daniel A. Lyons, *Internet Policy’s Next Frontier: Usage-Based Broadband Pricing*, 66 FED. COMM’NS L. J. 1 (2013). The presence (or absence) of congestion is key to assessing both the purported problem itself, as well as the costs and benefits of any proposed solution. Priority really matters only when there is congestion. See, e.g., Jan Krämer & Lukas Wiewiorra, *Network Neutrality and Congestion Sensitive Content Providers: Implications for Service Innovation, Broadband Investment and Regulation*, MPRA Paper No. 27003 (Dec. 2010), available at http://mpra.ub.uni-muenchen.de/27003/1/MPRA_paper_27003.pdf. See also Drew Fitzgerald, *How The Web’s Fast Lanes Would Work Without Net Neutrality*, WALL ST. J. (May 16, 2014), <http://online.wsj.com/news/articles/SB10001424052702304908304579565880257774274>.

¹²³ See, e.g., Scott Wallsten & James L. Riso, *Residential and Business Broadband Prices Part 1: An Empirical Analysis of Metering and Other Price Determinants*, Tech. Policy Inst. Paper (Nov. 2010), available at <https://techpolicyinstitute.org/wp-content/uploads/2010/11/residential-and-business-broad-2007439.pdf>. See also *id.*

Among other things, this means that, particularly where there is congestion, the socially optimal solution is for broadband providers to encourage users to *prioritize*, not necessarily to maximize, their data usage.¹²⁴ Deterring or prohibiting innovative broadband business models that seek to offer content via programs like zero rating and sponsored data¹²⁵ undermines not only optimal policymaking, but also net neutrality proponents' own stated aim to enhance "the value of [] broadband to consumers."¹²⁶

It also means that the socially optimal solution is for broadband providers to encourage *content providers* to prioritize their offerings, which runs counter to the very logic of the 2015 OIO's version of net neutrality. Not all content is created equal, and policies aimed at indiscriminately maximizing content "may actually lead to inefficient entry and lower quality and diversity of content."¹²⁷ At the margin, by mandating free terminating access for content providers, the *Order's* content-maximization strategy will tend to lead to an inefficient mix of content offerings because unmetered access "is particularly valuable to applications that make wasteful use of bandwidth."¹²⁸ Regardless, absent an assessment of the actual or likely welfare effects, it is impossible to say *ex ante* that consumer welfare in general, and regarding content in particular, is best served by policies aimed at encouraging innovation and investment in content over networks. Because of the complexities discussed above,¹²⁹ it is by no means clear that maximizing content at the expense of network management is optimal, *even for content providers*. At the very least, the Commission's claimed statutory obligation is to promote *broadband deployment*, not to maximize content.

To the extent that new content entrants might threaten ISPs' affiliated content or services, the *Order* is on somewhat more solid economic ground. But such a risk justifies, *at most*, only a limited rule creating a rebuttable presumption of commercial unreasonableness in such circumstances. But even then, the logic behind such a rule tracks precisely the well-established antitrust law and economics

¹²⁴ But this also means it may be correct to assume that priority, in the first instance, means not just better service for some, but worse service for others (if some content gets better service when there is congestion, the capacity to do so can come only from limiting the transmission quality of other bits in some regard). The assertion that this inherently means that prioritization in the face of congestion is "zero-sum," however (*see* 2015 OIO at ¶ 126 & note 287), is not correct. If the benefits to users receiving prioritized bits is greater than the cost to users receiving de-prioritized bits, the welfare effect of prioritization is *not* zero-sum. There may be some situations where this does not hold, but are also innumerable situations where it would. *See* Thomas W. Struble, *On the Relationship Between QoS & QoE: Why Differential Traffic Management on the Internet Is Not a Zero-Sum Practice*, Research Paper for TPRC 44 (Aug. 31, 2016), available at http://docs.techfreedom.org/Paid_Prioritization_TPRC_2016.pdf.

¹²⁵ Corynne McSherry, *et al.*, *Zero Rating: What Is It And Why You Should Care*, ELEC. FRONTIER FOUND. (Feb. 18, 2017), <https://www.eff.org/deeplinks/2016/02/zero-rating-what-it-is-why-you-should-care>.

¹²⁶ Feld, *T-Mobile Data Roaming Petition Proves Wireless Data Caps Are About Market Power*, *supra* note 121.

¹²⁷ Connolly, *et al.*, *supra* note 98 at 552.

¹²⁸ *Id.*

¹²⁹ *See supra* Section II.C.

of vertical foreclosure, which neither justifies a presumption (even a rebuttable one) nor the imposition of a targeted regulation beyond the antitrust laws themselves.¹³⁰

Prioritization schemes offer a means to both a) limit data usage and relieve congestion, whether there are caps or not; and b) still permit users to pay to avoid whatever limits caps would place on their usage in a much more useful way, allowing them to pick and choose which types of data or even content providers are most important to them. Such arrangements facilitate the optimal use of scarce data, enable network management practices that alleviate congestion overall, and allow ISPs to reduce the risk of infrastructure investment by speeding up the rate at which they realize returns. Collectively these create an enormous impetus for broadband investment that is disregarded by the *2015 OIO*. In fact, the *2015 OIO* is uncharacteristically clear and decisive on this issue:

Unlike the no-blocking and no-throttling rules, there is no “reasonable network management” exception to the paid prioritization rule because paid prioritization is inherently a business practice rather than a network management practice.¹³¹

It wasn’t always entirely this way at the FCC. In fact, as the Commission’s efforts to enact some — *any* — version of open Internet rules intensified, the actual, underlying logic of the rules increasingly gave way to the instrumental need to write rules to satisfy the activists and to fit whatever claimed authority the Commission could get past the courts. While this led most obviously to the eventual reclassification of broadband providers as common carriers, it also led to the minimization of network management as a crucial limitation on the *per se* application of the rules. Thus, in a speech defending the *2010 OIO* — and in marked contrast to the *2015 OIO* — Chairman Genachowki declared that

broadband providers need meaningful flexibility to manage their networks — for example, to deal with traffic that’s harmful to the network or unwanted by users, and to address the effects of congestion. Reasonable network management is an important part of the proposal, recognizing that what is reasonable will take account of the network technology and architecture involved.

¹³⁰ See, e.g., Hazlett & Wright, *The Law and Economics of Network Neutrality*, *supra* note 16.

¹³¹ *2015 OIO* at note 18. See also Tom Wheeler, FCC Chairman, *Letter to Daniel S. Mead, President & CEO, Verizon Wireless* (Jul. 30, 2014), available at https://gigaom.com/wp-content/uploads/sites/1/2014/07/vzw-letter-07_30_14.pdf (“‘Reasonable network management’ concerns the technical management of your network; it is not a loophole designed to enhance your revenue streams. It is disturbing to me that Verizon Wireless would base its ‘network management’ on distinctions among its customers’ data plans, rather than on network architecture or technology.”).

Our work has also demonstrated the importance of business innovation to promote network investment and efficient use of networks, including measures to match price to cost such as usage-based pricing.¹³²

The contrary idea that consumers and competition generally are better off when content providers face no incentive to take account of congestion externalities, or when users have little incentive to take account of their own usage, runs counter to basic economic logic and is unsupported by the evidence. In fact, contrary to such claims, nonlinear and two-sided pricing – usage-based pricing, congestion pricing and sponsored content (among other nonlinear pricing models), on the one hand, and non-zero, differential content termination fees, on the other – would generally be expected to increase overall welfare and further incentivize networks to *expand* capacity (not create artificial scarcity).¹³³

Significantly, restraints on ISP pricing freedom may deter the use and thus the construction of faster networks and result in lower consumer welfare. As one of the DOJ’s former chief economists, Aviv Nevo, and coauthors explained:

[U]sage-based pricing is an effective means to remove low-value traffic from the Internet, while improving overall welfare. Consumers adopt higher speeds, on average, which lowers waiting costs. Yet overall usage falls slightly. The effect on subscriber welfare depends on the alternative considered. If we hold the set of plans, and their prices, constant, then usage-based pricing is a transfer of surplus from consumers to ISPs. However, if we let the ISP set price to maximize revenues, then consumers are better off.¹³⁴

To be sure, under some conditions such arrangements could create some incentive for networks to extract surplus and create “artificial scarcity.”¹³⁵ But if this is the justification for regulation, it should be more clearly established through economic analysis and it should evaluate the practical relevance of those specific conditions. Further, such regulation should narrowly focus on this risk and avoid constraining efficient investment, usage and innovation incentives when the risk is not present.

¹³² Julius Genachowski, *Remarks on Preserving Internet Freedom and Openness* (Dec. 1, 2010), available at https://apps.fcc.gov/edocs_public/attachmatch/DOC-303136A1.pdf.

¹³³ See, e.g., Gary S. Becker, et al., *Net Neutrality and Consumer Welfare*, 6 J. COMP. L. & ECON. 497 (2010); Hermalin & Katz, supra note 102; Michael L. Katz, *Wither U.S. Net Neutrality Regulation?* _ REV. NET. ECON. _ (forthcoming 2017) (Working Paper (May 15, 2016) available at <https://techpolicyinstitute.org/wp-content/uploads/2016/05/MLKatzWitherUSNetNeutralityRegulation.pdf>). See generally, Robert D. Willig, *Pareto Superior Nonlinear Outlay Schedules*, 11 BELL J. ECON. 56 (1978).

¹³⁴ Aviv Nevo, et al., *Usage-Based Pricing and Demand for Residential Broadband*, 84 ECONOMETRICA 411 (2016) (Working Paper (Sep. 2013) at 38, available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2330426).

¹³⁵ See Nicholas Economides, *Why Imposing New Tolls on Third-Party Content and Applications Threatens Innovation and will not Improve Broadband Providers’ Investment*, NYU Center for Law, Econ. & Org. Working Paper No. 10-32 (Jul. 2010), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1627347.

The bottom line is that regulatory restrictions on pricing serve generally to lower welfare and broadband investment incentives. The 2015 OIO evinces no awareness of this, however.

C. The importance of prioritization for encouraging innovation and new entry

The deepest problem with the 2015 OIO is that the one thing it *does* prioritize is the *status quo*, deterring not only new network access models but also novel business and pricing models at all levels of the Internet.¹³⁶

While limits to Internet “openness” can arise at any number of points along the “value chain” from content creation to consumption, so too can innovation and investment occur at any number of points – and do at least as much to spur broadband infrastructure investment (the goal ordered by Congress in Section 706, and claimed by the Commission as its source of legal authority).

The diverse array of wireless innovations happening globally illuminates the tradeoffs inherent in the Commission’s ongoing net neutrality efforts. To protect Internet content and application providers... the Commission generally requires broadband providers to grant access to all lawful Internet endpoints at all times from all devices. Conventional wisdom suggests this arrangement benefits consumers as well. But in international markets, consumer demand and carrier innovation are challenging that wisdom by introducing competitive and popular alternatives to the traditional net-neutral model... [C]onsumers are increasingly accessing the Internet through multiple devices, which suggests less need for every device to provide the same comprehensive service. Internationally, companies are using that flexibility to develop alternative service bundles that appeal to a broad base of consumers. But the long shadow of the Commission’s net neutrality proceeding may limit the ability of Americans to share in the global revolution currently taking place for mobile services.¹³⁷

The particularly ironic aspect of the narrow focus on network access, and the commensurate threat to all manner of innovative practices under the rubric of net neutrality, is that these innovations have frequently been introduced by both new entrants and incumbent firms facing rigorous competition – settings in which anticompetitive effects are of little or no concern and in which consumers are manifestly benefitted from such efforts.

¹³⁶ See, e.g., Larry Downes, *Unscrambling the FCC’s Net Neutrality Order: Preserving the Open Internet – But Which One?*, *supra* note 81, at 115 (“As the exceptions piled up, the majority should have realized the futility of making rules for an ecosystem very much in transition. Instead, they remain fixated on maintaining an Open Internet even though they now had ample evidence that neutrality is a virtue more honored in the breach.”). See also Christopher S. Yoo, *Beyond Network Neutrality*, 19 HARV. J.L. & TECH. 1 (2005).

¹³⁷ Daniel A. Lyons, *Innovations in Mobile Broadband Pricing*, 92 DENVER U. L. REV. 453, 455 (2015). See also CHRISTOPHER S. YOO, *THE DYNAMIC INTERNET* 122–23 (2012).

Daniel Lyons points to then-fledgling MetroPCS's effort to gain market share in 2011 by offering a limited data plan with subsidized, unlimited access to content from YouTube and a few other content providers.¹³⁸ The plan was excoriated by net neutrality proponents. But,

as Professor Tom Hazlett notes, [MetroPCS's] customers were mostly price-sensitive cord-cutters who had little use for the bells and whistles of larger carrier plans, especially at higher price points. MetroPCS's plan was poised to bring wireless data to this market segment. But instead it found itself facing the threat of agency action because its plan did not match the Federal Communications Commission's preconceived notion of what the wireless broadband experience should be.¹³⁹

MetroPCS ultimately abandoned this innovative business model, whose very non-neutrality could have promoted broadband adoption, especially among those on the other side of the "digital divide."

It is not hard to imagine myriad business models that would manifestly lower prices and increase broadband adoption but that could be prohibited under the 2015 OIO. In fact the Commission has already targeted ISPs experimenting with novel, discriminatory business models. In late 2016 the FCC sent letters to AT&T and Verizon, challenging their zero-rating programs as possible (even likely) violations of the 2015 OIO.¹⁴⁰ In both cases, the Commission took issue with the fact that the companies allowed their own affiliated content services to subsidize users' access in exchange for prioritization (and even though the programs were also open to non-affiliated content services).

The ongoing risk of an enforcement action for similar conduct (or even the bad publicity from letters like the ones sent to AT&T and Verizon in 2016) might well deter broadband companies from experimenting with such business models in the first place. Indeed, that risk is essentially why the D.C. Circuit struck down the FCC's 2010 non-discrimination rule as amounting to *de facto* common carriage.¹⁴¹

¹³⁸ *Id.* at 455-57 (citing Ryan Kim, *MetroPCS LTE Plans to Charge More for VoIP & Streaming*, GIGAOM (Jan. 4, 2011), <http://gigaom.com/2011/01/04/metropcs-lte-plans-charge-more-for-skype-and-streaming/>).

¹³⁹ *Id.* at 556-57 (citing Thomas W. Hazlett, *FCC, Net Neutrality Rules, and Efficiency*, FINANCIAL TIMES (Mar. 29, 2011), <http://www.ft.com/intl/cms/s/0/f75fd638-5990-11e0-baa8-00144feab49a.html#axzz2gFHqNfa>).

¹⁴⁰ See Jeff Dunn, *The FCC Thinks AT&T's Policies 'Harm Consumers' - And It's Warning Verizon, Too*, BUSINESS INSIDER (Dec. 2, 2016), <http://www.businessinsider.com/fcc-verizon-att-zero-rating-net-neutrality-letter-directv-now-2016-12>.

¹⁴¹ *Verizon*, 740 F.3d at 657 ("The Commission has provided no basis for concluding that in permitting 'reasonable' network management, and in prohibiting merely 'unreasonable' discrimination, the Order's standard of 'reasonableness' might be more permissive than the quintessential common carrier standard.").

D. Banning prioritization and nonlinear pricing by ISPs doesn't mean there's no rationing — it just moves it elsewhere (or, the “hydraulic effect” of myopic regulation)

The 2015 OIO's failure to grapple in any way with the economics of rationing by ISP-mediated price (on both sides of the market), and its failure to recognize that there will *always* be rationing of some sort, call into question the entire apparatus of the *Order's* policy justification for the rules it adopts.

Scarcity on the Internet (as everywhere else) is a fact of life — whether it arises from network architecture, search costs, switching costs, or the fundamental limits of physics, time and attention. The need for some sort of rationing (which implies prioritization) is thus also a fact of life. If rationing isn't performed by the price mechanism, it will be performed by something else. For startups, innovators, and new entrants, while they may balk at paying for priority, the relevant question, as always, is “compared to what?” There is good reason to think that a neutral Internet will substantially favor incumbents and larger competitors, imposing greater costs than would paying for prioritization. Far from detracting from the Internet's value, *including its value to the small, innovative edge providers so many net neutrality proponents are concerned about*, prioritization almost certainly increases it.

In other words, and of particular importance to the regulation of rapidly-evolving markets like broadband, there is no free lunch. Regulation cannot change the laws of physics or economics, and it cannot change the fact that there is no such thing as a truly neutral Internet: someone and some mechanism will always “pick winners and losers” in the face of scarcity. Regulation that prohibits ISPs and market prices from doing so also have the unavoidable effect of ordaining someone and something else to do so. It is thus incumbent upon well-meaning regulators to consider and rigorously account for the problems and/or risks that regulation itself may introduce. The “hydraulic effect” of regulation — the reality that underlying economic incentives will shift conduct to unregulated areas, often in ways that undermine the purpose of regulation — is inevitable.¹⁴² This reality makes it considerably more difficult for regulators to design regulations that do more good than harm.

In essence, the 2015 OIO attempts to minimize networks' central management function and largely prohibits ISP-mediated prices from acting as a rationing device¹⁴³ — but it does not impose an alternate regime for navigating conflicts among content providers. Yet, unavoidably, something else will

¹⁴² See Geoffrey A. Manne, *The Hydraulic Theory of Disclosure Regulation and Other Costs of Disclosure*, 58 ALA. L. REV. 473 (2007).

¹⁴³ The 2015 OIO bans paid prioritization outright, but regulates nonlinear pricing mechanisms like sponsored data under the Internet conduct standard. See 2015 OIO at ¶ 151-53. But the *Order* also rejects the “commercially reasonable” standard of the 2010 OIO and replaces it with a more amorphous, and more restrictive, “unreasonable interference or unreasonable disadvantages” standard. Following the Commission's letters expressing its hostility to AT&T's and Verizon's zero rating programs, *supra* note 140, and accompanying text, it is safe to assume that such pricing schemes stand on extremely thin ice under the 2015 OIO, at best.

arise in its stead: e.g., online platforms, direct payments between content providers, mergers, marketing, or simply the “natural” default. These may or may not be better at optimizing value, but they certainly undermine efforts to mandate neutrality.

Consider this 2006 statement from the Future of Music Coalition:

For musicians, net neutrality means they should have the unfettered ability to make their work available to potential fans without undue interference from corporate gatekeepers. Similarly, music fans should have the ability to access this music via a range of legitimate business models. Net neutrality also ensures the continued innovation that has spurred the growth of the indie sector, the transition to a legitimate digital economy and, more widely, consumer adaptation [sic: adoption?] of broadband services.¹⁴⁴

In this case, the only “corporate gatekeepers” that are stymied by the *OIO* are ISPs. But that means that other “gatekeepers” – like music streaming services, various advertising platforms, music search services, radio station programmers, and music retailers, for example – become even more powerful. Instead of guaranteeing the “unfettered ability [for musicians] to make their work available,” the rules may have the opposite effect.

Absent subsidized prioritization, online music consumers must, at the margin, limit their consumption of content or limit its quality (by consuming lower-bit versions or purchasing only slower broadband access). Moreover, the effective prohibition in the *2015 OIO* on affiliated-content prioritization and ISP-based promotion of content removes a mechanism for reducing search and marketing costs – even as consumers face stronger incentives to discriminate in the content they consume. In such a world, other mechanisms for promotion, placement, marketing, and advertising become correspondingly more important and more expensive – and more significant sources of non-neutrality.

And, of course, non-ISP platforms can themselves engage in other forms of prioritization that essentially replicate the “fast and slow lanes” of ISP prioritization: for example, by offering some music only at lower bit rates, offering their own fast/slow lanes to certain labels or artists, or, like Netflix, offering their own original or exclusive content – protected by contract and IP laws, and limited only by the market and antitrust rules.

Of course, there might be a consumer-welfare-relevant difference between rationing by these entities and broadband providers. But if there is, the only thing for certain we know about it is that the Commission did not demonstrate that it evaluated it – or even *recognized* the tradeoff – at all, and the *2015 OIO* completely ignores it. We – and, more to the point, the FCC – simply don’t know whether the resulting non-ISP-based discrimination will necessarily be better or worse. But we can

¹⁴⁴ Jenny Toomey & Michael Bracy, *Indie-rock revolution, fueled by net neutrality*, FUTURE OF MUSIC COALITION (Jun. 13, 2006), available at <https://futureofmusic.org/article/article/op-ed-indie-rock-revolution-fueled-net-neutrality>.

say that it follows logically from net neutrality regulation and that it can undermine net neutrality proponents' *stated* aims.

The key point is that the activists behind the effort to mandate neutrality, the structure of the FCC's statutes, and the specific authority at issue in the 2015 OIO are all myopically focused on *communications networks* as potential barriers to access and innovation. But viewed properly (rather than through the jaded lens of an idiosyncratic regulatory crusade and an outdated statute), ISPs are not by any means the only possible sources of friction between content and its potential consumers.

It is possible (but not actually established)¹⁴⁵ that broadband "openness" is a necessary condition for edge innovation, but it is by no means sufficient. In many ways, in fact, it is content aggregators (think Netflix, Etsy, Google, Facebook) that probably exert the greatest, or certainly the most direct, influence over access. While these companies sometimes come under fire themselves (wrongly, in our view), it is a relevant question to assessing the desirability of the 2015 OIO whether they are made more or less powerful if ISPs are constrained, and what effect that will have on consumer welfare.

In fact, of course, all of these companies, including ISPs, have the ability to mediate access, but are limited by the market dynamics that constrain them, including from interactions with each other. That is crucial for assessing the effects of the implicit preference for non-ISP prioritization in the 2015 OIO. But, it must be stressed, it is also crucial for assessing whether the *Order* adequately evaluated the extent and consequences of ISPs' asserted "incentive and ability" to impose harm. As noted, all we know for certain is that the *Order* evinces no awareness and no consideration of the complex market dynamics of the Internet ecosystem it purports to protect. Hayek must be rolling in his grave.¹⁴⁶

1. A brief discussion of the complex market dynamics of the Internet ecosystem that are utterly absent from the 2015 OIO

An entrepreneur needs *both* an edge provider and an ISP to reach consumers. And that reality presents both an opportunity and a complication. The opportunity is for increased bargaining power to "the little guy" through aggregation. Bob Loblaw's Law Blog may seem to be at the mercy of its Internet provider, standing on its own. But if it uses WordPress's platform it doesn't actually stand on its own. The same is true for independent artists plying their music or videos on the web. It isn't, say, Adele (or XL Recordings) vs. Comcast; it's YouTube vs. Comcast (and YouTube vs. Spotify). That's a very different situation, and one in which YouTube is by no means clearly at a disadvantage.

¹⁴⁵ See *supra* Section II.

¹⁴⁶ See *supra* note 2.

The complication is that if, by virtue of net neutrality rules, Comcast is made weaker, YouTube is made comparatively stronger. As the ongoing tussle between YouTube and some independent artists and labels demonstrates, YouTube is far from powerless in its relationships with the content providers that it aggregates.¹⁴⁷ If Comcast is hamstrung in its dealings with YouTube, it is not only the relationship between YouTube and Comcast that is affected, but also the relationship between YouTube and its content sources.

Powerful companies play off one another to gain temporary advantage, which they can and often do lose thanks to more nimble competitors as well as commercial partners. The dynamics of these relationships are much more complicated than a simplistic “ISP as gatekeeper” view of the world contemplates.

There is no reason to expect that this conflict will lessen, and instead there are arguments that suggest it will intensify. Should something like net neutrality prevail, the conflict would likely move to a different level. That level might become search neutrality.... Or, to take another currently popular concept, if “cloud computing” does become as significant as its enthusiasts claims, it could lead to dominance of a single service provider. The effective monopoly of that dominant player could then become perceived as far more insidious than any of the “walled gardens” or “intelligent networks” that telcos would like to build.

* * *

[A] net neutral communications infrastructure could be viable economically. But such an infrastructure might enable even more extreme forms of price discrimination by players such as Google, and might then lead to new controversies and new forms of regulation.¹⁴⁸

The irony is that by thwarting discriminatory business models at the ISP level, the 2015 OIO may effectively mandate different, but not necessarily better (or worse), forms of discrimination, including through paid advertising and application-based prioritization.

2. Paid prioritization is payola for the Internet — and that’s a good thing

Consider an analogous example: payola and the allocation of scarce radio airtime for popular music. Once upon a time, AM radio was the “gatekeeper” standing between popular music and its consumers. The best advertising for new recordings was airplay by popular radio disc jockeys. Because the amount of time available to air new music (let alone to do so during the most popular hours) was far outstripped by the amount of music available, some record companies and music publishers paid influential disc jockeys, who had discretion over their playlists, to “prioritize” their own recordings.

¹⁴⁷ See, e.g., Daniel Adrian Sanchez, *Indie Labels Say Spotify Is Paying 3X Better Than YouTube*, DIGITAL MUSIC NEWS (Jun. 12, 2017), available at <https://www.digitalmusicnews.com/2017/06/12/merlin-spotify-more-youtube/>.

¹⁴⁸ Andrew Odlyzko, *Network Neutrality, Search Neutrality, and the Never-ending Conflict between Efficiency and Fairness in Markets*, 8 REV. NET. ECON. 40, 41, 43 (2009).

Established labels and publishers (which used direct connections to radio station operators to influence programming) sought to fend off new competitors (and the new-fangled “rock and roll” music they were peddling by agitating for a ban on payola. They were aided in the effort by populist political sentiment that considered payolas as part of the corrupting force of “powerful interests that thwart opportunity and competition.”¹⁴⁹ In 1960, following a series of politically charged congressional investigations into the practice, they succeeded, and undisclosed payola was made illegal in the U.S.¹⁵⁰ Today it is still commonly reviled as a cynical exercise of corporate power over free culture, and often offered up as an analogy to paid prioritization on the Internet.¹⁵¹ Like paid prioritization, payola was (and still is) viewed as a form of corporate corruption, practiced by “gatekeepers” to extract rents from content providers dependent upon them, to the detriment of smaller companies that are less able to afford the entry fee.

But that characterization (of both payola and paid prioritization) is *exactly* backward.

In a path-breaking (if unimaginatively titled) 1979 paper, *Payola in Radio and Television Broadcasting*, Nobel Laureate economist Ronald Coase detailed the history of payola and laid out the simple economics that explain why banning paid prioritization for radio airplay (*i.e.*, payola) actually benefitted large record labels, not small artists.¹⁵² Payola was not about gatekeeper disc jockeys extracting rents from record companies; it was about innovators, start-ups, and small companies finding a way to pay for a valuable resource (airtime) within a system dominated by incumbents with no interest in giving up the “neutrality” that prevented these rivals from getting a leg up.

To sell music on a large scale it is necessary that people hear it. Payola is one way of inducing people to play it so that it can be heard. From a business point of view, ***the ban on payola is therefore simply a restraint on one kind of promotional or advertising expense...*** [O]pposition to payola came from those segments of the popular music industry which were hurt by the rise of the new music and the associated development of new record companies, [and] ***the aim of the business interests which sought to curb payola seems to have been... to hobble their competitors.***

[Anti-payola advocates claimed that banning payola] would protect the small publisher, and Congressman Oren Harris, in his introductory remarks to the payola enquiry, said that ***“we are told” that payola tends “to drive out of business small firms who lack the means to survive this unfair competition.” Such statements convey a completely false***

¹⁴⁹ John E. Moss (D - CA, 3rd Cong. Dist. 1953-1978), undated interview, *quoted in* Steven F. Lawson, *Race, Rock and Roll, and the Rigged Society: The Payola Scandal and the Political Culture of the 1950s*, in *THE ACHIEVEMENT OF AMERICAN LIBERALISM: THE NEW DEAL AND ITS LEGACIES* (William H. Chafe, ed. 2003), at 205, 221.

¹⁵⁰ See 47 U.S.C. §§ 317 & 508.

¹⁵¹ Timothy Karr, *The Payola Internet*, VOICES FOR INTERNET FREEDOM (FREE PRESS) (Dec. 10, 2013), <https://www.internetvoices.org/blog/2013/12/10/payola-internet>.

¹⁵² See Ronald H. Coase, *Payola in Radio and Television Broadcasting*, 22 J.L. & ECON. 269 (1979), available at <http://old.ccer.edu.cn/download/7874-3.pdf>.

impression. Although the music publishers' attempts to regulate payola do not seem to have been designed to harm the small publisher, *it was, in fact, small firms which protested to the FTC in the 1930s about the harm they would suffer if payola was banned.* In the period after World War II, all record companies seem to have given payola to disc jockeys, but, as we have seen, the smaller companies thrived on it. *These companies lacked the name-stars and the strong marketing organization of the major companies, and payola enabled them to launch their new records.... There is no reason to suppose that a ban on payola would, in general, have helped the small music publishers or has helped the small record companies.*¹⁵³

As theory predicts, not only did the pricing ban actually *harm* small and startup labels, it also didn't end the need for some sort of prioritization mechanism. That the larger, established firms advocating for the ban on payola benefitted more under this regime should come as no surprise.

The fact of airtime scarcity and the enduring need for marketing and promotion — *especially* among new entrants — means that the dollars formerly spent on payola will be spent somewhere else, most likely advertising.¹⁵⁴ On the radio, ironically enough, this means more ads taking up airtime, creating more scarcity, thus making advertising more valuable, leading inexorably to less music of any kind being played.

Since the 1960 amendments to the Communications Act impose a restraint on a particular kind of advertising expenditure, it is to be expected that it would lead firms to increase other forms of promotional activity.... And this appears to have happened.... *[R]ecord companies are "vastly increasing promotion expenses, while the most powerful form of advertising — radio play — remains free."* *At the same time the smaller companies have lost ground....* Six major companies... now control more than 85% of the U.S. market.[] This growth in concentration was probably largely a result of the larger companies adjusting to the new taste in music but the 1960 amendments, which made payola illegal, undoubtedly helped in the process.

It is consistent with the view that a ban on payola would lead to an increase in other promotional activities that, in the past, *support for curbing payola has come from those likely to benefit from this diversion of advertising expenditures....* [Ultimately, b]y leading to the employment of more resources in promotional activity, the ban on payola has a tendency to reduce the national product elsewhere.¹⁵⁵

In summing up the (entirely predictable) effects of the ban on payola, Coase offers a sage assessment that is equally relevant to those who persist in asserting that the 2015 OIO's ban on paid prioritization is beneficial for society:

¹⁵³ *Id.* at 316-17 (emphasis added).

¹⁵⁴ See GABRIEL ROSSMAN, CLIMBING THE CHARTS: WHAT RADIO AIRPLAY TELLS US ABOUT THE DIFFUSION OF INNOVATION (2012).

¹⁵⁵ *Id.* at 317 (citation and some internal quotation marks omitted) (emphasis added).

What has been described as happening after the ban on payola is the normal result of a situation in which no price is exacted for the receipt of a valuable service. Indeed, in the early days, what we now call payola was termed the “payment system,” or, as economists would say, the pricing system. When a pricing system is not used and something of value is provided for nothing, people are willing to incur costs up to its worth in order to secure the benefits of that service.... In addition, the prohibition of payola may result in worse record programs, will tend to lessen competition, and will involve additional expenditures for regulation....

It is not enough to outlaw payments simply because they can be described as “improper.” Some attempt should be made to discover why such payments are made and what would in fact happen in the world as it exists if they were made illegal.¹⁵⁶

If only the 2015 OIO made such an attempt....

E. The red herring of harm to small and start-up content providers

Echoing the misguided and economically illiterate claims of the proponents of a ban on payola in the 1950s and ‘60s, defenders of the 2015 OIO regularly assert versions of the argument that

some cable and wireless companies have said that they want to introduce pay-to-play prioritization systems. This approach has rightly been prohibited; while big companies could afford to cut special deals to get in the so-called fast lane, everyone else would be relegated to a slow lane.¹⁵⁷

The problem is that, while “fast lanes” and “slow lanes” – *i.e.*, paid prioritization – *could* make new entry more difficult, they are actually more likely to make it *easier*. “Because exclusivity is often more beneficial to new business models than old ones, blanket bans are likely to have the perverse effect of discriminating against innovation and, by extension, against entry.”¹⁵⁸

As always, the crucial question is, “compared to what?” Paying for priority may seem like a costly barrier to entry by start-ups and new innovators, but it’s nothing compared to the costs of trying to gain a foothold in an established market *without* it.¹⁵⁹ The baseline state of affairs is that entrants are naturally at a disadvantage relative to incumbents. Incumbents have greater economies of scale, ben-

¹⁵⁶ *Id.* at 318-19 (emphasis added).

¹⁵⁷ Sam Altman, *Hey Startups, It’s Your Duty To Fight Net Neutrality*, WIRED (May 18, 2017), <https://www.wired.com/2017/05/hey-startups-duty-fight-net-neutrality/>.

¹⁵⁸ Jeffrey A. Eisenach, *Broadband Competition in the Internet Ecosystem*, AEI ECON. STUDIES 30 (October 2012), available at http://www.aei.org/wp-content/uploads/2012/10/-broadband-competition-in-the-internet-ecosystem_164734199280.pdf.

¹⁵⁹ And, of course, this applies to ISPs, as well as content providers. It is thus not surprising that T-Mobile has been most aggressive among mobile ISPs in implementing zero-rating programs.

efits of learning by doing, larger customer bases, more brand loyalty, lower search costs, lower marketing costs, established business relationships, experienced sales, marketing, and business-development teams, and the like. Prioritization can help to ameliorate the disadvantage.

[P]remium service stimulates innovation on the edges of the network because lower-value content sites are better able to compete with higher-value sites with the availability of the premium service. The greater diversity of content and the greater value created by sites that purchase the premium service benefit advertisers because consumers visit content sites more frequently. Consumers also benefit from lower network access prices.¹⁶⁰

The ahistorical claim that prioritization necessarily benefits “the big boys” is typically (as in the 2015 OIO) offered without evidence and without consideration or evaluation of the possibility that the opposite is, in fact, more often true. The fantasy victim is the “small content provider”: the proverbial garage start-up, the independent filmmaker, the intrepid blogger making political waves.

The danger here, as Ohanian said, is that small companies – the Googles and Netfixes of tomorrow – won’t have the capital to “win on the merits” of their technology, and that the entrenched tech powers won’t be challenged, or, as he said repeatedly, “disrupted.”¹⁶¹

The quintessential illustration of the purported problem is the metaphorical David vs. Goliath tale of pre-Google YouTube’s entry into online video. Here’s how Al Franken tells the story:

To illustrate why net neutrality is so critical to innovation on the web, I like to tell the story of a small online startup that launched in 2005 above a pizzeria in San Francisco. It had a product that now seems simple: it allowed people to upload videos so others could stream them. It was called YouTube – you may have heard of it.

At the time, Google had a similar product – Google Video – but it wasn’t as easy to use, so consumers took their business to YouTube. The site took off and, less than two years after it launched, YouTube was purchased by Google for \$1.6 billion. Not a bad payday.

But it wouldn’t have been possible without net neutrality. If Google had been able to pay Comcast and other large Internet service providers to prioritize its data – and make YouTube’s videos load more slowly – YouTube wouldn’t have stood a chance. Google’s inferior product would have won.¹⁶²

¹⁶⁰ Mark A. Jamison & Janice Hauge, *Dumbing Down the Net: A Further Look at the Net Neutrality Debate*, in *INTERNET POLICY AND ECONOMICS: CHALLENGES AND PERSPECTIVES* 57-71 (William H. Lehr & Lorenzo Maria Pupillo eds., 2009).

¹⁶¹ Joseph Bernstein, *Reddit Co-Founder On Net Neutrality: “It’s a Terrible Brand”*, BUZZFEED (Jul, 7, 2014), <http://www.buzzfeed.com/josephbernstein/reddit-co-founder-on-net-neutrality-its-a-terrible-brand>.

¹⁶² Al Franken, *Huffington Post Op-Ed: Net Neutrality is Under Attack...Again*, WEBSITE OF SENATOR AL FRANKEN (Nov. 8, 2011), <http://www.franken.senate.gov/?p=news&id=1831>. Barbara van Schewick tells the same story: Barbara van

Leaving aside that this series of events that “wouldn’t have been possible without net neutrality” occurred *before* the FCC adopted enforceable net neutrality rules, the conclusion simply does not follow. Most important, and as is so often the case, things are just not so simple. What the story misses is the importance of search costs, advertising, reputation, and the like in naturally putting a thumb on the scale in favor of incumbents. Many a new entrant has foundered on the shoals of obscurity. In a functioning competitive market, there are mechanisms to help entrants overcome these structural impediments. They usually cost money. And they implicitly amount to favoritism.

Properly understood, the existence of a non-neutral regime is not inherently tilted in favor the powerful incumbent: Who stands to benefit more from – and be willing to pay for – artificial relative quality? The company that is already known or the one that no one’s ever heard of?

To make the trade-off clear, take Franken’s story and tweak it slightly. What if Google’s incumbent video offering weren’t so “inferior,” but YouTube was nevertheless still better? What would have happened in a neutral world? Likely no one would have bothered with YouTube (and perhaps YouTube would never have been created in the first place). We would have lost out on an incremental improvement because the impediments to a marginally better challenger besting an incumbent, given the incumbent’s structural advantages, may have been more costly to overcome than the benefits of doing so.

But what about in a non-neutral world? Let’s re-write the end of Franken’s story:

If YouTube had been able to pay Comcast and other large Internet service providers to prioritize its data – and even make Google’s videos load more slowly – YouTube would have stood a fighting chance. Google’s inferior product would have had a harder time winning because YouTube’s product would have been “artificially” enhanced enough to make consumers’ rejection of the known quantity, and their taking a risk on the new entrant, worthwhile.

Net neutrality may preclude Google from getting a network-based edge over YouTube, but it also precludes *YouTube* from getting one over *Google*. Whether the benefit of the former outweighs the cost of the latter in any particular circumstance (or in the abstract) is an empirical question. But it must be accepted that there are both costs and benefits, and the assumption that the benefits are always (or even on average) greater than the costs simply has not been established.

Further, the neutrality argument is that *ISPs* will use their presumed monopoly power to harm new content providers. But it is not clear why Comcast would care at all about a small start-up with no traffic. *Google* may care about the next Google killer, but there is little reason to think that *Comcast* will jump at the chance to help Google take down its rival. To the extent that *Google* (for example)

Schewick, *Opening Statement at the Federal Communications Commission’s Workshop on Approaches to Preserving the Open Internet* (April 28, 2010), WC Docket No. 07-52 & GN Docket No. 09-191, available at <http://media.law.stanford.edu/publications/archive/pdf/schewick-statement-20100428.pdf>.

engages in such practices (like paying Comcast for priority service that forecloses competition with Google), one could imagine a hypothetical antitrust case against Google. But that doesn't justify net neutrality rules that hamstring Comcast, especially ones that do so *regardless* of any anticompetitive effects.

It is not an accident that Netflix led the charge for “strong net neutrality rules,” when it is *neutrality* that is likely to benefit large incumbents. Content providers have far less to worry about and face far less competition from broadband providers than from successful competitors. It is often claimed that “Netflix would be able to pay Comcast’s toll, but a small startup won’t have that luxury.” But Comcast would not even notice or care about a small startup; its traffic demands will be inconsequential. Netflix can afford to pay for Internet access for precisely the same reason it came to Comcast’s attention: It is hugely successful, and thus creates a huge amount of broadband traffic. It is, of course, a valid question whether Comcast might theoretically seek to employ anticompetitive means to thwart *Netflix*. But that is not the argument being made here,¹⁶³ nor is it very likely to be much of a problem.¹⁶⁴

1. Toward an informed and accurate understanding of the effects of zero-price neutrality on start-up investment incentives

The common refrain is often further extended to assert that, in an environment where non-neutrality is ever permitted, small startups can’t or won’t invest and innovate.¹⁶⁵

The argument is that, without the assurance of a fast (or is it “neutral”?) Internet connection, a small start-up – say, a new online game company – nor its potential investors will bear the allegedly heightened risk. That risk, of course, is a function of the likelihood of better-funded, established competitors buying into a “fast lane” and relegating the startup to a “slow lane,” thus precluding it from offering competitive quality:

[W]e are worried that your proposed rules will not provide the necessary certainty that we need to make investment decisions and that these rules will stifle innovation in the Internet sector.

¹⁶³ See *infra* Sec. II for a discussion of the economics of net neutrality as a response to the risk of anticompetitive foreclosure by vertically integrated broadband service providers.

¹⁶⁴ See Geoffrey Manne, *The FCC distorted market realities to scuttle the Comcast-TWC merger*, TRUTH ON THE MARKET (Oct. 2, 2015), <https://truthonthemarket.com/2015/10/02/the-fcc-distorted-market-realities-to-scuttle-the-comcast-twc-merger/>.

¹⁶⁵ See, e.g., Engine Advocacy, Reply Comment, *Protecting and Promoting the Open Internet*, WC Docket No. 14-28, at 5 (filed Sep. 15, 2014), available at <http://bit.ly/2tuwBWs> (“[P]aid prioritization schemes, once implemented, will result in Internet fast lanes for well-heeled incumbents, relegating startups and the economic growth they create to the slow lane.”).

If established companies are able to pay for better access speeds or lower latency, the Internet will no longer be a level playing field. Start-ups with applications that are advantaged by speed (such as games, video, or payment systems) will be unlikely to overcome that deficit no matter how innovative their service. Entrepreneurs will need to raise money to buy fast lane services before they have proven that consumers want their product. Investors will extract more equity from entrepreneurs to compensate for the risk.¹⁶⁶

But this argument doesn't comport with reality.

The fundamental problem with the claim is that no one *at all* will pay for priority unless there is congestion. Absent an ISP affirmatively throttling or otherwise interfering with traffic in the “slow lane,”¹⁶⁷ without congestion a fast lane is no faster than the slow lane. But if there *is* congestion, the small online game provider is going to suffer anyway. In fact, it may suffer *more* if its competitors are forced to use the same lane than it would if they moved over into the proverbial HOV lane, thus reducing the congestion for everyone else.

Paid prioritization at least requires content providers to respond to incentives — to take congestion into account, instead of using up a common resource without regard to cost. It also allows the startup game company to buy better service in order to avoid the congestion, which isn't an option at all with neutrality. And the hard truth is that, if the game developer can't afford to pay for clear access when it is needed, then it may have a bad business model. As a general rule, a business model dependent on an expectation that a company will always have unfettered, free access to a scarce, contestable, and unmetered common resource is doomed to failure.

It is similarly claimed that *current* successful businesses might not have been funded in an environment that didn't guarantee neutrality by law. Leave aside that most of them *were* created in just such an environment: Even if true, that doesn't mean that *different* businesses wouldn't have been created. All that can legitimately be said is that the investment dollars might have flowed elsewhere: to entrepreneurs with business models more likely to succeed in a different economic and regulatory environment. But this says nothing about the amount of investment, the types of businesses, or the quality of businesses that would have been created under a different set of rules. It says only that the same set of *particular*, past investments might not have been made.

Unless the contention is that businesses would be systematically worse under a different rule, this is irrelevant to an assessment of the merits of the 2015 OIO. And while someone, somewhere may have made that contention, there can be no evidence to support it. Businesses thrive in unequal, cost-laden environments all the time. To take one example, it can cost more than \$5 million/30

¹⁶⁶ “Open Internet Investors Letter” (May 8, 2014), available at https://docs.google.com/document/d/1v34_bFesbfyF_MbQgtZtUQNfSByAgUKTICEB9pjH3jk/pub.

¹⁶⁷ Certainly this is a possibility that should be evaluated. See *infra* Sec. III.F for a discussion of the possibility of ISPs creating “dirt roads” and mechanisms for addressing the risk.

seconds to advertise during the Super Bowl; Budweiser and Frito-Lay, two of the largest ad buyers during the 2017 Super Bowl, had to pay millions to do so.¹⁶⁸ That Sierra Nevada and Pringles, for example, cannot or will not do so does not support a conclusion that Super Bowl advertising should be free or should not cost more than other advertising. And, in the meantime, neither Sierra Nevada nor Pringles has gone out of business.

In fact, it is the smaller, lesser-known entities that benefit most from Super Bowl ads. Then-startup GoDaddy.com famously received a significant spike following its first, memorable Super Bowl ad in 2005.¹⁶⁹ And the effect is generalizable:

As a general rule, advertising works best on consumers with little information.... The lesson applies to the Super Bowl, too. New companies and products get the biggest bang for the buck in the Super Bowl, because millions of people are hearing about them for the first time.¹⁷⁰

The same dynamic applies to new content like films and movies. Thus, Super Bowl advertising “increases opening week-end movie revenue by 50–70 percent” and, on average, leads to an “incremental return of at least \$8.4 million in opening weekend ticket sales associated with a \$3 million Super Bowl advertisement.”¹⁷¹

As noted, non-neutrality offers the prospect that a startup might be able to buy priority access to overcome the inherent disadvantage of newness, and to better compete with an established company. Neutrality, on the other hand, means that that competitive advantage is unavailable, and that the baseline relative advantages and disadvantages remain. On the margin, this can only favor incumbents, not startups. With a neutral Internet the advantages of the incumbent competitor can’t be dissipated by a startup buying a favorable leg-up in speed, and the Netflix’s of the world will continue to dominate.

Of course, the counterclaim is that incumbents will use their considerable resources to gain even *more* advantage with prioritized access. Implicit in this assertion is an assumption that the benefit to incumbents (over and above their natural advantages) from paying for priority, in terms of hamstringing new entrants, will outweigh the cost. This is unlikely generally to be true. They already *have* advantages. While sometimes they might want to pay for more, it is in *precisely* the cases where it

¹⁶⁸ SI Wire, *Super Bowl Commercials: How Much Does A Spot Cost In 2017?*, SPORTS ILLUSTRATED (Jan. 16, 2017), <https://www.si.com/nfl/2017/01/26/super-bowl-commercial-cost-2017>; Lauren Watters, *How Much Would You Pay To Run A 30-Second Ad In The 1967 Super Bowl?*, AMERICAN MARKETING ASSOCIATION (Jan. 27, 2017), <https://www.ama.org/publications/marketingnews/pages/history-of-super-bowl-commercial-costs.aspx>.

¹⁶⁹ See Jeff Bercovici, *The Woman(!) Behind GoDaddy's Tasteless, Effective Super Bowl Ads*, FORBES.COM (Feb. 6, 2013), <http://www.forbes.com/sites/jeffbercovici/2013/02/06/the-woman-behind-godaddys-crass-effective-super-bowl-ads/>.

¹⁷⁰ Derek Thompson, *Why a Super Bowl Ad Is the Smartest Way to Waste \$5 Million*, THE ATLANTIC (Feb. 5, 2017), <https://www.theatlantic.com/business/archive/2017/02/super-bowl-ads-waste-5-million/515682/>.

¹⁷¹ Seth Stephens-Davidowitz, Hal Varian & Michael D. Smith, *Super Returns to Super Bowl Ads?*, 15 QUANT. MARKET. & ECON. 1 (2017).

might be worth it to do so (say, when a truly threatening new entrant is coming up fast behind) that the new entrant would *also* be most benefitted by buying priority.

And it is thus *also* the situation in which investment funds sufficient to “pay the toll” would most likely be available. The argument assumes that the return to a startup from buying priority is smaller than the cost imposed on it by its inherent disadvantages in reputation, brand awareness, customer base, etc. But that’s not plausible for all startups, and investors exist precisely because they are able to provide funds for which there is a likelihood of a good return. So if paying for priority *would* help overcome inherent disadvantages, there would be money for it.

Finally, implicit in all arguments about the need for neutral, zero-price access for edge providers is the belief that content deserves to be subsidized, while networks neither need subsidy nor even sufficient flexibility to adopt more profitable business models or to operate their networks optimally. *Innovation*, it is assumed, comes only from the edge – and even then, only from the small startup; whatever else we do, we must do nothing that might deter innovation by deterring the formation and success of startups (say the investors who make their money from startups).¹⁷²

Of course, not all innovation comes from small, startup edge providers. As economists Peter Klein and Nicolai Foss have pointed out:

The problem with an exclusive emphasis on start-ups is that a great deal of creation, discovery, and judgment takes place in mature, large, and stable companies. Entrepreneurship is manifest in many forms and had many important antecedents and consequences, and we miss many of those if we look only at start-up companies.¹⁷³

Adopting a regulatory scheme that prioritizes startup innovation and content creation (although, as noted, it likely doesn’t even do that) at the expense of network innovation, in part because network operators aren’t small startups, may materially detract from consumer welfare and the rate of overall innovation.

In any case, whether it is labeled “innovation” or not, broadband providers, equipment makers, and other associated firms have invested trillions of dollars to build the infrastructure of the Internet, and they continue to make enormous investments (and, of course, innovations). Net neutrality schemes (including the 2015 OIO) hold that *content providers and their users* shouldn’t have to pay for it: *all* broadband users should. Of course, there is no principled basis for this assertion.

¹⁷² “Open Internet Investors Letter,” *supra* note 7.

¹⁷³ Ángel Martín Oro, *Interview: Nicolai J. Foss and Peter G. Klein on “Organizing Entrepreneurial Judgment,”* SINTETIA (Jul. 7, 2014), <http://www.sintetia.com/interview-nicolai-j-foss-and-peter-g-klein-on-organizing-entrepreneurial-judgment/>. See also NICOLAI J. FOSS & PETER G. KLEIN, ORGANIZING ENTREPRENEURIAL JUDGMENT: A NEW APPROACH TO THE FIRM (2014).

The ability to charge high-usage content directly, instead of all ISP subscribers indiscriminately, encourages edge providers to optimize their content and their business models to take account not only of their own and their users' interests, but those of the network more broadly. In other words, differential pricing encourages content providers to internalize at least some of the externality they may impose on other network users. Mandated zero-price neutrality, on the other hand, means that the congestion costs fall on *everyone*, and the high-bandwidth content provider has limited incentive to optimize content or its users' demand for bandwidth to reduce congestion.¹⁷⁴ The result is that “[p]rice restrictions on ISPs’ ability to charge additional fees to [content providers] that cause network congestion can lead to higher prices that are charged to all end users – regardless of whether or not the end user subscribes to the content service that causes the congestion.”¹⁷⁵ It’s clear why high-bandwidth-usage content providers would prefer everyone else subsidize their customers, but that hardly seems like an optimal result overall – or a sound basis for regulatory decisionmaking.¹⁷⁶

F. Sensible solutions to fanciful problems

Despite all the breathless claims, if content providers were ever relegated to a “slow lane,” the reality would almost certainly be dramatically different. For many of those fretting, their own content’s lack of sensitivity to latency and packet loss, for example, means the consequence of being in even the fanciful “slow lanes” they describe would be minimal to non-existent. If the differences between “fast” and “slow” are relevant at all only rarely (when there is enough congestion) and then only marginally so, it is hard to imagine anything like the suggested parade of horrors ever coming to pass.¹⁷⁷

¹⁷⁴ It is certainly true, of course, that content providers have *some* incentive to reduce congestion. Because not all of the costs of congestion are externalized (indeed, the largest creators of congestion problems are also the ones whose users suffer most from congestion, even if they don’t bear the *full* cost), high-usage content providers do spend some resources to reduce congestion. And these efforts, meanwhile, reduce congestion not only for their own users, but for everyone else, as well. Put differently, while their excessive bandwidth use might impose external costs, their efforts to minimize bandwidth use confers external benefits. Other mechanisms (like usage-based transit pricing, for example) further incentivize some internalization of the network-wide costs of high usage. The issue, however, is *optimal* incentives.

¹⁷⁵ Connolly, *et al.*, *supra* note 98, at 544.

¹⁷⁶ And, for reasons noted above, it’s probably not optimal for the content providers, either. They benefit from the subsidy, of course, but they are harmed by the inability to buy their way out of everyone else’s congestion. On balance, the rules of the 2015 OIO arguably leave no one with optimal incentives to manage congestion, and content needing the most bandwidth (or most sensitive to other quality of service requirements) will be the most affected.

¹⁷⁷ The claims run the gamut: slow/fast lane will be the sole determinant of success or failure online; venal ISPs will “freeze someone out of the fast lane before they even start[] competing;” ISPs will intentionally degrade service; and “any new innovation that would make the network faster or more responsive will debut in the fast lane,... [a]nd [] may not ever trickle down into the slow lane;” Michael Weinberg, *5 Reasons Why Internet Fast Lanes Can Never Make Sense*, PUBLIC KNOWLEDGE (May 15, 2014), <https://www.publicknowledge.org/news-blog/blogs/5-reasons-why-internet-fast-lanes-can-never-make-sense>.

But more fundamentally, how does it help anyone if VoIP providers, for example, are not able to buy a latency guarantee that email providers would have no interest in paying for anyway, when the alternative (given enough congestion) is that email remains unaffected but VoIP is unusable? And on the multi-purpose Internet this also necessarily means that email providers and users must subsidize the provision of a network with high enough average quality to accommodate the performance demands of the VoIP providers and users with whom they share it, even though they do not benefit from the incremental increase in quality.

And the fact is that edge providers are already constructing what amounts to their own version of Internet fast lanes. Netflix, for example – one of the very largest content providers on the Internet – uses peering to store locally available copies of its service within ISP’s networks.¹⁷⁸ And many sites use CDN services like Cloudflare in order to speed up delivery of their website content. In both examples (and there are multitudes more), edge providers are shaping network traffic at their own expense in order to generate what amounts to a “fast lane” for their own benefit.

These issues are considerably more complex than the simple slogans of net neutrality advocates convey. To take just one example, a 2011 paper by a group of network engineers studied the network characteristics of video streaming data from Netflix and YouTube.¹⁷⁹ Netflix’s and YouTube’s streaming strategies vary with the application used to view a video and the video encoding rate. In some cases, the application determines the strategy, in others the content server does. Network capacity and device capabilities affect the choice of strategy and which video resolution is delivered.

In this circumstance, particularly when the content in question is Netflix, with 30% of network traffic, both the network’s and the content provider’s transmission decisions may be determinative of network quality, as may the users’ device and application choices:

This is a concern as it means that a sudden change of application or container in a large population might have a significant impact on the network traffic. Considering the very fast changes in trends this is a real possibility, the most likely being a change from Flash to HTML5 along with an increase in the use of mobile devices.... We derive a model for the aggregate traffic generated by the different streaming strategies. We use this model to show that streaming videos at high resolutions can result in smoother aggregate traffic while at the same time linearly increase the aggregate data rate due to video streaming.¹⁸⁰

¹⁷⁸ Eric Limer, *This Box Can Hold an Entire Netflix*, GIZMODO (July 23, 2014), <https://gizmodo.com/this-box-can-hold-an-entire-netflix-1592590450>.

¹⁷⁹ Ashwin Rao, et al., *Network Characteristics of Video Streaming Traffic*, CoNEXT ‘11: Proceedings of the Seventh Conference on emerging Networking EXperiments and Technologies (2011), available at <http://conferences.sigcomm.org/co-next/2011/papers/1569470149.pdf>.

¹⁸⁰ *Id.* at 12.

Indeed, it was discovered in 2015 that Netflix actually self-throttled traffic over certain networks, presumably in order to optimize consumers' viewing experience.¹⁸¹ Such self-regulation is beneficial not only to Netflix itself, but to other edge providers potentially vying for the same network channels as Netflix. It is not clear exactly how much such self-regulation is optimal, but it is almost certain that, relative to the status quo, more would be better. Yet under the 2015 OIO, any additional incentives rooted in ISP-facilitated prioritization are removed. And the economic literature suggests that bans on ISP practices like paid prioritization *decrease* incentives for such self-regulation and thus may deter the sort of innovation among content producers that would otherwise result.¹⁸²

If a network uses QoS (quality of service) floor mechanisms (rather than best efforts) to manage its traffic to the net benefit of Netflix's content, is it unreasonably discriminating against, say, VoIP traffic? If Netflix pays the network to adopt a certain QoS, is the decision unreasonable? Is it a problem if the network imposes a lower QoS not on Netflix but on certain video encoding, impairing Netflix's ability to manage its data streams as it would prefer but also resulting in lower aggregate data use? Should there be any mechanism by which the network can alter Netflix's privately optimal, but possibly socially detrimental, incentive to stream videos at high resolution?¹⁸³

Although not apparently considered by the 2015 OIO, a minimum quality guarantee would theoretically entail a less-restrictive, and likely more effective, means to address the risk of discriminatory quality degradation (the so-called "fast lanes vs. dirt roads" problem):

[P]olicy concerns arise from selling prioritization to content providers for delivering data to users. Because monopoly [and even potentially competing] providers of access to users may be the only channel through which content providers can reach users, internet service providers have incentives to invest in ways that raise the value of the prioritization sold to content providers.... An ISP might benefit from strategically degrading (at least in relative terms) the quality of the nonpriority lane in order to extract higher profits from the priority lane.¹⁸⁴

Both Tim Brennan (former FTC chief economist) and Martin Geddes (former strategy director at British Telecom's network division) have proposed a minimum quality guarantee as an alternative

¹⁸¹ Steven Musil, *Netflix: We're the Ones Throttling Videos Speeds on AT&T and Verizon*, CNET (Mar. 24, 2016), <https://www.cnet.com/news/netflix-admits-throttling-video-speeds-on-at-t-verizon/>.

¹⁸² See Marc Bourreau, *et al.*, *supra* note 32; Martin Peitz and Florian Schuett, *Net Neutrality and Inflation of Traffic*, 46 INT'L J. INDUS. ORG. 16 (2016).

¹⁸³ Note, of course, that Netflix already employs its own optimization and prioritization. Netflix's CDNs are, among other things, rate-limited, because optimal viewing doesn't require maximal speed. Thus, even on Google Fiber's gigabit fiber networks, Netflix claims to stream at 3.81 Mbps – not because the network limits it, but because that is all it needs. See *Netflix ISP Speed Index USA, ISP Leaderboard – June 2017*, NETFLIX (last visited July 12, 2017), <https://ispspeedindex.netflix.com/country/us/?small=True>.

¹⁸⁴ Greenstein, *et al.*, *Net Neutrality: A Fast Lane to Understanding the Trade-offs*, *supra* note 18, at 142-43.

to the sort of invasive regulation entailed by the 2015 OIO.¹⁸⁵ With implementation of such a guarantee, the regulator would need only “monitor traffic quality [to] help avoid the fast lane/dirt road problems by enforcing a minimally required floor.”¹⁸⁶

One key result of a minimum guarantee is that no service can be degraded below some point *and* that any promise of *better* service will be limited by the bandwidth available given minimum obligations to non-priority service. This, in turn, means that ISPs that offer priority service are likely to actually *increase* network capacity as a consequence of prioritization (in order to escape limits on their ability to offer priority service).¹⁸⁷ By allowing market-based pricing for different quality levels at both the retail and wholesale levels, the cost of increased network capacity would be progressively borne by those with comparatively higher demand.¹⁸⁸

But even when capacity has not yet expanded (or when further expansion is infeasible), prioritization with a minimum guarantee does not significantly impair Internet service or create substantially differentiated service levels. While “slower” becomes a reality with congestion, a minimum guarantee ensures that, in the same circumstance (congestion), “faster” is of decreasing significance in direct proportion to the amount of congestion. Thus, the practical difference between the fast and slow “lanes” will be less than generally assumed, and will vary depending on the amount of traffic at any given time flowing in each “lane.”

This also means that the *value* of prioritized service to content providers that want it will be lower—which also means the price will be lower, and that a larger number of resource-constrained providers will be able to purchase priority. In turn, this means that an ISP’s ability to offer much better service to prioritized content will be lessened (absent technological developments or capacity expansion). If, in the end, practically everyone is paying for priority, priority will be both cheap and only marginally relevant.

¹⁸⁵ See Timothy Brennan, *Net Neutrality or Minimum Standards: Network Effects vs. Market Power Justifications*, in NET-WORK NEUTRALITY AND OPEN ACCESS 61-78 (I. Spiecker and J. Krämer eds., 2011), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1622226; Martin Geddes, *Broadband Service Quality: Rationing or Markets?*, White Paper (Jul. 6, 2017) at 17, available at <http://www.martingeddes.com/broadband-service-quality-rationing-markets/>.

¹⁸⁶ Greenstein, *et al.*, *Net Neutrality: A Fast Lane to Understanding the Trade-offs*, *supra* note 18, at 143. See also Brennan, *Net Neutrality or Minimum Standards*, *id.* at 75. It should be noted, however, that implementation of a minimum guarantee is not necessarily a simple matter, and it is *possible* that monitoring a priority differential might be more problematic than simply enforcing a net neutrality regime. Of course this is precisely the sort of assessment the 2015 OIO should have undertaken, but did not.

¹⁸⁷ See Mark A. Jamison & Janice A. Hauge, *Getting What You Pay For: Analyzing The Net Neutrality Debate*, University of Florida, Warrington College of Business, PURC Working Paper 07-05, at 14-15, available at http://warrington.ufl.edu/centers/purc/purcdocs/papers/0705_Jamison_Getting_What_You.pdf (“When the non-degradation condition holds, a network provider will increase network capacity when providing premium transmission service.”).

¹⁸⁸ Martin Geddes, *Broadband Service Quality: Rationing or Markets?*, *supra* note 185, at 17.

IV. The Internet Conduct Standard is a vague, all-encompassing regulation that will not promote consumer welfare

Perhaps one of the most salutary changes that could be brought about by this *NRPM* would be the repeal of the Internet Conduct Standard (also known as the General Conduct Rule).¹⁸⁹ The Internet Conduct Standard was written into the *2015 OIO* as a general catch-all rule that would allow the FCC to intervene when it found that an ISP's conduct generally threatened end users or content providers under some principle of net neutrality.¹⁹⁰ As "guidance," ISPs were given a non-exhaustive list of factors that would possibly (but not necessarily) be used to prove a violation.¹⁹¹ The factors are an uncertain mashup of competition law, consumer protection law, and first amendment law and include 1) the effect on end-user control; 2) competitive effects; 3) effect on consumer protection; 4) effect on innovation, investment, or broadband deployment; 5) effects on free expression; 6) whether the conduct is application agnostic; and 7) whether the conduct conforms to standard industry practices.¹⁹²

In the litigation that followed the *2015 OIO*, the court rejected *USTelecom*'s due process argument that the Internet Conduct Standard should be invalidated because it is too vague.¹⁹³ Most significantly, the court held that a regulation is not impermissibly vague because it is marked by flexibility and reasonable breadth, rather than meticulous specificity, and the Commission was aiming to address an area where "specific regulations cannot begin to cover all the infinite varieties of conditions" that may arise.¹⁹⁴ Moreover, the Commission did not merely set forth the factors; it also included a description of how it believed that each factor should be interpreted and applied (at least until a later Commission decides differently).¹⁹⁵ The court noted that "we can never expect mathematical certainty from our language," and the descriptions "suffice to provide fair warning as to the type of conduct prohibited by the General Conduct Rule."¹⁹⁶ Unfortunately for consumers, investment decisions cannot be justified based on whether a court finds a non-exhaustive set of factors to be descriptive enough.

¹⁸⁹ *In the Matter of Restoring Internet Freedom*, Notice of Proposed Rulemaking, WC Docket No. 17-108, ¶ 72 (2017) (*Restoring Internet Freedom NPRM*)

¹⁹⁰ *2015 OIO* at ¶ 135.

¹⁹¹ *Id.* at ¶ 138.

¹⁹² *Id.* ¶¶ 139-45; Hon. Maureen K. Ohlhausen, *The FCC's Knowledge Problem: How to Protect Consumers Online*, 67 *FED. COMM. L.J.* 203, 228 (2015).

¹⁹³ *USTelecom*, 825 F.3d at 674, 736.

¹⁹⁴ *Id.* at 737.

¹⁹⁵ *Id.* at 736-37.

¹⁹⁶ *Id.* at 737.

While the court may have found the Internet Conduct Standard was not vague in all its applications, under *State Farm*, it did not consider that the Commission’s choice to implement such a far-reaching, ambiguous standard lacked a rational connection with the FCC’s proffered facts. In the 2015 OIO, the FCC claimed it was not creating a novel, case-by-case standard, but rather that it was taking a similar approach to the “no unreasonable discrimination rule,” which was accompanied by four factors (end-user control, use-agnostic discrimination, standard practices, and transparency).¹⁹⁷ While the “no unreasonable discrimination rule” was grounded in section 706 of the 1996 Act, basing the Internet Conduct Standard in Sections 201 and 202 of the Communications Act in addition to Section 706 enabled an unprecedented expansion of FCC authority over the Internet’s physical infrastructure.¹⁹⁸ As then Commissioner Pai noted:

The FCC’s newfound control extends to the design of the Internet itself, from the last mile through the backbone. Section 201(a) of the Communications Act gives the FCC authority to order “physical connections” and “through routes,” meaning the FCC can decide where the Internet should be built and how it should be interconnected. And with the broad Internet conduct standard, decisions about network architecture and design will no longer be in the hands of engineers but bureaucrats and lawyers. So if one Internet service provider wants to follow in the footsteps of Google Fiber and enter the market incrementally, the FCC may say no. If another wants to upgrade the bandwidth of its routers at the cost of some latency, the FCC may block it. Every decision to invest in ports for interconnection may be second-guessed; every use of priority coding to enable latency-sensitive applications like Voice over LTE may be reviewed with a microscope. How will this all be resolved? No one knows. 81-year-old laws like this don’t self-execute, and even in 317 pages, there’s not enough room for the FCC to describe how it would decide whether this or that broadband business practice is just and reasonable. So businesses will have to decide for themselves – with newly-necessary counsel from high-priced attorneys and accountants – whether to take a risk.”¹⁹⁹

In the 2015 OIO, the FCC relied on its 2010 findings without advancing new evidence from the intervening five years of Internet innovation to justify asserting vastly greater authority over the physical infrastructure of the Internet than the 2010 OIO.²⁰⁰ Invoking Communications Act sections 201 and 202 and adding more factors to the Internet Conduct Standard than were in the “no unreasonable discrimination rule” merely addressed the legal basis upon which the D.C. Circuit in *Verizon* overturned the rule; it did nothing to justify with evidence or analysis the purported dire need to grab more power.²⁰¹

¹⁹⁷ 2015 OIO at ¶ 138.

¹⁹⁸ 2015 OIO at ¶ 137; 2010 OIO at ¶ 68.

¹⁹⁹ Dissenting Statement of Commissioner Ajit Pai, *In the Matter of Protecting & Promoting the Open Internet*, 30 F.C.C. Rcd. 5601, 5921 (2015).

²⁰⁰ 2015 OIO at ¶ 137-38.

²⁰¹ *Cellco Partnership v. Fed. Comm’n Comm’n*, 700 F.3d 534, 548 (D.C. Cir, 2012); *Verizon*, 740 F.3d at 657.

Expanding the reach of the FCC's authority implemented through a vague list of non-exhaustive factors is a terrible way to determine the rules of conduct for firms that have to invest billions of dollars in infrastructure over the course of decades. Even on the relatively shorter timescale required for offering innovative new service packages to consumers, the amount of negotiation required between the broadband networks, rights holders, and any other third parties can be tremendous. The only practical way of actually complying with the Internet Conduct Standard would be to involve the FCC in business decisions at virtually every level. For providers, such a "standard" cannot but chill innovation and ultimately harm consumers by raising prices, reducing quality, and limiting choice.

In addition, unlike the Internet Conduct Standard, which applies to both fixed and mobile broadband providers, the "no unreasonable discrimination rule" adopted in the 2010 OIO applied only to fixed broadband providers.²⁰² The court in *USTelecom* did not consider the FCC's failure to create a rational connection between the facts the Commission found and its choice to establish a conduct standard for mobile in the 2015 OIO. First, the FCC's reliance on the 2015 *Broadband Progress Report* to show that the "virtuous cycle" was in peril did not incorporate mobile broadband. Second, the FCC attempted to sidestep the need to perform competitive analysis for imposing the standard on mobile by claiming that "even if the mobile market is sufficiently competitive, competition alone is not sufficient to deter mobile providers from taking actions that would limit Internet openness."²⁰³ Instead, and true to form, the FCC asserted that the Internet Conduct Standard was properly applied to mobile broadband access providers based essentially on a handful of "incidents."²⁰⁴ Closer inspection of the examples cited, however, critically undermines the FCC's purported foundation.

For example, the Commission claims that "AT&T blocked Apple's FaceTime iPhone and iPad applications over AT&T's mobile data network in 2012,"²⁰⁵ and that this was unjustifiable as a matter of network management. Already operating on Wi-Fi, Apple made FaceTime available over mobile operators' networks starting in September 2012 with iOS 6, which was designed to handle more data than previous iOS versions.²⁰⁶ Sprint and Verizon announced that they would make the service available to mobile data subscribers of all data plans.²⁰⁷ AT&T maintained that it was taking a more

²⁰² 2010 OIO at ¶ 68.

²⁰³ 2015 OIO at ¶ 148.

²⁰⁴ *Id.*

²⁰⁵ 2015 OIO at ¶ 123.

²⁰⁶ Jordan Crook, *Apple Introduces iOS 6, Coming This Fall*, TECHCRUNCH (June 11, 2012), <https://techcrunch.com/2012/06/11/apple-announces-ios-6-wwdc/>.

²⁰⁷ See, e.g., *Sprint Says It Will Not Charge For FaceTime Over Network, Verizon Calls iOS 6 Pricing Conversations 'Premature'*, 9TO5MAC (July 18, 2012), <https://9to5mac.com/2012/07/18/sprint-says-it-will-not-charge-for-facetime-over-cellular-verizon-calls-talk-premature/>; Jon Brodtkin, *Verizon Will Enable iPhone's FaceTime On All Data Plans, Unlike AT&T*, ARS TECHNICA (Sept. 13, 2012), <https://arstechnica.com/apple/2012/09/verizon-will-enable-iphones-facetime-on-all-data-plans-unlike-att/>.

cautious approach and made FaceTime available only on shared data plans because it could not sufficiently model the app's network impact.²⁰⁸ If FaceTime use were to exceed modeled expectations, AT&T claimed that it may have adversely affected voice quality because of the app's copious network data usage.²⁰⁹ In November 2012, without public threat of FCC action, AT&T announced that its network would support FaceTime on all tiered data plans with an LTE device and would continue to monitor its network in an effort to expand the availability of FaceTime to customers on other billing plans.²¹⁰ It is extremely difficult to see in this series of events and AT&T's explanation for it any problem meriting a regulatory response, let alone one sufficient to justify the imposition of an invasive and costly provision like the Internet Conduct Standard.

In addition, it is quite plausible that competition – purportedly insufficient to regulate provider behavior – with Sprint and Verizon, induced AT&T to make FaceTime available over its mobile network just four months after those providers did.

On balance, in a year in which AT&T doubled its nationwide 4G LTE coverage, this (like the other examples adduced by the Commission) hardly seems like a nefarious “they’ve done it before and will do it again” rationale sufficient to justify including mobile broadband under the expansive Internet Conduct Standard.²¹¹

Theoretically, such a case-by-case standard should, in fact, be focused precisely on the ability of competition to mitigate any alleged harms, and on the existence (if any) of identifiable harmful effects. The Internet Conduct Standard is instead a novel, catch-all standard established without input (nor, arguably, authorization) from Congress. It contains no guidance regarding which factors will be most important in its execution, how the agency will resolve the inevitable conflicts among factors, or even if the factors are dependent on one another or disjunctive.²¹² And it sacrifices sensible, effects-based competition analysis (as under the antitrust laws) for unnecessary over-inclusiveness.

Antitrust enforcement, by contrast, is rooted in explicit, congressionally delegated statutory authority. It is circumscribed by longstanding economic and legal principles that would promote the certainty required to invest in costly innovation to meet industry projections in terms of 5G deployment

²⁰⁸ Jim Cicconi, *A Few Thoughts On FaceTime*, AT&T PUBLIC POLICY (Nov. 8, 2012), <https://www.attpublicpolicy.com/broadband/a-few-thoughts-on-facetime/>.

²⁰⁹ *Id.*; At the time, a FaceTime call consumed on average 2-4 times more bandwidth than a similar call carried out via Skype. See OIAC Mobile Broadband Working Group, *AT&T/FaceTime Case Study*, OIAC Annual Report (Aug. 20, 2013) at 3, available at <https://transition.fcc.gov/cgb/oiac/Mobile-Broadband-FaceTime.pdf>.

²¹⁰ Cicconi, *A Few Thoughts On FaceTime*, *supra* note **Error! Bookmark not defined.**

²¹¹ Press Release, AT&T, *AT&T 4G LTE Coverage Double In 2012* (Nov. 16, 2012), <https://www.att.com/gen/press-room?pid=23553&cdvn=news&newsarticleid=35717>.

²¹² Ohlhausen, *The FCC's Knowledge Problem*, *supra* note 192, at 228.

and the introduction of an additional 10 billion devices by 2021.²¹³ As former FTC Commissioner Joshua Wright has pointed out:

what is a novel policy dilemma for the FCC is a problem that antitrust has been grappling with for over a century and for which it offers a clear solution. Over the course of the last century, antitrust jurisprudence has evolved a highly sophisticated “rule of reason” to adjudicate various types of vertical arrangements by analyzing their costs and benefits. The rule of reason requires that each vertical arrangement be assessed on a case-by-case basis by marshaling the available economic literature and empirical evidence to evaluate the evidence of actual competitive harm under the specific circumstances of the case.²¹⁴

Conversely, when the FCC applied the Internet Conduct Standard to examine zero rating, although it deemed that “competitive effects” was the most important factor, the Wireless Bureau reserved only a single footnote containing two papers on vertical arrangements to source its theories on vertical conduct.²¹⁵ Further, the citation serves only to state that vertical arrangements can *conceivably* lead to foreclosure, rather than to substantively assess the *actual* competitive effects.²¹⁶ On that flimsy basis the FCC determined that two zero rating deals “likely obstruct competition.” Had the Bureau more thoroughly engaged with the literature, it would have found that such vertical arrangements not only very rarely result in consumer harm, but generally provide substantial *benefits* to consumers.²¹⁷ Presumably the actual competitive effects would have supported this conclusion, but the Commission made no effort whatever to assess them.

²¹³ VNI Forecast Highlights Tool, CISCO SYSTEMS (July 12, 2017), http://www.cisco.com/c/m/en_us/solutions/service-provider/vni-forecast-highlights.html.

²¹⁴ *Prepared Statement of Commissioner Joshua D. Wright, Federal Trade Commission*, before the U.S. House of Representatives Committee on the Judiciary, Hearing on “Wrecking the Internet to Save It? The FCC’s Net Neutrality Rule” (Mar. 25, 2015), available at https://www.ftc.gov/system/files/documents/public_statements/632771/150325wreckinginternet.pdf.

²¹⁵ FCC Wireless Telecommunications Bureau Report, *Policy Review of Mobile Broadband Operators’ Sponsored Data Offerings for Zero-Rated Content and Services* (2017), at note 22, available at http://transition.fcc.gov/Daily_Releases/Daily_Business/2017/db0111/DOC-342987A1.pdf.

²¹⁶ *Id.*

²¹⁷ See, e.g., Geoffrey A. Manne & Kristian Stout, *Comments of the Int’l Ctr. for Law & Econ., In The Matter Of: Telecom Regulatory Authority of India’s 9/12/15 Consultation Paper On Differential Pricing For Data Services* (Jan 4., 2015) at 9, available at http://laweconcenter.org/images/articles/icl-india_diff_pricing_comments_2016.pdf (and citations therein); Francine Lafontaine & Margaret Slade, *Vertical Integration and Firm Boundaries: The Evidence*, 45 J. ECON. LIT. 629, 680 (2007); Doug Brake, *Mobile Zero Rating: The Economics of Innovation Behind Free Data* at 2, INFO. TECH. & INNOVATION FOUND. (May 2016), available at http://www2.itif.org/2016-zero-rating.pdf?_ga=1.52572395.297393886.1464014843; John Horrigan & Maeve Duggan, *Home Broadband 2015: The Share Of Americans With Broadband at Home Has Plateaued, And More Rely Only On Their Smartphones For Online Access*, PEW RESEARCH CENTER (Dec. 21, 2015) at 5, available at <http://www.pewinternet.org/files/2015/12/Broadband-adoption-full.pdf>.

An *ex post* enforcement framework, while desirable if properly circumscribed, must be grounded in sound economics to facilitate a consistent, principled basis for intervention.²¹⁸ Regulatory uncertainty caused by an unknowable scope of regulatory authority accompanied by unpredictable exercises of discretion, as under the Internet Conduct Standard, are a significant disincentive for investment in the costly innovations needed to meet (let alone exceed) industry projections of network innovation, including a projected 24% compound annual growth rate in peak Internet traffic in the United States and an anticipated 97% annual increase in Ultra HD video traffic through 2021.²¹⁹

The (lack of) analysis in the zero rating report belies the court’s conclusion that the Internet Conduct Standard offers sufficient notice and is properly circumscribed to further the agency’s and the statute’s purpose. Moreover, the Commission’s process – a non-transparent, non-evidentiary, 13-month investigation, followed by a passive-aggressive letter to its targets informing them of the agency’s determination in fundamentally conclusory fashion – further undermines any conclusion that the Rule will promote consumer welfare, broadband deployment, or even the public interest more generally.²²⁰ The basis for the Internet Conduct Standard, like the *2015 Order* more generally, is based on theoretical harms and “unsubstantiated fears of future wrongdoing,”²²¹ insufficient to justify it and, especially, its application to mobile providers.

Conclusion

Working backward from a politically preferred result is a terrible way to create public policy. It is a reckless, dangerous practice that ultimately generates uncertainty in the regulated, and reduces consumer welfare. Worse still, when agencies manufacture false crises in order to justify action, it undermines faith in those institutions, even when they otherwise act within their statutory limits.

The *2015 OIO* falls far short of even the most basic conception of “reasoned analysis,” and in doing so exposes the politically motivated nature of the *Order*. It ignored or dismissed, without examination, crucial economics literature, and sometimes mischaracterized entire fields of study in order to reach a preferred result. Cherry picking among comments, the Commission avoided dealing with many fundamental issues that severely weaken the foundation upon which the *Order* was built.

²¹⁸ Peter Alexaidis, *EU Net Neutrality Policy and the Mobile Sector: The Need for Competition Law Standards*, at 7 (2016), available at https://antitrustlair.files.wordpress.com/2016/05/net-neutrality-article_12-may-2016_final.pdf.

²¹⁹ Cisco, VNI Forecast Highlights Tool, CISCO SYSTEMS (Jul. 12, 2017), http://www.cisco.com/c/m/en_us/solutions/service-provider/vni-forecast-highlights.html.

²²⁰ Jon Wilkins, Chief, FCC Wireless Telecommunications Bureau, “Letter to Robert W. Quinn, Jr. re: AT&T’s Sponsored Data Program” (Dec. 1, 2016), available at https://apps.fcc.gov/edocs_public/attachmatch/DOC-342941A1.pdf.

²²¹ *In the Matter of Protecting & Promoting the Open Internet*, Dissenting Statement of Commissioner Michael O’Rielly, 30 F.C.C. Rcd. 5601, 5987 (2015).

And, finally, the purported justification for the *2015 OIO* is based on a manufactured set of facts and wholly unsupported predictions that do not accurately represent the current state and competitive dynamics of the markets it regulates.

In short, the Commission should finally undertake the reasoned economic analysis that the *2015 OIO* lacked, and bring its public policy into line with the reality that consumers and firms actually face.