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Bait-and-Switch—Or Why the FCC's 'Virtuous Circle' Theory is Nonsense

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For the past ten years, the Federal Communications Commission (FCC) has struggled to write legally-defensible net neutrality rules. This March, under heavy political pressure from the White House, the FCC voted out another set of rules, this time invoking the proverbial "nuclear option" of reclassifying both wireline and wireless broadband Internet access as a Title II common carrier telecommunications service.[1] As to be expected, the appeals process (for the third time) is now underway in earnest.[2] While the various legal infirmities of the Commission's arguments are well-documented,[3] absent from the discussion has been any analysis of the Commission's central economic justification for its radical intervention into the market—namely, the Commission's theory of a "virtuous circle" or "virtuous cycle" of investment.[4] As I show below, while many take the Commission's "virtuous circle" theory as accepted Gospel, the truth is that the Commission, in fact, adopted what I would describe as an "unvituous circle" theory of investment under which profit-maximizing firms will do things willingly and knowingly to *reduce* the demand for their products, which will somehow lead to *increased* profits, which in turn will lead to *reduced* broadband investment. As the Commission's logical flow cannot be squared with the plain language of the Commission's depiction of the "virtuous circle" (or likely any plausible economic model either), the Commission's core economic rationale for imposing Title II regulation on the Internet rests on shaky ground.

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Background: The 'Virtuous Circle of Investment'. The Commission first laid out the notion of a "virtuous circle" in its *2010 Open Internet Order*,[5] and again embraced this argument in its *2015 Open Internet Order*:

> The Internet's openness [] enables a virtuous circle of innovation in which new uses of the network—including new content, applications, services, and devices—lead to increased end-user demand for broadband, which drives network improvements, which in turn lead to further innovative network uses. [] Each round of innovation increases the value of the Internet for broadband providers, edge providers, online businesses, and consumers.[6]

Certainly, this idea of a "virtuous circle" sounds nice, so much so that the D.C. Circuit appears to have bought into the idea in *Verizon v. FCC*, concluding "the Commission [had] more than adequately supported and explained its conclusion that edge provider innovation

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[1] *In the Matter of Protecting and Promoting the Open Internet*, FCC 15-24, REPORT AND ORDER ON REMAND, DECLARATORY RULING, AND ORDER, __ FCC Rcd __ (rel. March 12, 2015) (hereinafter "*2015 Open Internet Order*").

[2] *See, e.g.*, Brooks Boliek, *FCC Net Neutrality Rules Hit With New Telecom Lawsuits*, POLITICO (April 14, 2015) (available at: http://www.politico.com/story/2015/04/net-neutrality-lawsuit-ctia-116957.html).

[3] *See, e.g.*, Lawrence J. Spiwak, *You Can't Innovate When You Have To Litigate*, THE HILL (April 13, 2015) (available at: http://thehill.com/blogs/pundits-blog/technology/238571-you-cant-innovate-when-you-have-to-litigate); Lawrence J. Spiwak, *The FCC's Legal Gymnastics: Why Wheeler's Title II Approach to Network Neutrality Will Lead to Litigation*, MULTICHANNEL NEWS (February 23, 2015) (http://www.multichannel.com/blog/mcn-guest-blog/fccs-legal-gymnastics/388213); George S. Ford and Lawrence J. Spiwak, *Tariffing Internet Termination: Pricing Implications of Classifying Broadband as a Title II Telecommunications Service*, 67 FEDERAL COMMUNICATIONS LAW JOURNAL 1 (2015); Lawrence J. Spiwak, *What Are the Bounds of the FCC's Authority over Broadband Service Providers?—A Review of the Recent Case Law*, 18 JOURNAL OF INTERNET LAW 1 (2015); George S. Ford and Lawrence J. Spiwak, *Section 10 Forbearance: Asking The Right Questions To Get The Right Answers*, 23 COMMLAW CONSPECTUS 126 (2014).

[4] *See, e.g.*, *2015 Open Internet Order*, *supra* n. 1 at ¶ 127 ("because of the very real concerns about the chilling effects that preferential treatment arrangements could have on the virtuous cycle of innovation, consumer demand, and investment, we adopt a bright-line rule banning paid prioritization arrangements.")

[5] *See In re Preserving The Open Internet*, FCC 10-201, 25 FCC Rcd 17905, REPORT AND ORDER (rel. December 23, 2010) (hereinafter "*2010 Open Internet Order*").

[6] *2010 Open Internet Order*, *id.* at ¶ 14; *2015 Open Internet Order*, *supra* n. 1 at ¶ ¶ 7, 77.

leads to the expansion and improvement of broadband infrastructure."[7]

Using the text of the *2010* and *2015 Open Internet Orders*, one can get a sense of what the FCC means by this concept of a "virtuous circle." To begin, let's consider what the FCC sees as the role of the Broadband Service Provider ("BSP") in the "virtuous circle." As the Commission observed both in its *2010* and *2015 Open Internet Orders*:

> The Internet's openness [] enables a virtuous circle of innovation in which new uses of the network [] lead to increased end-user demand for broadband, which drives network improvements.[8]

Likewise, the Commission's *2015 Order* states that the Open Internet will,

> spur consumer demand for those Internet access services, in turn "driving demand for broadband connections, and consequently encouraging more broadband investment and deployment," consistent with the goals of the 1996 Act,[9]

and that the rules contained in its *2015 Open Internet Order* will, consistent with the statute, "encourage broadband deployment."[10]

The *2010* and *2015 Open Internet Orders* make clear that the FCC views consumer demand in this context as the "end-user demand for broadband,"[11] which is the service sold by BSPs. The FCC also believes that a BSP's investment in its network is driven by the increasing "demand for broadband connections." The FCC has also stated that it sees a direct link between the concept of the "virtuous circle" and the deployment/investment mandate of Section 706 ("goals of the 1996 Act").[12] The Commission explains in its *2015 Open Internet Order* that "key drivers of investment are demand and competition."[13]

Thus far, the FCC has made it clear that it believes investment is positively related to demand: higher demand, more investment; lower demand, lower investment. Assuming the FCC is correct in its beliefs, we must now ask exactly how demand affects investment. The agency provides an answer that is entirely consistent with economic theory—increases in demand lead to higher profits and these higher profits lead to more investment. In the *2015 Open Internet Order*, the FCC makes clear that it sees investment as being driven fundamentally by "future profitability"[14] and that

> .. the profits associated with satisfying that growth provide a strong incentive for broadband providers to continue to invest in their networks . . . . The possibility of enhancing profit margins can be expected to induce broadband providers to make the appropriate network investments needed to capture a reduction in costs made possible only through technological advances.[15]

The fact that profits drive investment is central to all modern economic theories of investment.[16] It is also important to note that the Commission's only citation to the economic literature on investment incentives explicitly models investment as a function of profits.[17]

Based on what the agency has publicly said on the matter, we know the agency believes that demand drives investment because of the effect of demand on profits. Accordingly, the basic idea of the FCC's "virtuous circle" is this—*higher* consumer demand for broadband providers leads to *higher* profits for broadband providers and, in turn, *higher* investment by broadband providers. (And vice versa, lower demand, lower profits, and lower investment.) What is interesting to recognize is that in the Commission's stated model of the "virtuous circle", the incentives are self-reinforcing and thus there appears to be no need to regulate the broadband sector in an effort to stimulate investment. Unfortunately, as I will demonstrate in a moment, the Commission is never shy to let the economics get in the way of a politically-expedient regulatory intervention.

The Reality: The 'Unvirtuous Circle' Theory of Investment. As noted above, central to both of the Commission's *2010* and *2015 Open Internet Orders* is the claim that without regulatory control BSPs will "disrupt[] the virtuous cycle"[18] by "reducing consumer demand"[19] and in doing so, by implication of the circle metaphor, reduce investment in broadband networks. In effect, the Commission has argued that it must control the behavior of BSPs through regulation lest they take actions

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[7] *Verizon v. FCC*, 740 F.3d 623, 644 (D.C. Cir. 2014).

[8] *2010 Open Internet Order, supra* n. 5 at ¶ 14; *see also 2015 Open Internet Order, supra* n. 1 at ¶¶ 7, 77.

[9] *2015 Open Internet Order, supra* n. 1 at ¶ 54.

[10] *Id.* at ¶ 282.

[11] *Id.* at ¶¶ 54, 77; *2010 Open Internet Order, supra* n. 5 at ¶ 14.

[12] 47 U.S.C. § 1302. Section 706(a) states that the agency may use, "in a manner consistent with the public interest, convenience and necessity, . . . regulatory forbearance, measures that promote competition in the local telecommunications market, or other regulating methods that remove barriers to infrastructure investment." Section 706(b), in turn, states that if the Commission determines that advanced telecommunications capability is not "being deployed to all Americans in a reasonable and timely fashion", the FCC "shall take immediate action to accelerate deployment of such capability by removing barriers to infrastructure investment and by promoting competition in the telecommunications market." There is some debate whether Section 706(a) is independent from Section 706(b), which states that if the Commission determines that advanced telecommunications capability is not "being deployed to all Americans in a reasonable and timely fashion", the FCC "shall take immediate action to accelerate deployment of such capability by removing barriers to infrastructure investment and by promoting competition in the telecommunications market." While the agency once believed that Section 706(b) was required to trigger Section 706(a), the FCC reads the D.C. Circuit's opinion in *Verizon* to mean that Sections 706(a) and 706(b) are independent grants of authority. For a full discussion, *see* Lawrence J. Spiwak, *What Are the Bounds of the FCC's Authority over Broadband Service Providers?—A Review of the Recent Case Law, supra* n. 3; George S. Ford and Lawrence J. Spiwak, *Justifying the Ends: Section 706 and the Regulation of Broadband*, 16 Journal of Internet Law 1 (January 2013).

[13] *2015 Open Internet Order, supra* n. 1 at ¶ 412.

[14] *Id.* at ¶ 40.

[15] *Id.* at ¶ 412. The Commission similarly recognized that profits drive investment in its National Broadband Plan, so there is nothing really new here. For a discussion, *see* Lawrence J. Spiwak, *Professor Susan Crawford and the Looming "Cable Monopoly"*, @Lawandeconomics Blog (November 16, 2012) (http://www.phoenix-center.org/blog/archives/899).

[16] *See, e.g.*, Robert S. Chirinko, *Business Fixed Investment Spending: Model Strategies, Empirical Results, and Policy Implications*, 31 Journal of Economic Literature 1875-1911 (1993).

[17] *2010 Open Internet Order, supra* n. 5 at ft. 84, *citing* Jay Pil Choi & Byung-Cheol Kim, *Net Neutrality and Investment Incentives*, 41 Rand J. of Econ. 446–465 (2010).

[18] *2015 Open Internet Order, supra* n. 1 at ¶ 82.

[19] *Id.*

that *reduce* the demand for broadband. This argument is flatly inconsistent with the agency's stated theory of a ''virtuous circle'' of investment. In the FCC's ''virtuous circle'', consumer demand for broadband and profits are positively related. BSPs, if left to their own devices, will not sabotage their own profits, which means that BSPs will not do things that reduce the demand for broadband connections. Profit-maximizing firms don't take normally take actions that reduce profits, including, in particular, reducing the demand for their own products and services. It turns out, therefore, that upon close inspection, the Commission's ''virtuous circle'' theory of investment isn't so virtuous after all.

The truth of the matter is that rather than adopt and adhere to a theory of a ''virtual circle'' of investment, the FCC has in fact developed a theory of an ''*unvirtuous circle*'' that, as explained below, defies logic and is inconsistent with the economic literature that explains the impact investment has on innovation. The actual ''circle'' theory the FCC applied in its two *Open Internet Orders* is this—*lower* consumer demand for broadband providers leads to *higher* profits for broadband providers which, in turn, results in *lower* investment by broadband providers. Here, the BSPs take actions that *reduce* the demand for broadband connections, but these actions simultaneously *increase* their profits (thus making the actions rational for the BSP). However, these higher profits, by the Commission's reasoning, lead the BSPs to *reduce* investment and innovation. This reasoning is entirely incompatible with the ''virtuous circle'' model.

Constructing an economic model that supports this ''unvirtuous circle'' involves implausible assumptions such as reducing demand for your product will increase your profits. Under plausible scenarios, reducing consumer demand for your product is not good for profits and what is good for profits normally is good for investment.

Perhaps the FCC envisions a market in which BSPs sell multiple services. If two goods are substitutes, then the BSP may willingly reduce demand for one of its services (e.g., broadband) in order to increase demand for another (e.g., video bundles). The Commission proposes this approach as a possibility, stating

> Broadband providers may seek to gain economic advantages by favoring their own or affiliated content over other third-party sources.[20]

With multiple products, however, there are tradeoffs to consider. For example, the higher profits from one product must be large enough to offset the lower profits from the other so that total profits rise (so that the decision is rational for the BSP). In turn, the self-sabotaged product has to be more investment intensive than the promoted product so that overall investment declines. The argument contains a lot of ''if-then'' statements for which the agency has not a shred of evidence and, in fact, has not even explicitly recognized as being relevant. Given that BSPs are investing billions annually to enhance the capabilities of their broadband networks to do things a video service does not require, it seems to me implausible that the BSPs are sabotaging broadband to promote their own video services.[21] Indeed, given the rapid rise in programming costs, bundled video is no longer a profit center for BSPs,[22] as is evidenced, in part, by Verizon's recent efforts to curb video bundling.[23] Moreover, economic theory suggests that imposing policies like zero-price regulation—which is what the *2015 Open Internet Order* does in the form of its current ''no blocking'' rule—may birth incentives worse than those the agency claims it is trying to temper.[24]

Notwithstanding, the Commission attempts to give its ''virtuous circle'' theory credibility by falling back on the old standard of ''externality'' to justify its regulatory intervention. In so doing, the agency points to the presence of ''negative externalities'' as a source of perverse incentives on behalf of the BSP:

> . . . broadband providers' behavior has the potential to cause a variety of other negative externalities that hurt the open nature of the Internet.[25]

The agency appears to have no understanding of the economic concept of externality (though, in fairness, the term ''externality'' is often used loosely and improperly). Still, this effort fails to justify the Commission's actions. In the ''virtuous circle'', as described by the Commission, the effects of a firm's actions are *internalized*—that is, the BSP's actions (or lack thereof) directly impact its demand and profits. A characteristic feature of externalities is that they are not internalized,

[20] *Id.*.

[21] *C.f.*, C. Kang, *Comcast Is Officially an Internet Company, and Its Timing Is Awful*, WASHINGTON POST (May 4, 2015) (''Comcast, the nation's biggest cable firm, said Monday that its subscribers for high-speed Internet have surpassed cable television customers for the first time. The trend has already shown up at slightly smaller cable companies such as Charter Communications, and analysts expect the entire cable industry will follow suit sometime this year.'') (available at: http://www.washingtonpost.com/blogs/the-switch/wp/2015/05/04/comcast-is-officially-an-internet-company-and-its-timing-is-awful).

[22] *See, e.g.*, Michael Masnick, *Not Just Consumers Cutting The TV Cord: Small Cable Companies Dropping TV Also*, TECHDIRT (October 1, 2014) (available at: https://www.techdirt.com/articles/20141001/07100828690/not-just-consumers-cutting-tv-cord-small-cable-companies-dropping-tv-also.shtml).

[23] *See, e.g.*, Nelson Granados, *Bundling vs A La Carte: What's The Fuss About Verizon's Skinny Bundles?* FORBES (April 21, 2015) (available at: http://www.forbes.com/sites/nelsongranados/2015/04/21/bundling-vs-a-la-carte-whats-the-fuss-about-verizons-skinny-bundles); Dade Hayes, *INTX 2015: Pay TV Forecast Calls for More Skinny Bundles*, BROADCASTING AND CABLE (May 5, 2015) (available at: http://www.broadcastingcable.com/news/technology/intx-2015-pay-tv-forecast-calls-more-skinny-bundles/140582).

[24] George S. Ford and Michael Stern, *Sabotaging Content Competition: Do Proposed Net Neutrality Regulations Promote Exclusion?*, PHOENIX CENTER POLICY PERSPECTIVE No. 10-02 (March 2010) (available at: http://phoenix-center.org/perspectives/Perspective10-02Final.pdf). The theory of ''sabotage'' originated in T. Beard, D. Kaserman and J. Mayo, *Regulation, Vertical Integration and Sabotage*, 49 JOURNAL OF INDUSTRIAL ECONOMICS 319-33 (2001). Subsequent papers confirm that regulation is a necessary condition for sabotage. *See, e.g.*, David M. Mandy and David Sappington, *Incentives for Sabotage in Vertically Related Industries*, 31 JOURNAL OF REGULATORY ECONOMICS 235-260 (2007); T. Randolph Beard, George S. Ford and Lawrence J. Spiwak, *Why ADCo? Why Now? An Economic Exploration into the Future of Industry Structure for the ''Last Mile'' in Local Telecommunications Markets*, 54 FED. COMM. L. J. 421 (2002).

[25] *2015 Open Internet Order*, *supra* n. 1 at ¶ 83.

so the ''externality'' argument is no help.[26] Moreover, the agency makes no mention of an externality in its ''virtuous circle'', so the implications of such a market failure on making good Internet policy are entirely unknown.

The Commission also attempts to square its illogical flow by arguing that BSPs are short-run oriented and ignore the long-term profit implications of their actions:

> Broadband providers have incentives to engage in practices that will provide them short term gains but will not adequately take into account the effects on the virtuous cycle.[27]

Justifying the heavy-handed regulation of the Internet on corporate naivety isn't very satisfying. It seems implausible that firms surviving decades of market changes and investing billions annually in long-lived assets take such a naîve, short-term view when they make decisions.[28] Moreover, the regulatory scheme must be specifically designed to properly motivate the naîve decisionmaker. If a long-run view suddenly replaces the short-run view, then will the regulatory path chosen still be the right one? It is unclear. The onus is certainly on the Commission to provide strong evidence of a short-run view, and then demonstrate, theoretically, that the short-run view leads to self sabotage of profits and reduced investment incentives.

Conclusion. Close inspection of the FCC's two *Open Internet Orders* forces the conclusion that the agency's ''virtuous circle'' approach is deeply flawed. While the ''virtuous circle'' concept in its general form is plausible, this is not the model used by the agency to support its regulatory interventions. At its core, the Commission's true model—the *''unvirtuous circle''*—requires profit-maximizing firms to do things willingly and knowingly that reduce the demand for their products. In a strange logical twist, this reduced demand must somehow *increase* profits and, in another strange logical twist, *reduce* investment. This logical flow cannot be squared with the plain language of the Commission's depiction of the ''virtuous circle'' or likely any plausible economic model either.

Put simply, we have the FCC in its *2010* and *2015 Open Internet Orders* pulling a bait-and-switch, offering up a sweet-sounding ''virtuous circle'' and then replacing it with an ''unvirtuous circle''—entirely incompatible with the ''virtuous circle''—to support its regulatory intervention. The Commission's switch is extremely problematic, since the ''unvirtuous circle'' has no support from economics or even rudimentary logic. When a regulatory agency disregards and then contradicts its own model of the industry then it almost certainly engages in arbitrary and capricious rulemaking. And if history has taught us anything, policies based on shaky economic foundations never bode well for consumers. Of course, net neutrality was never a consumer-focused policy, but a thinly-vieled effort to shift profits from the network's core to its edge. Consumers, as is often the case with regulation, are just part of the spin.

[26] *C.f.*, George S. Ford, Thomas M. Koutsky and Lawrence J. Spiwak, *The Welfare Impacts of Broadband Network Management: Can Broadband Service Providers be Trusted?*, Phoenix Center Policy Perspective No. 32 (March 2008) (available at: http://www.phoenix-center.org/pcpp/PCPP32Final.pdf).

[27] *2015 Open Internet Order, supra* n. 1 at ¶ 83.

[28] George S. Ford and Lawrence J. Spiwak, *The Unpredictable FCC: Politicizing Communications Policy and its Threat to Broadband Investment*, Bloomberg BNA (October 30, 2014) (available at: http://www.phoenix-center.org/oped/BloombergBNARegulatoryCertainty30October2014.pdf).

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