

Will U.S. Consumers Pay a Price If Net Neutrality is Rescinded: How Do Consumers Feel about the Bundling of Services?

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Abstract:

Net neutrality is defined as the principle that Internet Service Providers, (ISP's), and governments should treat all data on the Internet the same, not discriminating or charging differentially by user, content, site, platform, application, type of attached equipment, or mode of communication. In early 2015, the U.S.'s Federal Communications Committee voted to keep the Internet net neutral denying preferential treatment for Content Providers, (CP's) that are more data-rich than other CP's. It will supposedly keep the consumers safe from paying more for Internet service by treating the Internet as a public utility. Is the practice of price bundling and tiering of data-rich websites just a matter of time for ISP's to charge consumers for these services? This paper begins to look at the likelihood of what net neutrality really means for consumers in the future and how consumers feel about paying for faster Internet service and premium data-rich website content.

Key Words: Net neutrality, Internet pricing strategy, price bundling, data rich content, streaming video services

1.0 Introduction

“On February 26, 2015, the Federal Communications Commission voted to regulate broadband Internet service as a public utility, a milestone in regulating high-speed Internet service into American homes. Tom Wheeler, the commission chairman, said the F.C.C. was using ‘all the tools in our toolbox to protect innovators and consumers’ and to preserve the Internet’s role as a ‘core of free expression and democratic principles.’ The new rules, approved 3 to 2 along party lines, are intended to ensure that no content is blocked and that the Internet is not divided into pay-to-play fast lanes for Internet and media companies that can afford it and slow lanes for everyone else. Those prohibitions are hallmarks of the net neutrality concept. Explaining the reason for the regulation, Mr. Wheeler, a Democrat, said that Internet access was ‘too important to let broadband providers be the ones making the rules,’” (Ruiz & Lohr, 2015).

Mr. Wheeler is correct, but the net neutrality rules, as written, give companies the right to challenge on a case-by-case basis. That fact does not bode well for consumers given the fact that the Internet service providers such as Comcast or Verizon are used to getting their own way. These companies have deep pockets to litigate for years AND to pay lobbyists to “plead” their cases to the appropriate Washington, DC players. In that case, what can a consumer do to protect himself from unwanted price increases? After all, it is the Internet service providers who have to make all of the financial and technological investments to carry more and more Content Providers, (CP’s), data to the consumer. Just because the net is being classified as “a utility,” such as one’s gas, electricity, and water providers, does not mean that rate increases are not passed by State Utility Boards without most consumers knowing about the increases until they see their respective utility bills. Can we assume that this same utility rate increase process will not come to fruition for the Internet? That is, like everything else that is government regulated, how long will it take for consumers to start paying for their utility? This article makes an initial foray into how consumers feel about Internet data “fast lanes” and what consumers may or may not be willing to pay for the faster transmission of their data to and from their favorite websites. This paper may also give ISP’s an idea on what to charge consumers for these fast lane services once the “free period comes to an abrupt end.”

2.0 History

The bulk of the published academic economic, legal, and public policy research on net neutrality was done from the years 2002 to about 2009 (for example- Van Schewick, 2006; Wu 2003; 2004; Yoo 2004; 2005), but no papers addressed any consumer specifics on what they were willing to pay or not pay for faster or equal Internet data transmission services, whether there was a net neutral Internet or not. Then, the issue has mainly been discussed in the U.S. popular press from 2007 until 2017 as a hot button topic that Democrats and Republicans are using as a ping-pong ball to set and re-set public policy. The whole net neutrality issue has been debated by the US government for years through Congress and the Federal Communications Committee (FCC). Net neutrality is defined as the principle that Internet Service Providers, (ISP’s), and governments should treat all data on the Internet the same, not discriminating or charging differentially by user, content, site, platform, application, type of attached equipment, or mode of communication. “This question over the ‘net neutrality’ has generated hot discussions since the FCC changed the classification of Internet transmissions from the category of ‘telecommunications services’ to the category of ‘information services’ in the U.S. in 2005, making ISP’s no longer explicitly subject to the principle of net neutrality,” (Borreau, Kourandi, & Valletti, 2015).

“This debate has been exacerbated by the fact that, over the last few years, the volume of Internet traffic has grown drastically, requiring ISP’s to upgrade their network capacity. In 2005, AT&T, later followed by other major telephone and cable operators, proposed to charge content providers (CP’s) premium prices for preferential access to broadband transmission services. Comcast, the largest cable operator in the U.S., was also accused of interfering with users’ access to file-sharing services such as BitTorrent. There have been other cases reported in the popular press of ISP’s blocking or degrading the quality of content. ISP’s argue that these practices are necessary to manage Internet traffic efficiently and ensure a sufficient quality of service, especially for content, services and applications that are very sensitive to delays, such as VoIP services or video conferencing. However, even if this view seems now widely accepted, which traffic management techniques will be allowed is still discussed. In particular, policy-makers argued that it is crucial to prevent ISP’s from adopting discriminatory practices for reasons unrelated to traffic management,” (FCC, 2011; Borreau, Kourandi, & Valletti, 2015; Thierer, 2004; Turner, 2005; Waldmeir, 2006; WSJ, 2006; Wu, 2003).

“The net neutrality issue turned out to be highly contested among policymakers and industry players. Opponents to net neutrality argued that a net neutrality regulation would reduce ISPs’ incentives to invest in broadband capacity and lead to less entry of CP’s,” (Yoo, 2005). And according to Van Schewick (2006) proponents of net neutrality, on the other hand, contended that the Internet had been neutral since its inception, and should be kept free and open to everyone. They further argued that a departure from the net neutrality regime would reduce innovation in Internet services (entry of CP’s), and that ISP’s will continue to invest in broadband capacities whatever the traffic regime, since this is the only way to keep their demand high. “Finally, end users were concerned about the subscription fees that they pay to ISP’s, the variety of Internet content, and the quality of their Internet connection,” (Borreau, Kourandi, & Valletti, 2015).

In the FCC's view, its proposed net neutrality rules would "prohibit a broadband Internet access provider from discriminating against, or in favor of, any content, application or service, (FCC, 2009). "Broadband access providers would be prohibited from: (1) prioritizing traffic and charging differential prices based on the priority status; (2) imposing congestion-related charges; (3) adopting business models that offer exclusive content or that establish exclusive relationships with particular content providers; and (4) charging content providers to access the Internet based on factors other than the bandwidth supplied," (Becker, Carlton, & Sider, 2010).

The net neutrality framework outlined by the FCC reflects the view that there is insufficient competition in the provision of broadband access services to ensure that broadband access providers will adopt business models and network management practices that are consistent with consumers' interests. Net neutrality proponents argue that in the absence of regulation, broadband access providers will adopt 'non-neutral' network management that disadvantages certain types of Internet content, harming competition for and investment in content," (Becker, Carlton, & Sider, 2010). The FCC's Notice of Proposed Rulemaking (NPRM), for example, states that 'market forces alone are unlikely to ensure that broadband Internet access service providers will discriminate in socially efficient ways and that, absent regulation, such discrimination is likely to change fundamentally the nature of the Internet, reduce competition, and hinder innovation and growth,' (FCC 2009). The FCC further suggests that non-neutral network management practices also "could reduce innovation at the edge of the network," (FCC 2009).

It is important to appreciate that the notion that we currently have a "neutral Internet is simply false. "The Internet already has slow and fast lanes. Companies such as eBay and Google plug into it through big pipes and store their data on servers around the world so that their pages load more rapidly. Telecom companies exchange traffic in order to make it travel faster than it would through the public hubs that were the foundation of the Internet," (Gapper, 2006).

According to Ganley & Allgrove, (2006), in contrast to user led initiatives, the access tiering models now advocated by some operators are a more sweeping attempt to adjust the Internet's default settings by placing control of the network in operators' hands and allowing them to set the price for access. First, there is the "best efforts" rule, the existing default that treats all data packets the same; it is a first in/first out arrangement irrespective of origin or destination. It applies bit parity. Then, there is the "needs-based discrimination which treats data packets according to the best efforts rule until such time that there is network congestion. At this point, certain packets are prioritized and moved to the front of the line. Finally, there is the active discrimination rule where operators inspect all packets and prioritize them in accordance with pre-defined rules irrespective of whether their network is congested. Needs-Based and active discrimination overturn the best efforts rule and bit parity. Any of these methodologies is ripe for a little payola to get preferential treatment. (In some countries, "payola" is a normal, legal way of doing business.) And just where is the monitoring of these ISP's "lane violations?" If you believe Republicans, it is self-monitored by the companies themselves. Americans have seen how that has worked with the protection of privacy during consumer Internet activity.

But all of this history has changed with Donald Trump of the Republican Party winning the Presidential election in November 2016. He has made it his mission to change most of the major political, economic, and social justice issues that were passed under the Obama presidency of the last eight years. And one of those political/economic issues is to reverse the vote of a neutral internet by the FCC. Now that vacancies on the FCC have been filled along Presidential party lines (Republican), the new FCC Commissioner has already started the process of negating net neutrality. FCC Chairperson, Ajit Pal, wants to remove strong legal authority that critics say over-regulates telephone and cable providers and "that is holding back investment, innovation, and job creation," (Takiff, 2017).

3.0 Pricing Trends and Practices

It is not necessary to wax on about the debate of whether preferential treatment for CP's, so called "fast lanes for data transmission has a price to pay for the CP or that price/cost will eventually be passed on to the consumer. It is only a matter of time. What will it possibly look like for the consumer given certain retail pricing trends? And how would consumers feel about that?

Consumers have so many "fees, taxes, and surcharges on their current Internet, wireless, and utility bills that when asked to describe exactly what these charges represent, most could not explain what they were paying for. Yet, consumers continue to pay them.

They have become apathetic because once the State or Federal government imposes these fees as required for the ISP's, wireless, and utility companies to charge the consumer for, most consumers do not have the time to investigate nor the money to litigate if they deem these charges unfair. Just what are the "FCC User Fees," the "Regulatory Recovery Fees," the "Monthly State Assessment," or the "Universal Connectivity Charge" on my cable/internet/landline bill? Why are they collected? Who gets the actual money? And it would not be the first time a cable/internet provider "accidentally slipped a new charge on your bill." (There are reasons why companies such as Comcast and Time-Warner Communications are the lowest ranked in customer service satisfaction surveys decade after decade.)

So what can consumers expect in terms of future pricing of internet service? According to Levy, Grewal, Kopalle, and Hess (2004), price sensitivity, substitution effects, the effects of price promotions, retail competition, retailer costs and discounts, and segment-based pricing effects all affect pricing of all goods and services for the last decade. But no one item or combination of these items can really predict proper pricing techniques. Substitution effects and the lack of competition force consumers to pay whatever they must in order to get service at all. What control do consumers have over the pricing practices of ISP's? If Comcast or Verizon decides that eBay, Google or YouTube takes up too much bandwidth with their data-rich websites, what is to stop Comcast or Verizon to start charging them for the infrastructure they need? And how long will it take the costs to be passed on to the consumers? By the same token, if Comcast or Verizon charges them at all or more than any other website, could Google, eBay and YouTube not provide their websites at all to the ISP's? What if these websites charge a "slotting fee" type to the ISP's? Who loses? Who wins? The consumers could revolt and not use Comcast or Verizon at all if they were not to receive these or other popular websites. Is boycotting Comcast or Verizon that likely?

The most likely scenario would have an ISP such as Comcast, calling its local utility board and filing the paperwork for a price increase. "The Federal Communications Commission has not regulated any rates since 1999," according to John Reinert of the state's Board of Public Utilities, of which the state's Office of Cable Television is part," (Leeds, 2016). In the Philadelphia metro area that includes Philadelphia and its suburbs such as Southern New Jersey and parts of Delaware, Comcast has gotten its last seven rate increases. In addition, it has "hidden" rate increases through fees which effectively have raised consumers' bills. "In 2016, the New Jersey Board of Public Utilities investigated whether or not Comcast should have notified the regulator before tacking on a \$9.95/month 'High Definition Technology Fee' for subscribers to the company's 'Limited Basic' service," (Morran, 2016). That would have raised the monthly bill over 50%," Some people were able to remove the fee from their bills, but others were not able to remove the fee based on local municipality rules. And Comcast is not the lone ISP using fees to raise monthly consumer bills. It is that easy for ISP's to get rate increases. A majority of other states allow ISP's to do the same thing. Consumers' bills would increase that simply. That is what happens with our electricity, gas, and water bills now. And then the next step would be that ISP's like Comcast and Verizon would then bundle price and tier the different websites based on these fees and infrastructure costs to recoup. In essence, the Internet would become like cable television pricing. Consumers would have to choose between basic Internet (the websites which require little data bandwidth), and different "premium" levels of service that would include the different data-rich websites. The websites with the highest amount of data would be packaged and bundle-priced with like websites. It would be just like adding HBO, Showtime, Cinemax, Starz, or any professional Sports league game-by-game plans to a consumer's service. Or Comcast or Verizon could simply add some mysterious charge under a heading that no one really understands on the consumers' bills.

4.0 Data Collection

It will be interesting to test consumers' willingness to pay for tiered bundling of websites. Price sensitivity ranges could be utilized to judge consumers' resistance to pay or not. Using the concept of psychological price thresholds and reference pricing effects would be a good beginning. Of course, since consumers are not paying for this now, one would think there would be total resistance to paying for anything, hypothetically or not. A preliminary survey was developed to investigate different pricing scenarios. It was important to test large enough samples that included age ranges, income, and gender. As a sample question, would younger consumers be more willing to pay a premium to their ISP for more data-rich websites than older consumers? How much money would they be willing to pay?

A preliminary study with 420 respondents was conducted. 210 were males, and 210 were females. The respondents were divided into three age ranges: 16-35-years-old; over 35 to 60-year-olds; and over 60-years-old. There were equal number of males and females in each of the age categories (70 each). Income levels for the respondents were divided in to five categories: 0 to \$40,000; over \$40,000 to \$80,000; over \$80,000 to \$120,000; over \$120,000 to \$160,000; and over \$160,000. 37% of the total respondents (155) were willing to pay their ISP's more money per month for faster internet lanes for certain websites that they transfer data to and from, but only 20% of the respondents over age 60 (28 out of 140) were willing to do so. Only 2% of the respondents making less than \$40,000 were willing to do so as well. Of those 37% who were willing to pay more on their monthly ISP for faster internet lanes, 35% were willing to pay up to \$10 more a month; 32% were willing to pay more than \$10 and up to \$20 more a month; 24% were willing to pay over \$20 and up to \$30 more a month; 8% were willing to pay over \$30 and up to \$40 more a month; and 1% were willing to pay more than \$40 a month. 97% of the total respondents did not want the ISP to determine which websites would get faster lane data transmission status compared to consumer determination. It appears consumers want to have a final say in what they are willing to pay for regardless of how much a website or streaming service uses in data transmission against the ISP's bottom line costs to do so.

According to Protalinski (2015), Sandvine's Global Phenomena Report says in descending order starting with the most downstreaming traffic that Netflix, YouTube, HTTP, BitTorrent, Amazon Video, iTunes, Facebook, and Hulu account for over 70% of the North American downstream traffic in peak evening hours on fixed access networks. So we asked the participants in the surveys if they would be willing to pay extra money per month on their ISP bills if their ISP bundled the following streaming audio and video services and websites together, and if "yes," how much would they be willing to pay each month? The combination of services and websites were based on if the respondents would pay for a particular streaming service and/or website and how the respondents ranked those services and websites in combination. The following are the most popular combinations. The first bundled combination of services included Netflix, YouTube, and iTunes. 37% of the total respondents said they would pay more money per month for these services. There were no significant gender differences in any of the age categories for this question. As for how much more per month the consumers were willing to pay per month to their ISP for Netflix, YouTube, and iTunes, 35% were willing to pay up to \$10 more a month; 32% were willing to pay more than \$10 and up to \$20 more a month; 24% were willing to pay over \$20 and up to \$30 more a month; 8% were willing to pay over \$30 and up to \$40 more a month; and 1% were willing to pay more than \$40 a month. The second combination of streaming services and websites included Netflix, YouTube, and Facebook. 40% were willing to pay up to \$10 more a month; 38% were willing to pay more than \$10 and up to \$20 more a month; 18% were willing to pay over \$20 and up to \$30 more a month; 4% were willing to pay over \$30 and up to \$40 more a month; and 0% were willing to pay more than \$40 a month. The third combination of streaming services and websites included Netflix, Amazon Video, and Hulu. 50% were willing to pay up to \$10 more a month; 40% were willing to pay more than \$10 and up to \$20 more a month; 8% were willing to pay over \$20 and up to \$30 more a month; 2% were willing to pay over \$30 and up to \$40 more a month; and 0% were willing to pay more than \$40 a month. The fourth combination of streaming services and websites included Netflix, Amazon Video, YouTube, iTunes, Facebook, and Hulu. 62% were willing to pay up to \$10 more a month; 24% were willing to pay more than \$10 and up to \$20 more a month; 8% were willing to pay over \$20 and up to \$30 more a month; 6% were willing to pay over \$30 and up to \$40 more a month; and 0% were willing to pay more than \$40 a month. Not surprisingly, when all respondents were asked why they would not pay for a streaming service and/or website whether for a single service or website or in combination, the most popular reason was that the streaming service and/or website was already free of charge. Finally, when respondents were asked if they would want to pay for faster data transmission lanes, especially when using Netflix, YouTube, HTTP, BitTorrent, Amazon Video, iTunes, Facebook, and/or Hulu, the common response was, "faster than what?" The perception of time varies from ISP provider to user so it would be difficult to discern what would be a slower transmission time until that particular user noticed a "slowdown" based on their own time threshold perception.

5.0 Conclusions and Future Research

As an initial investigation into what consumers may or may not pay for if ISP's begin to charge premiums for faster data transmission lanes for certain audio and video streaming services and/or websites due to the dismantlement of net neutrality, we have learned that many consumers are not willing to pay more for these services.

Whether they would be content by being in the “slow lanes” for these services remains to be seen. Consumers would have to compare the speed/length of time it takes to transfer data on these services and websites to know if they would prefer to pay for “faster lanes” if net neutrality allows ISP’s to charge premiums for these services and websites. Based on our data, most people who are willing to pay a premium for these services and websites would not be willing to pay more than \$30 per month depending on the services offered in the bundle. The reality is that wireless operators are already bundling some of these data-rich services for their customers. For example, “T-Mobile is giving credit for one \$10/month Netflix Standard streaming plan to each eligible account. That includes two simultaneous streams in HD. If you want to upgrade to the Premium plan with four streams, 4K and HDR, that will cost you \$2/month,” (Segan, 2017). In addition, AT&T is giving its Unlimited Choice customers a free subscription to HBO. “The Unlimited Choice subscription, which costs \$60 a month, with additional discounts for people who have multiple phone lines on the same account, includes unlimited data, talk and texting capabilities. For an additional \$10, customers get access to DIRECTV NOW’s ‘Live a Little’ plan, which includes more than 60 lives streaming channels and 25,000 on demand titles. Unlimited Choice customers who currently subscribe to AT&T’s video services like DIRECTV, DIRECTV NOW or U-verse TV will get HBO for free. If they don’t use the services, they will get HBO through DIRECTV NOW and HBO GO apps,” (Castillo, 2017).

The reality is that customers are willing to pay for extra data packages and usage on their wireless phones. Someone has to pay for the infrastructure that allows these features and streaming services to get to consumers. These wireless operators charge the consumers with subscriptions and the option for expanded data packages. Someone has to pay for the expansion of infrastructure for ISP’s as traffic increases dramatically as more and more consumers are using computers and mobile devices from anywhere they can get a signal for service to communicate, work, and be entertained by streaming video and audio services. Is it unrealistic to think that ISP’s should not also charge consumers for this expansion of infrastructure just like the wireless service providers? In many cases these ISP’s are also wireless operators or acquiring them. Is it just a matter of time? Will the end of net neutrality provide the doorway for ISP’s to charge consumers for these current free services? According to Gharakheili (2017), “though Software Defined Networking addresses the challenges for bundled best-effort service provided by broadband operators for users, it does not distinguish between the different types of applications (video streaming, web-browsing, and large file transfers), nor does it cater to the varying needs of different household devices (entertainment tablets, work laptops, or connected appliances). This is a problem for end-users, who want to differentiate between applications and devices; for content providers (CP’s), who want to exercise control over streams of high monetary value; and for Internet service providers (ISP’s), who have to accommodate growing traffic volumes without additional revenues.” Bundling is not a new idea. It would be easy to group video streaming, web-browsing, and large file transferring services/websites as separate bundles by function or by cross-section since many consumers use at least one of these data usage categories. Further research is needed to streamline what ideal combinations should be bundled together to satisfy the most consumers. Will consumers need some metrics to estimate how much they are using different streaming services and websites to be able to calculate how much they can afford to spend on these services that are certain to not be free-of-charge in the very near future? And since the FCC has not regulated any ISPs’ rates since 1999, it seems likely that the consumers will have to start paying for the increased traffic speed of data transmission for data-rich streaming services and websites to defray ISP’s costs and to improve the ISP’s profit margins.

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