

Net Neutrality: Changing Regulations Won't Kill the Internet

By **Gregory L. Rosston**

Over the past 25 years, the internet has grown and changed in ways, both good and bad, that no one predicted. But at least one thing is constant: concern about how the Internet is regulated.

The Federal Communications Commission's decision last month to change the regulatory framework governing internet service providers (ISPs) isn't going to change that concern. Net neutrality, which embodies the types of regulations the FCC can impose as well as ways those rules can be appealed, will continue to be a regulatory and competition policy issue for the foreseeable future.

The phrase "net neutrality" sounds like something everyone should support and makes a great bumper sticker. But to fully understand the implications of net neutrality requires

understanding what the bumper sticker means.

The definition of net neutrality has evolved over time and meant different things to different people. It stems from the century-old question of how to price access to a communications network that costs a lot to build but almost nothing to use. In the dial-up era, the answer to that question was "open access," which meant that consumers could call any ISP using the telephone network without additional charges.

As modern broadband replaced dial-up, open access gave way to the new net neutrality. Tim Wu, the originator of the term, started with a principle of non-discrimination. Most recently, the discussion has evolved from solely non-discrimination — no blocking of legal content and no throttling or slowing down of content — to

include restrictions on paid prioritization and payments from the content side of the market.

Background

ISPs, like Comcast, Verizon, T-Mobile, and others, provide the connection between end-users and the broader internet. In economics terms, they are a platform in the middle of a two-sided market.

Originally, ISPs were dial-up providers like America On Line (AOL), CompuServe, and Prodigy that customers reached by attaching a modem to their telephone line and having the computer call one of their provider's modems.

In the early days of the internet, not many services existed that appealed to large numbers of people. So providers took the initiative to make their service more attractive. Some of these providers established "walled gardens" of exclusive content. This approach also benefited content providers who paid AOL to be within the walled garden so potential customers could easily find them. If you wanted to access AOL's content, you needed to subscribe to AOL. You could switch dial-up providers if the content was not attractive enough for you.

About the Author



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And your telephone company could not treat your modem call in any way different from a similar voice call.

The widespread adoption of user-friendly browsers in the mid-1990s and the introduction of higher-speed access by telephone and cable companies created a mechanism for consumers to access the broader internet. As a result, the amount of available content on the internet exploded as content providers competed to attract potential customers and advertising. More and higher quality content increased demand for internet access and more customers online created an incentive for increased content, a virtuous cycle.

AOL and similar ISPs that controlled content via walled gardens soon became irrelevant — customers could find the content they wanted outside of AOL and content providers no longer needed to pay AOL to get to those customers. The role of the ISP fundamentally changed with broader content availability and the rise of broadband service that connected directly to the internet.

This change had positive and negative outcomes. The positive outcome is obvious: It created an incentive for the companies that provide the infrastructure to begin massive upgrades, allowing faster and faster connections, which content providers could use to innovate new services. But it also meant that the market was likely to be able to sustain only a small number of

infrastructure providers and led to the concurrent competition concern that a provider with market power would have incentive to move back to a regime where it controlled the content you could access. The resulting push for net neutrality has been in front of the FCC, Congress, and the courts ever since.

Access to Local ISPs

Understanding how content providers can connect to their customers through local ISPs is important for both legal and economic analysis of restrictions.

Content providers can send their content to local ISPs through content distribution networks (“CDNs”). These third-party companies negotiate deals with the local ISPs so that their customers don’t have to. Each local ISP negotiates deals with many different third-party CDNs so content companies have choices for CDN service. In addition, some companies pay for dedicated connections to local ISPs to transport their content directly. This setup can increase the quality of their service and lower their costs, but only very large companies typically can afford such arrangements since there are high fixed costs for transport.

Because of the myriad ways to get content to a local ISP, it would be difficult to block traffic from a small content provider without specifically targeting the content provider’s IP address or blocking a substantial

amount of unrelated traffic on its chosen CDN. As a result, blocking traffic should easily be detected either by the content provider or by the third-party provider. In 2013, when Netflix traffic slowed on several ISPs, the debate was not about blocking but about who should pay to increase the capacity of traffic into the ISPs from the third-party CDNs Netflix was using. Ultimately, Netflix decided to enter into direct access connections with some of the ISPs.

Legal Issues

Congress provides several mechanisms for FCC regulation through the 1934 and the 1996 Telecommunications Acts. The two most important in the current context are in Title II that applies to “common carriers” and Title I that applies to “information service” providers — hence, “Title II” and “Title I” regulation. One key issue in the dispute is whether ISPs are common carriers subject to Title II regulation or information service providers subject to Title I regulation. The FCC, with oversight from the courts, makes this call.

While regulation differs from antitrust in many ways, antitrust provides a useful analogy. Antitrust law distinguishes between practices that are *per se* illegal (price fixing most prominently) because there are limited or no social welfare benefits and most other actions that have some efficiency justifications and

therefore undergo a *rule of reason* analysis to assess welfare trade-offs. Title II regulation is more similar to a *per se* bar on actions whereas Title I regulation tends to be more akin to the rule of reason approach.

Because of the need for significant investment to develop the local connections for internet service, and a lot of uncertainty about how the internet would develop, the FCC chairmen under President Clinton (Reed Hundt and William Kennard) used the Title I regulatory framework designated for “information services” for cable broadband internet access instead of classifying it as a Title II service. Telephone companies, which provided DSL and telephone services over the same lines, were in turn regulated under Title II until 2005 when FCC Chairman Kevin Martin changed DSL regulation to Title I like cable broadband.

Then the FCC, first during the Bush administration and then at the start of the Obama administration, tried to articulate and enforce rules such as “no blocking of legal content, no throttling, and the right to use devices of their choice.” These rules were challenged in court (by Comcast and then Verizon) and the FCC lost both suits. The courts said that the FCC did not have the authority to impose such regulations on an information service, at least not in the way that it did.

The U.S. Court of Appeals for the District of Columbia Circuit implied

that the FCC could regulate ISPs under Title II or it could try to re-justify its authority to regulate information services.

In 2015 (under pressure from President Obama and comedian John Oliver, maybe not in that order), the FCC decided to reclassify broadband as a Title II Common Carrier Service, but did not impose rate regulation, which is a key part of traditional Title II regulation.

The FCC order prohibited blocking and throttling (slowing down of service from specific sites). It also said that it would evaluate paid prioritization and “zero-rating” (not counting or charging for data use from specific sites) on a case-by-case basis. Subsequently, the FCC provided a bit more guidance on what might be acceptable zero-rating, but its zero-rating statement was undone as one of the first moves by the FCC’s current chairman, Ajit Pai.

And last month, the FCC again classified broadband as an information service, arguing that competition law along with a transparency requirement would protect consumers.

Economic Issues

The economic theory behind a net neutrality concern is what economists call a vertical relationship in a two-sided market. Does a provider at one level of production have incentive and ability to harm competition at

another level of the chain? In this case, do ISPs have the incentive and ability to affect the content market?

In general, economic theory tells you that if a firm does not have market power, it is very unlikely to cause concern at another level in the chain because consumers have a choice. Even when a firm has market power, it often has incentives to promote competition at other levels to increase demand for its product.

However, there are times when a firm with market power at one level in a chain can increase its profits by affecting competition upstream or downstream. One of the clearest examples of a competitive problem involved a telephone company called Madison River. It provided traditional telephone service and broadband DSL service. In 2005, Madison River blocked its customers from accessing Voice over Internet Providers (VoIP) to make telephone calls, thereby protecting its core telephone business. The FCC quickly stepped in and Madison River stopped the practice, but its behavior illustrated a competitive problem — Madison River had the incentive and ability to block competition.¹

The FCC has worried about vertical relationships in other areas like cable television and responded with “program access” rules to prevent

¹ Madison River did not really protest so it was not a great test of FCC authority to regulate broadband without Title II.

a cable company from withholding programming from rival providers like satellite television providers.

The first step in an economic analysis to understand if a firm has the incentive and ability to harm competition would be to assess if there is market power by the firm engaging in the challenged behavior. If a firm does not have market power, antitrust policy generally allows a firm to enter into relationships without concern and assumes they will help the firm to compete and serve consumers. Firms without market power are unlikely to have the incentive to harm competition because they are unlikely reap the benefits.

Some net neutrality advocates expressed concern with a T-Mobile program called “Music Freedom” where streaming music did not count against customers’ wireless data usage caps.² Music Freedom was one of a number of disruptive T-Mobile programs designed to attract customers from their rivals. As the fourth-largest mobile provider, though, T-Mobile did not have market power and its customers liked the program (and subsequently T-Mobile added a program called “Binge On” to exempt video from data caps as well, provided it was compressed to take up less bandwidth). Had these

programs harmed consumers, they would have competitive alternatives to choose from and T-Mobile would have suffered in the market. As it stands, the introduction of these programs and other efforts led to T-Mobile increasing its share of the wireless marketplace.

Because a firm without market power is unlikely to harm consumers does not mean that a firm with market power should also be exempt from scrutiny. Antitrust law would lead to a case-by-case “rule of reason” approach to investigate the incentive and ability of a firm with market power. In contrast, the Title II rules were a combination of rule of reason and *per se* rules with less clarity on the line between the two and the standards that would be applied. Antitrust law has a significant history and case law so that firms should have a sense of what actions would be permitted and prohibited. One concern with relying on antitrust law is that it will be expensive and time consuming for firms that challenge behavior.

A firm with market power would have to sacrifice some profits at one level to increase profits at the next level. For example, to increase its content profits, it would have to harm its profits at the ISP level. The first issue would be whether such actions would be profitable. The next question would be whether the actions would succeed. For example, blocking content directly might cause the content provider to enter into

deals with CDNs to circumvent the blocking. So, even if a provider might have the incentive to block content, it might not have the ability.

How Will the Repeal of Title II Affect Investment?

There has been a significant amount of debate about the effect of net neutrality regulation on investment. However, the parties claiming investment has increased or decreased under Title II have not measured investment accurately; they do not have enough data to draw conclusions and “investment” is not the appropriate metric, in any event.

Investment is measured as how much money is put into projects, when we really care about output. In a rapidly evolving industry, investment does not correlate as well with output as we might hope. But the advocates for and against Title II regulation used their own measures of investment to engage in the debate and contradict points made by the other side.

Even if investment were the appropriate measure, investment in the network would not be the only important piece to measure. Investment by producers of complements to the broadband network like Netflix, Facebook, and startups of all sorts should be included to understand what inputs are being devoted to creating products and services for consumers. As a result, the current debate is

² See van Shewick, Barbara, “T-Mobile’s Binge On Violates Key Net Neutrality Principles,” <http://cyberlaw.stanford.edu/downloads/vanSchewick-2016-Binge-On-Report.pdf>.

really about a small piece of a much larger pie.

Finally, even if advocates were measuring investment correctly, it is extremely hard to believe that an event study of two years of investment (since the 2015 rules were adopted) would provide reliable evidence for any conclusion about the direction of investment. To isolate the effect of the rules requires correcting for all other factors, but a lot has changed so two years of data is really unlikely to yield a clear estimate of the effect. In addition, much of the large investment is planned ahead so changes in 2015 and 2016 may have been part of longer-term plans.

As a result, I would not put any weight on the arguments from either side showing that the 2015 rules did or did not impact investment, despite its seemingly large role in the debate.

Bundling

In addition to the worries about content being blocked, some people are worried that ending net neutrality means they will have to buy packages of services from their ISP rather than being able to pick and choose the pieces they want. Bundling content and access can be anticompetitive or pro-competitive, again depending first on the degree of market power and then the specific actions and implications.

Even under the Title II regime there has been bundling and there always

will be bundling. Some bundling is innocuous and pro-competitive — Netflix bundles television shows and movies in its monthly subscription; T-Mobile bundles a free Netflix subscription with its mobile service; AT&T bundles HBO.

Zero rating, as discussed above, is a form of bundling where data charges do not count toward data caps. The zero rating may be for general categories of content or for specific content. In general, zero rating benefits consumers especially if all content providers have the ability to pay to zero rate their content and consumers have a choice of access provider.

All of these practices appear innocuous and probably benefit consumers overall. The competition concern can arise, for example, if a provider with market power makes a bundle exclusively available on its platform and prohibits consumers using other platforms from accessing the content. Under certain circumstances, such bundling can raise the cost of rivals and allow the provider to raise prices harming consumers. Ensuring multiple competitive avenues to access content and a significant amount of content would protect consumers from anticompetitive harm. However, even in a competitive environment, some consumers may pay more for accessing specific content if it generally comes as part of a package. For example, consumers may pay to get high-performance tires with

their new car if it comes bundled with standard tires that appeal to most customers. In addition, some of the bundling practices can affect consumers differently depending on their intensity of demand.

Conclusion

The recent rule changes will not kill the internet. Nor would not changing them (or getting struck down by a court challenge) kill the internet. We have had 20 years of broadband service. Access providers have invested a lot to increase speeds substantially under a variety of regulations. Edge providers have also invested dramatically over the past 20 years. Both sides are likely to continue to invest.

In short, the FCC's regulatory classification of ISPs is probably not nearly as big a deal as people think it is.

Since market power is the first step to check to rule out possible competitive problems, the most important economic feature would be to promote local broadband competition. If wireless companies continue to improve their speeds and reliability, they will be more of a competitive constraint on wired broadband providers. While some consumers may want gigabit speed service, if there are enough who are happy with 5G wireless speeds, then the competitive constraint will be sufficient so that the need for Title II regulation of broadband goes away.

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