

Limiting internet congestion a key factor in net neutrality debate

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Too many vehicles on the highway inevitably slow down traffic. On the Internet information highway, consumers value high-speed Internet service, but there is little reason to think broadband traffic congestion will improve if the Federal Communications Commission abandons net neutrality, according to economic research.

In their paper, "The Economics of Network Neutrality," Ben Hermalin, Haas Economics Analysis and Policy Group, and Nicholas Economides, Berkeley-Haas visiting professor from NYU'S Stern School of Business, find that if Internet Service Providers known as ISPs initiate price discrimination in their [pricing](#), a "recongestion effect" will occur. In other words, online delivery channels that are less congested at the onset of new pricing tiers will eventually become recongested when consumer behavior adjusts.

As the [net neutrality](#) debate continues, the study published in the *RAND Journal of Economics* (Vol. 43, No. 4, Winter 2012) provides a reminder of the potential fallout that multiple pricing might have on online traffic.

Hermalin and Economides use models to explore the economics of the current pricing regime known as "net neutrality," in which residential ISPs, such as ATT and Comcast, treat all content providers equally and don't directly charge them for the content they deliver to end users.

The models measure linear pricing versus price discrimination and compare the rate of congestion through the information pipeline between

broadband providers and households under these different pricing strategies.

Hermalin says that many existing economic models examining price discrimination haven't taken the fixed capacity component seriously. Once the fixed capacity component is understood, "relaxing net neutrality becomes a bad thing," he says, "Except for the ISPs."

Linear pricing sets a fixed price for a product or service. Price discrimination is a pricing strategy that offers the same or similar product at different price points in order to maximize consumer demand or preference. For example, a type of breakfast cereal may come in two sizes: a small box for individuals and a large box for families. Even though the larger box of cereal may contain twice as much cereal, the price is not double the cost of the small box.

President Obama supports net neutrality but some ISPs continue to lobby the FCC to authorize "paid prioritization" or the creation of Internet "fast lanes" for those willing to pay more.

To better understand broadband congestion, consider Prof. Hermalin's hypothetical example of traffic on a real highway. If two of three lanes were reserved just for Mercedes Benz vehicles, drivers of Mercedes cars would enjoy a faster commute to and everyone else in the single remaining lane would be forced to slow down due to the added congestion. Predictably, Hermalin explains, more people would start buying Mercedes in order to take advantage of two lanes rather than one lane. The result? The two lanes that were previously less congested would recontest.

"Ultimately there is no real benefit because there is a fixed capacity on the highway," says Hermalin. "Likewise, the ISPs have a fixed amount of bandwidth to spread around unless they invest in more."

In the net neutrality debate, ISPs claim that in order to invest in more bandwidth, they need to charge content providers (Netflix, Amazon, etc.) either for streaming certain content or for facilitating content at premium speed. For years, the FCC has debated whether to alter the current system of a neutral network.

The findings also suggest that while consumers may be willing to pay more for faster service, if net neutrality rules were relaxed, eventually the larger economic fallout would be that people will try to spend less in reaction to increasing prices.

The FCC's authority to regulate Internet traffic is currently under appeal as broadband providers challenge whether providing Internet service is a utility subject to FCC regulation.

More information: [See the Abstract.](#)

See the authors' [newest working paper](#), "The Strategic Use of Download Limits By A Monopoly Platform."

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