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**Two Sides of the Internet's Two-Sidedness:
A Consumer Welfare Perspective**

by

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This month's [Open Internet argument](#) before the DC Circuit was exciting for many reasons – including many aside from the substantive arguments about the FCC's authority to issue the rules under review. I'd like to look closely about one of these reasons in particular: the argument that consumer broadband Internet providers are part of a so-called two-sided market, and the implications that this argument has for consumers. Whether or not this is a two-sided market (or could be, absent the FCC rules) is important to understanding how the Open Internet rules affect the development of the broadband Internet market – and ultimately how they affect consumers.

But first, what is a two-sided market? The most basic definition of a two-sided market is a market with two distinct groups of consumers for some good, where the number of consumers from each group consuming that good affects the demand of the consumers of the other group for that good. Examples should help: nightclubs are generally two-sided markets, because the number of men at a given club affects how much women will want to go to that club, and vice versa; health insurance plans are two sided markets, because the number of doctors in a plan's network affects consumers' willingness to be part of that plan, and vice versa; computer operating systems are another example, because the number of applications available for an operating system affects consumers' willingness

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to use that operating system, and the number of potential users affects programmers' willingness to develop applications for a given operating system.

So do broadband Internet service providers operate in a two-sided market? It seems so: all else equal, consumers are going to have greater demand for an ISP that gives them access to a wider range of content providers (such as Google and Netflix) rather than a smaller range. And content providers are going to care more about connecting to backbones and broadband ISPs (the largest of which are tier 1 and tier 2 backbone providers) with more customers rather than fewer.

But there is something missing from the discussion so far: why do we care if a market is two-sided? Because in most two-sided markets, the purveyor of the intermediary goods that the two sides are consuming – that is, the owner of the nightclub, the HMO provider, the OS developer, or the broadband ISP – sets different prices for each side of the market in order to maximize the value of the market. Why? Because doing so allows it to increase its own revenue! So nightclubs let women in for free, to attract more men; HMOs might make it easy for doctors to join in order to attract more customers; and OS developers may give away their APIs and SDKs for free, to make it easier for programmers to write the programs that will attract users.

This is part of the argument that Verizon made before the DC Circuit: the Open Internet rules, by preventing Verizon from charging firms like Google and Netflix for access to its network, prevent this market from behaving like a two-sided market. (As a brief technical aside, it is entirely possible for a “two-sided” market to have more than two sides. For example, there could well be four “sides”: consumers, high-value high-bandwidth services (Netflix), high-value lower-bandwidth services (Google, Facebook), and all other services. The economic analysis of such “multi-sided” markets is more complicated than of two-sided markets, but the idea is the same.)

The poignancy of this argument is that the economic literature makes amply clear that different price structures have powerful effects on the value of a given two-sided market to consumers. A nightclub that subsidizes women's entry may well attract far more consumers (both men and women!) than one that charges men and women the same cover or than one that subsidizes men's entry. The Open Internet rules impose a given price structure on the broadband market, Verizon's argument goes, without any evidence that that price structure is, in fact, the one that maximizes the value that that market creates for consumers.

Verizon's basic argument here is almost certainly correct: figuring out the best price structure in two-sided markets is complicated, and there is little reason to believe *a priori* that the Open Internet rules' prohibition on charging content providers is optimal. To the contrary, the economic literature suggests that the Open Internet rules can have a negative effect on the value created by the Internet, and that allowing broadband ISPs to charge content providers can benefit consumers and increase infrastructure investment.

What is more, the literature also suggests that the Open Internet rules are most likely to be harmful where there is little competition between ISPs – in other words, the world in which Network Neutrality advocates are generally eager to remind us we live in, where most consumers have access to only a few ISPs, is the world in which the Open Internet rules are most likely to be harmful.

The takeaway is that today's broadband Internet market is precisely the sort of market in which the FCC's "prophylactic" approach is inappropriate. It is, instead, one in which we should seek out opportunities to experiment with multisided price structure – and even reward firms for taking the risk of experimenting – in order to maximize the value of the Internet to consumers.

But wait! There's more! Many strands of the literature on two-sided markets introduce an additional requirement for a market to be two-sided: the parties on either side of the market need to be unable to bargain around the price structure. This means, to take a pointed example, that if Netflix can pass any charges that Time Warner Cable levies upon it back onto its customers, then Netflix is not party to a two-sided market.

This example offers another motivation for content providers – at least, those able to pass costs back on to their customers – to favor Open Internet rules. If a content provider's services stress an ISP's network, that ISP faces two options: either allow the quality of its network to fall or invest in upgrades. If it incurs the cost of upgrading the network, those costs will be passed on to its customers. In either case, the ultimate cost is borne by consumers.

This allocation of costs – spread as it is across all of the ISP's customers – makes little sense. Far preferable, at least for consumers and ISPs, would be a price structure that initially allocates the cost of network upgrades to those whose use of specific services requires those upgrades be made. Otherwise the least resource-consuming users are subsidizing the most resource-consuming users. And this creates an incentive for all users to consume more resources (the low-use users because they're paying for it, and the high-use users because their use is being subsidized). (Query, for readers interested in game theory: where's the stable equilibrium?)

Of course, this system isn't bad for everyone: the content providers prefer the Open Internet model. Under this model, they are shielded from needing to increase their prices – that consumer-angering move is passed on to the ISPs. They also benefit from the subsidy from low-use users to high-use users, because this effectively subsidizes use of the content providers' services. What's more, they benefit yet again from the incentive that this system creates for users to consume more resources – to consume, that is, more of the content providers' services.

It should be noted that this is exactly the sort of feedback loop that we expect to see in a two-sided market – indeed it is the mechanism that causes these markets to create value for consumers. But this is entirely consistent with Verizon's and other ISPs' presumed desire to experiment with two-sided price structures. It could well be the case that the

value of this market is maximized by ISPs, instead of content providers, passing infrastructure costs on to the consumers (query how they would be apportioned, evenly across all consumers or by usage). But if that is, indeed, the value maximizing outcome, it could obtain by agreements between ISPs and content providers, whereby they split the increased revenue that results from increased consumer demand.

Either way you have it – whether or not broadband Internet service is a two-sided market – the Open Internet rules are potentially a bad deal for consumers. We can't say categorically that this is the case. But "I dunno, maybe?" isn't a good enough basis for policy. What is clear is that these rules are a subsidy to content providers.

It's a shame that broadband Internet services and content providers are the two sides of these policy debates, when the consumers are the only side that really matters.

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