

Net Neutrality Special Issue: The Evolution of Competition

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They say that arguments in academia are so fierce because the stakes are so low. Occasionally, however, the stars align so that an academic journal hot-off-the-press informs a pressing and current policy debate. A just-released special issue of the *Review of Industrial Organization* devoted entirely to net neutrality and organized by the Technology Policy Institute and the University of Pennsylvania's Center for Technology, Innovation, and Competition, is one example.

The issue features nine articles on net neutrality, plus an introduction, which will inform the current debate and rulemaking. This post is the first in a series highlighting each article.

The Evolution of 'Competition': Lessons for 21st Century Telecommunications Policy, by Amanda Delp and John Mayo[1]

Most issues in telecommunications come down to competition. Net neutrality, which ultimately focuses on interactions between downstream and upstream companies, prices, and consumers, is no exception. Therefore, it makes sense to begin this series with the contribution by John Mayo and Amanda Delp, "The Evolution of 'Competition': Lessons for 21st Century Telecommunications Policy."

John Mayo Discusses the Evolution of Competition at TPI Event

They build off the observation that no bright line defines an industry as competitive or not competitive, which means that for policy purposes agencies must think carefully about the nuances of competition. Unfortunately, they conclude, the Federal Communications Commission (FCC) has not consistently applied any particular definition of competition, which muddles its track record and decision-making. To rectify this problem, Delp and Mayo present a definition of competition grounded in economic theory that balances consistency and flexibility and is applicable in complex and ever-evolving industries.

The authors trace the evolution of "competition" from Adam Smith's characterization of free competition as an inherently positive market force through the development of the model of perfect competition in the 19th century, which assumes free market entry, homogenous products, and perfectly informed buyers and sellers.

Reality, of course, is never that elegant. Few products compete perfectly. Even milk comes in whole, 2%, skim, almond, soy, and chocolate, among other incarnations.[2] Additionally, fixed costs can make entry difficult—especially in network industries like broadband—and all parties never have perfect information. Given that, economists recognized the importance of *imperfect* competition, in which products compete even when they are not perfect substitutes.

Economist J. M. Clark refined the concept of imperfect competition, coining the phrase "workable," or equivalently, "effective," competition, which exists when firms anticipate and react to each other's offerings.

While conceptually useful, the authors note that it still does not facilitate rigorous policy analysis. Two of Clark's contemporaries, Joe Bain and Jesse Markham, addressed this issue.

Bain argued that competition should be compared against some benchmark. Markham argued that an industry could be considered "workably competitive" when any possible policy change would result in more costs than benefits. In that case, firm rivalry, consumer choice, and efforts to win consumers will lead to better outcomes than government intervention, even if products are not perfect substitutes.

These definitions of workable and effective competition are clear and thoughtful. In practice, the concept of competition has been applied haphazardly and inconsistently in telecommunications policy. For example, the authors note, in the 12 years before the passage of the 1996 Telecommunications Act, television policy defined a "competitive" market in four different ways and required, at different times, at least two, three, or six firms in play.

FCC reports on cellular mobile did not define competition at all, though they concluded variously that the market was and was not competitive at different times between 1993 and 2015.

As the authors state, “the only consistency over the years has been the inconsistency with which policymakers have defined effective competition” (Delp & Mayo, 2015, p. 405).

The authors argue that a clear definition is necessary to inform solid (and lasting) communications policy in the digital age. To that end, they offer a definition of competition based on the ideas of “workable competition” detailed above:

“A market is said to be effectively competitive when:

1. Firms exhibit overt rivalry in their quest for consumer patronage;
2. Consumers can choose among vendors, readily demonstrate their ability to change vendors, and vendors ... have the ability and propensity to expand output to satisfy consumer demands;
3. Rivalry among vendors manifests itself in desirable economic performance metrics, including price, output, quality, investment, and innovation; and
4. No clearly indicated and cost-effective policy change can improve upon prevailing economic performance in the market at issue.” (Delp & Mayo, 2015, p. 411)

This definition provides a consistent foundation for policy analysis and evaluation across industries. And because the definition is grounded in economic theory, it should be more insulated from political and ideological shifts in administration.

Competition is only becoming more complicated as firms in one part of the Internet ecosystem encroach on territory once considered the exclusive domain of others. A coherent approach to the competitive landscape will help policymakers avoid unintended consequences, evaluate policies over time, and adjust as necessary. Delp & Mayo’s definition of competition offers a way to build this approach. It is a concise, consistent, and flexible tool for telecommunications policy in the 21st century.

The net neutrality debate itself would be more intelligible if it could incorporate a coherent interpretation of competition.

Our next blog posts will focus on the papers that dig more deeply into net neutrality, both in theory and in practice.

[1] The article is behind a paywall. An earlier working paper version is available [here](#), or contact [Scott](#) for the published version.

[2] We are particularly enamored with “[beef milk](#).”