

December 11, 2013

Hon. Tom Wheeler
Chairman
Federal Communications Commission
445 12th Street S.W.
Washington, DC 20554

Re: *Economic Evidence on Competition in Communications Markets and Implications for Key Policy Issues*

Dear Chairman Wheeler:

Congratulations on your confirmation as Chairman of the Federal Communications Commission. As economists who study and write about communications policy and regulation,¹ we agree with your comment during your confirmation hearing that “the role of the FCC has evolved from acting in the absence of competition to dictate the market, to promoting and protecting competition with appropriate oversight.” The economic evidence on this point is clear: in all but a few areas, communications networks no longer have the characteristics of natural monopolies, and should no longer be regulated as public utilities. Indeed, the convergence of the communications sector into the dynamic, intensely competitive Internet ecosystem is now virtually complete.

We write because we believe these economic facts have important implications for some of the key challenges facing you and the Commission in the months and years ahead.²

To begin, the emergence of robust competition does not obviate the need for consumer-welfare-focused, economically-informed antitrust oversight where residual monopoly power remains. Further, in areas such as consumer protection, public safety, spectrum management, and universal service, government involvement – whether by the Commission or by other appropriate state or Federal agencies – will continue to be appropriate. Even in these areas, however, economic analysis and market-based approaches can lead to better policy outcomes. The question, in other words, is not whether there is a role for government, but what specific policies should be pursued to maximize consumer welfare now and in the future.

This letter addresses this question in three parts. First, we summarize the economic evidence with respect to the overall competitiveness and performance of the communications sector. Next, we discuss the implications of the current competitive landscape for three major areas of policy: (a) regulation of IP networks and interconnection; (b) vertical issues, including net

¹ None of us have been compensated by any client for participating in this effort.

² Each of us shares the overall views and primary conclusions expressed herein, though as individuals we each reserve the right to use different wording or characterize particular points differently and, of course, to change our opinions on the basis of new facts which may present themselves in the future.

neutrality; and (c) spectrum policy. Third, we offer a few broader observations about the importance of allowing markets to supplant regulation in defining the future of the communications sector.³ References to a sampling of studies that provide empirical support for the conclusions below are attached.

The Communications Sector Is Vigorously Competitive

In August 1999, Chairman William Kennard released a *Draft Strategic Plan for a New FCC for the 21st Century*. Its first sentence reads as follows: “In five years, we expect U.S. communications markets to be characterized predominately by vigorous competition that will greatly reduce the need for direct regulation.”

The economic evidence that communications markets are now “vigorously competitive” is incontrovertible. The vast majority of Americans have access to multiple high speed broadband providers, multiple sources of digital video, and multiple providers of mobile wireless services. Communications firms have invested hundreds of billions of dollars in wireline and wireless networks (satellite as well as terrestrial), resulting in dramatic improvements in the capacities and capabilities of America’s communications networks. American wireless networks are unarguably the most advanced in the world, and more than 85 percent of U.S. households are passed by wireline networks capable of download speeds in excess of 100 Mbps. Competition in all of these markets is dynamic and intense. In many areas of the United States, less than one third of all households are still connected to the traditional wireline telephone infrastructure – i.e., the “natural monopoly” the FCC was created to regulate.⁴ Three of out of four households, on the other hand, have broadband Internet connections, which have been virtually exempt, up until now, from economic regulation.

Most importantly, the communications sector has now converged so thoroughly with the rest of the Internet ecosystem that it has become difficult to draw clear boundaries. Where does a content delivery network stop and the “telecommunications infrastructure” begin? What is a “telecommunications service” in a world in which more traffic travels over Skype and FaceTime than over the Public Switched Telephone Network? How much monopoly power does a wireless carrier have in a world in which consumers’ choices are driven at least as much by devices, operating systems and applications ecosystems as by coverage and pricing plans? None of the markets that make up the Internet ecosystem fits the model of atomized, commoditized “perfect competition” described in introductory economics textbooks – but all of them, communications no less than the others, are “vigorously competitive.”

³To ensure compliance with the Commission’s rules, we are filing this letter as an *ex parte* comment in the following proceedings: WC Docket No. 12-268; WC Docket No. 12-269; GN Docket No. 09-191; WC Docket No. 07-52; GN Docket No. 10-127; and, GN Docket No 12-353.

⁴ For example, AT&T reports that fewer than 15 percent of homes in Florida and Michigan are still connected to the PSTN; Verizon reports that only about one million (out of 17 million) homes in its FiOS footprint are connected to copper. We acknowledge that there are pockets of the country where residents have limited choices in wireline broadband networks capable of achieving speeds in excess of 6 Mbps. But with the coming advances in wireless and satellite broadband services, the opportunity for any targeted exercise of market power is remote. Rather than regulating carriers who have deployed high-speed networks in those areas, a better approach is to create a regulatory climate in which entrants are encouraged to expand their networks.

POTS-style Interconnection Regulation Should Not Be Imposed on IP Networks

One serious threat to continued innovation and dynamism in the communications sector is the potential for public-utility style regulation to be imposed on IP networks in the form of mandatory interconnection requirements.

Economic theory predicts that the incentive issues associated with interconnection among traditional telephone networks are unlikely to be present in IP-based networks, and these theoretical predictions are supported by two decades of empirical evidence: Since its inception in the 1990s, the modern commercial Internet has functioned remarkably well without mandatory interconnection requirements. There are virtually no significant instances of traffic being blocked or delayed as a result of failures to interconnect. At least equally important, the peering and transit regime has responded to changing market and technological conditions through continuous, transformational change.

The success of the Internet's voluntary interconnection regime stands in stark contrast to the distortionary, inflexible regulatory regimes that have governed interconnection in the POTS world. Simply put, regulators lack the information necessary to set efficient interconnection prices and the flexibility to adjust them in the face of changing market conditions, leading to inefficient market structures, misallocated investment, arbitrage schemes, and regulatory gamesmanship.

Allowing even "weak form" interconnection mandates to spill over onto the Internet would distort market outcomes and limit innovation. Moreover, since the Internet is global in scope and scale, any interconnection mandate imposed by the U.S. would invite involvement by international regulators, many of whom would surely welcome U.S. support for the principle of regulating interconnection of IP networks.

In summary, both economic theory and a large body of real-world experience demonstrate that the potential costs of prophylactic imposition of mandatory IP interconnection are very high, while the benefits likely are non-existent.

Vertical Practices Should Be Addressed on a Case-by-Case Basis

The *Open Internet Order* applies an *ex ante* approach to the regulation of vertical conduct by effectively prohibiting priority delivery arrangements. A better approach would be to permit new forms of contracting, and to police any abuses after the fact.

High tech industries, including those that make up the Internet ecosystem, have several characteristics -- including high rates of investment and R&D, large fixed costs, product differentiation, network effects, multi-sidedness and strong complementarities -- which tend to make economic analysis of particular business practices highly fact dependent: The effects of a particular practice are intrinsically dependent on the circumstances of the market at issue. Moreover, because market circumstances in the IT sector are constantly evolving, even conduct

that is harmful at one point may, a few years or even months later, be efficiency-enhancing and pro-competitive.

The upshot of these economic realities is that *ex ante* regulation of vertical conduct – i.e., blanket prohibitions on certain types of business practices – necessarily will yield a high incidence of Type II error: The well-intentioned but counterproductive prohibition of conduct that is actually welfare-enhancing. Accordingly, such regulations – including the *Open Internet Order* – are very likely to generate greater costs than benefits. The economic evidence is clear: Vertical practices, whether in the broadband space or in other areas (e.g., access to content and programming) should be policed on a case-by-case basis, not through prescriptive regulations or categorical bans on particular forms of conduct.⁵ Indeed, the Commission has correctly tolerated vertical integration and market-based contracting in the cable television industry, recognizing that the efficiencies outweigh the costs relating to potential discriminatory acts, which can be mitigated with *ex post* review of any claimed abuses. The same types of tradeoffs are at issue for the Internet. While we recognize that the *Open Internet Order* is before the courts, we hope you will take these considerations into account in thinking about how, if it is upheld, the *Order* is enforced or, if it is not, how best to proceed.

The Commission Should Continue to Expand the Role of Markets in Allocating Spectrum

A dozen years ago, a group of 37 “concerned economists” (including some of us) submitted a filing in the Commission’s secondary markets proceeding urging the Commission “to adopt market-oriented rules opening the radio spectrum and capturing its full potential for society.”⁶ We continue to support the expansion of market-based mechanisms for the allocation and reallocation of spectrum and urge the Commission to redouble its efforts in this regard.

The market-oriented spectrum policy reforms adopted by the Commission over the course of the past two decades have generated enormous benefits for consumers, and are one of the main reasons the U.S. now has the world’s most advanced mobile wireless services. Market-based spectrum allocation has allowed spectrum to flow away from inefficient uses to more highly valued ones and thus made possible the explosive growth of mobile broadband.

While not all of us felt that the incentive auction mechanism was the best or only choice for reallocating spectrum from broadcasting to mobile broadband, we all support the principle (embodied in the incentive auction mechanism) of voluntary exchange leading to efficient reallocation, and we all agree with the goal of transferring spectrum from the inflexible broadcast licensing regime to the far more flexible, secondary-market-friendly regime that governs mobile broadband. We urge you to make the success of the incentive auction a top priority.

⁵ See e.g., *Comments of Jerry Brito et al, Net Neutrality: The Economic Evidence, In the Matter of Preserving the Open Internet* (GN Docket 09-191; April 10, 2010) (available at <http://apps.fcc.gov/ecfs/document/view?id=7020408753>).

⁶ See *Comments of 37 Concerned Economists, In the Matter of Promoting Efficient use of Spectrum Through Elimination of Barriers to the Development of Secondary Markets* (WT Docket 00-230, February 7, 2001) (available at <http://apps.fcc.gov/ecfs/document/view?id=6512460886>).

In that context, it has been suggested that the auction be used to try to affect the structure of the mobile wireless market, either by restricting participation by some firms or by providing artificial advantages to others. We do not believe the Commission can, through economic analysis or otherwise, accurately predict the most efficient structure of the market for mobile wireless services (which may depend, for example, on the extent to which the wireless and wireline broadband markets converge); and we note that the use of eligibility restrictions and similar rules in prior auctions has resulted in delays and market distortions. By imposing such restrictions, prior auction policy has presumed that “more carriers are always better,” despite the growing importance of economies of scale in providing wireless networks and the growing demands on wireless networks from bandwidth-intensive applications. Economic research has shown such restrictions can be harmful, and the Commission should refrain from imposing such rules in the incentive auction.

More generally, we reiterate the advice proffered by our 37 colleagues more than a decade ago: The Commission should “seek not to create secondary markets directly but instead to institute rules permitting such markets to emerge,” “relax[] restrictions on the use of radio spectrum by both current licensees and new entrants,” and “eliminate all wireless license requirements unrelated to interference or anti-competitive concentration.”

The Internet Should Not Become a “Regulated Industry”

In closing, we return to a theme introduced above – the convergence of the communications sector with the Internet ecosystem.

As a veteran of the telecommunications policy arena, you know more than most about the political economy of regulation: the pressures brought by various interest groups to use regulatory means to achieve private ends; the bias thereby created in favor of regulatory expansion; the inherent cumbersomeness of the regulatory process; the inertia and inflexibility of regulations once put in place.

In the mid-1990s, the Clinton Administration elected to privatize the operation and governance of the Internet and to refrain from imposing industry specific regulation on broadband. These choices, combined with a series of decisions by the Commission over the course of many years (e.g, the three *Computer Inquiries*, the *Broadband Over Cable Order*) have allowed the evolution of the Internet ecosystem to be guided largely by market forces. Very few economists now challenge the wisdom of this course, or question the tremendous benefits it has created in economic terms and for the larger public interest.

The choices now before the Commission, including but by no means limited to the issues discussed above, will determine whether the Internet continues to be guided by market forces or, alternatively, whether the results of free interaction between consumers and producers will be supplanted by the preferences of regulators, using a regulatory system designed for a different industry in a different time. From an economic perspective, the costs of allowing the Internet to be transformed into a “regulated industry” would be tremendous.

We appreciate your attention to these thoughts, and wish you every success in your tenure as Chairman.

Respectfully,

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ATTACHMENT

Selected Academic References

- K. Caves, “Quantifying Price-Driven Wireless Substitution in Telephony,” *Telecommunications Policy* 35 (2011)
- R. Crandall, J. Eisenach and A. Ingraham “The Long-Run Effects of Copper-Loop Unbundling and the Implications for Fiber,” *Telecommunications Policy* 37 (2013)
- E. Ehrlich, J. Eisenach and W. Leighton, “The Impact of Regulation on Innovation and Choice in Wireless Communications,” *Review of Network Economics* 9;1 (2010)
- J. Eisenach, *Theories of Broadband Competition* (American Enterprise Institute, 2012)
- J. Eisenach and H. Singer, “Avoiding Rent-Seeking in Secondary Market Spectrum Transactions,” *Federal Communications Law Journal* 65;3 (2013)
- G. Faulhaber, R. Hahn and H. Singer, “Assessing Competition in U.S. Wireless Markets: Review of the FCC's Competition Reports,” (with) *Fed Communications Law Journal* 64 (2012)
- G. Faulhaber and D.J. Farber, “Innovation in the Wireless Ecosystem: A Customer-Centric Framework,” *International Journal of Communications* 4 (2010)
- Thomas W. Hazlett and Dennis L. Weisman, “Market Power in U.S. Broadband Services.” *Review of Industrial Organization*, 38:2 (2011)
- R. Litan and H. Singer, *The Need for Speed: A New Framework for Telecommunications Policy for the 21st Century* (Brookings Press, 2013)
- Glen O. Robinson and Dennis L. Weisman, “Designing Competition Policy for Telecommunications.” *The Review of Network Economics*, 7:4 (2008)
- Timothy J. Tardiff, “Reregulation or Better Deregulation?: Economic Evaluation of Recent FCC Competition Actions,” Presented at the Advanced Workshop in Regulation and Competition, 32nd Annual Eastern Conference (May 16, 2013)
- Dennis L. Weisman, “A ‘Principled’ Approach to the Design of Telecommunications Policy.” *Journal of Competition Law & Economics*, 6:4 (2010)