Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of	)	
	)	
Restoring Internet Freedom	)	WC Docket No. 17-108

Comments of the American Consumer Institute

The American Consumer Institute Center for Citizen Research (ACI) is a nonprofit (501c3) educational and research institute with the mission to identify, analyze and project the interests of consumers in selected legislative and rulemaking proceedings in information technology, health care, insurance, energy and other matters. Recognizing that consumers' interests can be variously defined and measured, and that numerous parties purport to speak on behalf of consumers, the goal of ACI is to bring to bear the tools of economic and consumer welfare analyses as rigorous as available data will allow, while taking care to assure that the analyses reflect relevant and significant costs and benefits of alternative courses of government action.

Summary

In this proceeding, the Federal Communications Commission (Commission) considers preserving a free and open Internet by reducing government regulatory controls, while restoring market-based policies to encourage investment, deployment and access, as well as to improve aggregate consumer welfare. The Commission has indicated its intent to focus on facts and reasoned analyses to determine whether retaining, eliminating or modifying Internet regulations would produce more benefits to society than costs.

In these comments, ACI will briefly discuss market concentration, industry rates, investment and profits. Based on a review of the literature and public record, we find no compelling empirical evidence of market failure to justify the Internet regulations in place. Furthermore, we find that *ex-ante* regulations (including bright-line rules) make consumers forgo important economic benefits and to pay higher consumer prices, compared to market-based solutions.

ACI believes that Internet regulations have and will impose substantial costs owing to delay, uncertainty, unanticipated impacts and other regulatory imperfections. The effect of these regulations reduces service quality, impedes investment and innovation,

and reduces consumer welfare. In general, we find the case for regulations to lack factual and analytical support and bereft of any specific consideration of economic welfare.

Therefore, we urge the Commission to conduct a full and fair analysis of the costs and benefits, and insist that proponents of regulations provide quantitative, data-rich, analytical assessments showing that consumer welfare will increase, just as Congress directed the Commission some eight years ago to include in its broadband plan recommendations for "advancing consumer welfare."[1] In the absence of such evidence, we ask the commission to reduce regulatory controls and restore market-based policies that will encourage investment, deployment, access, and increase consumer welfare.

No Evidence of Market Failure to Justify Title II Regulation of Internet Services

Evidence of market failure is most importantly established on the bases of market performance, which can influence market conduct and market structure. While the absence of market failure is a sufficient condition to reject regulatory intervention, the presence of market failure does not necessarily mean that regulations are warranted. This is because there can be government failure too. This failure can come in the form of misallocating private and public resources, lengthy and costly regulatory proceedings that lead to market uncertainty and higher cost of capital, higher regulatory surveillance and compliance costs, increased costs and waste from rent-seeking, and other nonmarket costs. Imperfect markets only need to outperform imperfect regulations.

Is there market failure? A reasonable assessment of the structure, conduct and performance of Internet network firms provides no substantial evidence of failure and certainly does not warrant the imposition of broad and deep regulation of operator conduct, as we see today with Title II and net neutrality regulations.

Supporters of regulation rely heavily on the structure-conduct-performance paradigm, claiming the market failure to be one of concentration, even though the markets in the information technology (IT) sector, and indeed economy wide, are frequently quite concentrated and perform nonetheless quite well without the kinds of Internet regulations currently in place.[2] Relevant markets in the IT sector and web-centered space are all quite concentrated, and they are headed by firms that dominate performance in individual submarkets. In fact, there is substantial concentration at all

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[1] Recovery Act § 6001(k)(2)(D). Also see, "Program-Specific Recovery Act Plan for the FCC's Effects on Broadband Technology Opportunities Program," Federal Communications Commission, p. 2, at https://transition.fcc.gov/recovery/FCC-Broadband-Recovery-Act-Program-Plan-051509.pdf.

[2] Concentration may be necessary for an industry to achieve economies of scale sufficient to drive down costs and maximize consumer welfare. See, Larry F. Darby, Joseph P. Fuhr and Erwin A. Blackstone, "The Case of Duopoly: Industry Structure Is Not a Sufficient Basis for Imposing Regulation," *Regulation*, Vol. 34, No. 4, Winter 2011-2012, p.12.

layers, including markets for search, online auctions, online retail, software, social websites, popular content (such as online video) and other applications. Different layers are concentrated, have substantial sunk costs and reflect enormous first mover advantages possessed by leading firms.

A review of the literature on duopoly from different perspectives would yield no evidence that duopoly or concentration *per se* is a sufficient indicator of market failure.[3] Concentration on the seller side is by no means a sufficient condition to warrant the kinds of government controls currently in place. Instead, onerous regulations are likely to inhibit competition and innovation, thereby increasing market concentration. In fact, this appears to be the case, and ever since the introduction of Title II and net neutrality regulations.[4]

There is no basis for concluding that regulation is warranted based on casual characterizations of market structure being made by proponents for intensive regulation.[5] Given the indeterminacy of structure alone in judging the adequacy of markets in creating consumer welfare and establishing the need for government involvement, the Commission is obliged to look beyond market structure and focus instead on indicators of both market conduct and actual performance. Here the data are more plentiful, the conclusions less speculative, and the policy implications clearer cut.

Performance: Internet Prices Have Decreased

Over the last decade, Internet service prices have fallen markedly – both in real and nominal terms. Data from the U.S. Bureaus of Labor Statistics' (BLS) Consumer Price Index (CPI) shows that Internet service prices fell 23% from December 1997 to December 2016, while the CPI for all items increased by 50% over the same period.[6] This decrease does not include the plummeting unit price of service when calculated on a per megabit

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[3] While the economics literature may find some basis for imperfection, the literature provides no basis for concluding that duopoly markets are not workably or effectively competitive, or that duopoly warrants imposition of economic regulation. For a fuller discussion of this, see Larry F. Darby, "To Regulate or Not to Regulate: Where Is the Broadband Market Failure?" The Consequences of Net Neutrality on Broadband Investment and Consumer Welfare: A Collection of Essays, ACI, November 19, 2009, p. 72. Available online at: http://www.theamericanconsumer.org/wp-content/uploads/2009/12/nn-and-market-failuare.pdf.

[4] The transition of DSL services to an all-IP fiber service is currently being hampered because of new discontinuance rules that treat wireline broadband services as common carrier services. The result of these regulations has produced a marked decline in ILEC wired broadband market share compared to the total wireline market. See Steve Pociask and Joseph Fuhr, "Concentration by Regulation," ACI, January 2016, at http://www.theamericanconsumer.org/wp-content/uploads/2016/01/ACI-Concentration-by-Regulation-FINAL-1.pdf (Attachment to this filing).

[5] According to Professor Kahn: "There is no consensus among economists about the likely sufficiency of competition under duopoly." Alfred E. Kahn, Statement to the FTC Workshop on Broadband Connectivity and Competition Policy, February 13, 2007, p. 2.

[6] These figures are from the CPI-U series, not seasonally adjusted, downloaded July 16, 2017, www.bls.gov.

basis.[7] Whether in nominal dollars, in inflation adjusted dollars or in megabits per second, consumer Internet prices are decreasing. The presence of expanding subscribership and falling prices provide yet further evidence of an absence of market failure and the pointlessness of regulatory remedies.

Performance: The Rate of Network Investment Is Substantial

A critical aspect of performance by ISPs is the rate of capital formation. The primacy of that aspect of performance is the combined effect of the capital intensity of networks, the fact that costs decline with scale, the relatively high uncertainty and risk associated with investment, and the consensus view that a rapid buildout of networks is necessary.

In this regard, the performance of the sector has been exemplary. Core broadband network providers are among the largest investors in the U.S., accounting for roughly $70 billion per year. Compared to major Internet edge providers, core network providers invest twice as intensively, as measured by the ratio of capital expenditure to operating cashflow.[8] With higher capital formation, core network providers employ nearly twice as many workers per dollar of revenue, compared to edge Internet providers.[9]

By these measures, network investment is healthy and should not be discouraged by regulations that would undermine return on capital and sacrifice job creation. There is not a shred of evidence in the record to suggest that Internet regulations would encourage ISPs to invest more.

Performance: The Industry Can Be Characterized as Having Comparatively Low Profits

As mentioned earlier, by virtue of high economies of scale, there is substantial concentration at all layers of the Internet market, including network, search, content, auction and applications. If significant amounts of market power are present and being exercised, it would show up in the financial results.[10] The table below reflects data taken

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[7] The BLS does not make a quality adjustment (referred to as a *hedonic adjustment*) for this service category. See https://www.bls.gov/cpi/cpihqaitem.htm for the list of services with a hedonic adjustment.
[8] Joseph P. Fuhr and Stephen B. Pociask, "Establishing a New Policy Paradigm That Encourages Broadband Deployment and Job Creation," ACI, December 2016, p. 28 (Attachment to this filing).
[9] Ibid.
[10] One justification for regulation would be to deal with the existence of market power. There are several potential indicators of market power drawn from measures of market structure (monopoly for example), market conduct (predatory pricing for example), and, most importantly, supernormal returns on investment or high profit rates. Advocates for Internet regulations rely on assorted rationales, but a common and popular theme is that network providers have substantial power over price and use that power to earn

from audited financial statements, including profit margins (net income divided by sales). The table shows profitability for a selection of major network and edge providers – all are compared to the Standard and Poor 500 (S&P) average.[11]

Profit, Employment and Capital Expenditures
For Selected Internet Ecosystem Firms

	3-Year Avg. Net Profit Margin (%)*	Employ-ment 2015 (000)	Cap Ex 2015 ($B)
S&P 500	**9.8%**	**N.A.**	**N.A.**
Telephone Network Providers	**9.3%**	**502.2**	**39.9**
AT&T	9.4%	281.5	19.2
Verizon	10.3%	177.7	17.8
CenturyLink	2.6%	43.0	2.9
Wireless Network Providers	**-3.2%**	**87.4**	**12.3**
T-Mobile	1.2%	50.0	4.7
Sprint	-8.6%	31.0	7.0
US Cellular	3.6%	6.4	0.6
Cable Network Providers	**8.7%**	**264.0**	**16.5**
DISH	5.7%	18.0	0.8
Comcast	11.2%	153.0	8.7
Charter	5.4%	80.1	6.3
Cablevision	5.0%	12.9	0.8
Core Providers	**7.5%**	853.5	68.7
Edge Providers	**22.0%**	**97.4**	**13.7**
Google	22.0%	61.8	9.9
Yahoo	31.7%	10.4	0.6
Facebook	21.1%	13.6	2.5
eBay	18.0%	11.6	0.7

Source: Steve Pociask and Joseph P. Fuhr, "Concentration by Regulation," ACI, January 2016.

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anticompetitive profits and returns on investment. If access providers have monopoly power, we should see monopoly returns in these firm's financial performance.

[11] Joseph P. Fuhr and Stephen B. Pociask, "Establishing a New Policy Paradigm That Encourages Broadband Deployment and Job Creation," ACI, December 2016, Table I, p. 22.

The facts show that operators of broadband networks earn relatively modest returns compared to major edge providers in the Internet sector. Indeed, average returns are below the average for firms in the S&P 500 index and substantially below those posted by Internet edge providers. In comparison, Google's profit margin is more than twice the average rates earned by network providers and the S&P.

A variety of conclusions might be adduced from the table, but one that clearly stands out is that profits of network access providers do not reflect market power and do not provide the basis of market failure. A review of industry structure, conduct and performance, provides no evidence of a market failure that would justify regulation, including net neutrality and Title II regulations.[12] If looking for market power, proponents of regulation and the Commission should look elsewhere.

***Ex-ante* Regulations Can Raise Consumer Prices; Reduce Quality and Innovation**

The *ex-ante* approach currently employed in net neutrality regulations is intended to prohibit "bad" behavior, but in doing so it creates uncertainty about what is or is not prohibited. In that process, that prevents, delays and/or attenuates beneficial market conduct that otherwise would occur and in so doing deny consumers the associated benefits. Therefore, there are substantial costs, associated with lost innovation, creativity, and related market conduct of will prove to be "false regulatory negatives." From a consumer perspective, these costs will likely take the form of lower service quality, fewer options, higher prices and slower innovation.

Ex-ante regulations could do more harm than good. Net neutrality regulations affect the ability of Internet providers from differentiating broadband services, developing Internet content and managing network congestion in fear that Internet providers could be accused of anticompetitive behaviors, even though these activities may increase consumer welfare. Essentially, these regulations could chill investment and innovation. In evaluating the case for imposing *ex-ante* regulation since the current record, the Commission should pay careful attention to the Federal Trade Commission's expression of concern from year's past:

> *Policy makers should be wary of calls for network neutrality regulation simply because we do not know what the net effects of potential conduct by broadband providers will be on consumers, including, among other things, the prices that consumers may pay for Internet access, the quality of*

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[12] These points are reviewed in Larry F. Darby, "To Regulate or Not to Regulate: Where's the Market Failure?" in *The Consequences of Net Neutrality Regulations on Broadband Investment and Consumer Welfare: A Collection of Essays*, ACI, November 19, 2009. See http://www.theamericanconsumer.org/2009/11/19/aci-releases-a-book-holds-a-capitol-hill-event-the-evidence-on-net-neutrality/.

Internet access and other services that will be offered, and the choices of content and applications that may be available to consumers in the marketplace. Similarly, we do not know what net effects regulation to proscribe such conduct would have on consumers. This is the inherent difficulty in regulating based on concerns about conduct that has not occurred, especially in a dynamic marketplace.[13]

The fact is that Internet regulations permit errors on what may be good conduct upfront, instead of remedying bad conduct later. Brightline rules are not needed.

Another major concern with the sort of *ex-ante* approach is that it provides an opportunity for "rent seeking" behavior by firms and special interest groups to delay or prevent market conduct that would increase consumer welfare, but for the damage to the interests of rent seekers.[14]

Potential Costs of Regulatory Imperfections

Markets are imperfect, but so too are government regulatory processes. While the case for markets has been exhaustively researched and expressed in both empirical and theoretical terms, the infirmities of government regulation have gotten less analytical attention and are often merely implied or mentioned in passing in terms of unanticipated or unintended consequences. To be sure, economic analysts have cited regulatory lag, imperfect or asymmetric information, the absence of regulatory commitment, "regulatory capture" by vested interest groups, and, particularly relevant in the current context, the simple inability of well-meaning and well-informed government officials reliably to forecast the impact of regulatory constraints in a dynamic market setting. Fixing markets is like shooting at a moving target. Markets solve imperfections through private contract, but also create new ones as technology evolves, consumer tastes change and market strategies mature. While many of the consequences of imposing one or another element of Internet regulation on network suppliers can be reasonably and reliably foretold, many cannot. The unintended, unanticipated consequences will not be trivial.

In this context, no less an authority than Professor Joseph Stiglitz, Nobel prize-winner and formerly Chairman of the President's Council of Economic Advisors once wrote:

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[13] "Broadband Connectivity Competition Policy," Report of the Staff of the Federal Trade Commission, June 2007, p. 161.

[14] "Ex-post v. Ex-ante Regulatory Remedies Must Consider Consumer Benefits and Costs," ACI, May 14, 2008, at http://www.theamericanconsumer.org/2008/05/14/ex-post-v-ex-ante-regulatory-remedies-must-consider-consumer-benefits-and-costs.

Anyone who has watched the U.S. government in the last seven years is well aware not only of the possibility of government failure but also of its reality. In some cases it is a matter of incompetence, in others of corruption, in still others it is a result of ideological commitments that preclude taking appropriate actions…Government programs can be subverted.[15]

The Commission should, accordingly, consider the likelihood and costs of imperfection or failure in regulatory processes put in place to "fine tune" markets to offset their imperfections.

Onerous Broadband Regulations Reduce Consumer Welfare

The new rules prohibit or limit service differentiation and prioritization, as well as the use of multi-sided pricing that could reduce consumer prices, increase consumer welfare and increase Internet investment. The vast empirical evidence cited in prior proceedings suggests that consumers welfare would be worse off from imposing Internet regulations.[16] Years before the FCC's decision latest decision, the U.S. Department of Justice warned that consumer welfare and innovation would, in fact, be harmed by net neutrality regulations:

> The FCC should be highly skeptical of calls to substitute special economic regulation of the Internet for free and open competition enforced by the antitrust laws. Marketplace restrictions proposed by some proponents of "net neutrality" could in fact prevent, rather than promote, optimal investment and innovation in the Internet, with significant negative effects for the economy and consumers.[17]

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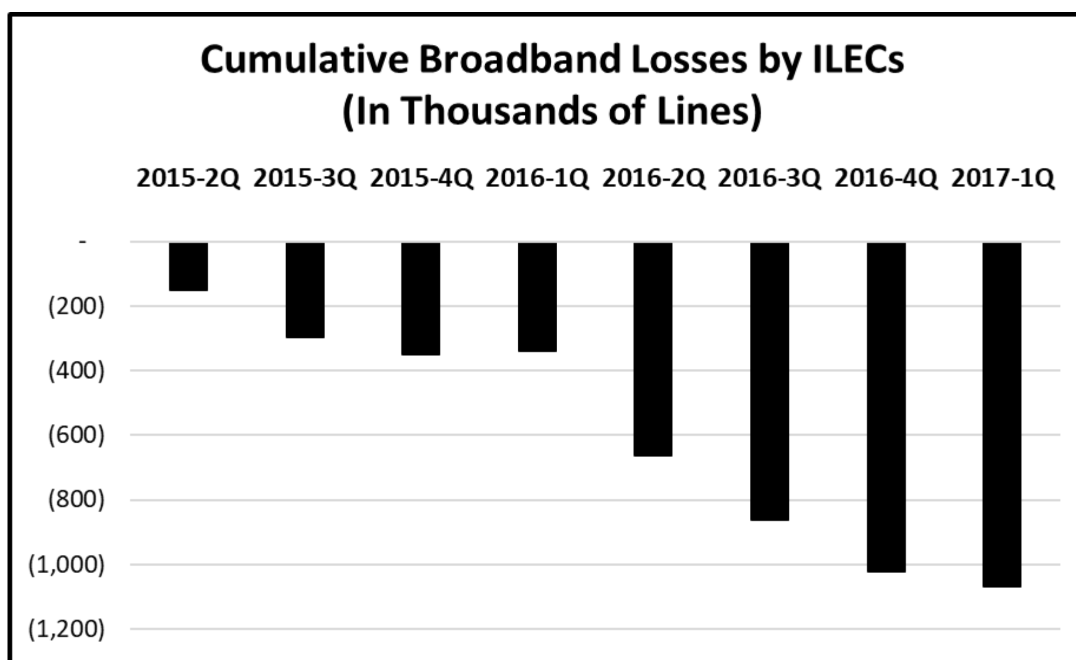
[15] Joseph E. Stiglitz, "Government and Markets: Toward a New Theory of Regulation," Government Failure vs. Market Failure: Principles of Regulation, Edward Balleisen and David Moss, Eds., The Tobin Project, at http://www.tobinproject.org/books-papers/government-markets.

[16] The prior literature demonstrating and measuring the billions of dollars of consumer welfare losses is quite extensive, and includes Gary S. Becker, Dennis W. Carlton and Hal S. Sider, "Net Neutrality and Consumer Welfare," *Journal of Competition Law & Economics*, 6 (3), 497-519, 2011; J. Gregory Sidak, "A Consumer Welfare Approach to Network Neutrality Regulations of the Internet," *Journal of Competition Law & Economics*, Oxford Press, Vol. 2:3, 2006, p. 400; Robert Hahn and Scott Wallsten, "The Economics of Net Neutrality," AEI-Brookings Joint Center for Regulatory Studies, 2006; Larry F. Darby and Joseph P. Fuhr, Jr., "Consumer Welfare, Capital Formation and Net Neutrality: Paying for Next Generation Broadband and Networks," *Media Law and Policy*, Summer 2007, pp. 122-64; Stephen Pociask, "Net Neutrality and the Effects on Consumers," ACI, May 9, 2007; and Robert E. Litan and Hal J. Singer, "Unintended Consequences of Net Neutrality Regulation," *Journal on Telecommunications and High Technology Law*, 2007; as well as several essays from "The Consequences of Net Neutrality Regulations on Broadband Investment and Consumer Welfare," ACI, November 19, 2009.

[17] "In the Matter of Broadband Industry Practices," WC Docket No. 07-52, *Ex Parte* Filing from the United States Department of Justice to the Federal Communications Commission, September 6, 2007, p. 1, available at http://www.usdoj.gov/atr/public/comments/225767.htm, citing studies by ACI and others.

Recent studies predict the adverse consequences that Internet regulations will have on investment and consumer welfare.[18] That prediction now appears to have come true. In recent research, Singer found that the top twelve ISPs collectively cut spending by $2.7 billion during the first six months of this year, compared to the six-month period since the FCC decision.[19] Less capital spending leads to a reduction in service deployment, reduced consumer welfare and fewer jobs. The FCC has provided its own list of studies indicating the adverse consequences that regulations can have on investment.[20] In addition, as shown in the chart below, ILEC broadband wireline subscription has declined every consecutive quarter, and only since Title II and net neutrality regulations took effect.



The application of Title II and net neutrality regulations on Internet services is unwarranted and it is now having adverse consequences on investment, which ultimately means that consumer welfare will suffer too. The adoption of onerous technology

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[18] For example, see Thomas W. Hazlett and Joshua D. Wright, "The Effect of Regulation on Broadband Markets: Evaluating the Empirical Evidence in the FCC's 2015 Open Internet Order," *Review of Industrial Organization*, December 21, 2016; Christopher S. Yoo, "Avoiding the Pitfalls of Net Neutrality Uniformity: Zero Rating and Nondiscrimination," *Revenue of Industrial Organization*, December 8, 2016; and Roslyn Layton and Bronwyn Howell, "How Title II Harms Consumers and Innovators," AEI, July 2017, at http://www.aei.org/wp-content/uploads/2017/07/How-Title-II-harms-consumers-and-innovators.pdf.

[19] Giuseppe Macri, "Investment Down Among Internet Providers Since Net Neutrality," *Inside Sources*, August 12, 2016, at http://www.insidesources.com/investment-down-among-internet-providers-since-net-neutrality-economist-says/.

[20] See, FCC Notice of Proposed Rulemaking, "In the Matter of Restoring Internet Freedom," WC Docket No. 17-108, par. 45, pp. 15-16, released May 23, 2017.

transition rules – which have lengthened the discontinuance process from copper-based services to an all-IP fiber services and which now allows complaints by competitors to holdup the migration and deployment of advanced services – runs counter encouraging investment and adoption.[21] These rules are chilling investment and they add market uncertainty that increases the cost of capital. Market-based solutions is needed.

Conclusion

There is no evidence of market failure that justify net neutrality and Title II regulations. To the contrary, numerous studies have found that net neutrality regulation reduces consumer welfare. Proponents have yet to address those issues in any reasonable analytical way, thereby leaving the Commission with little empirical evidence on which to base maintaining these regulations.

With communications and content traveling to consumers at lightening speeds, the highly innovative and dynamic Internet market should not be subject to a regulatory process that moves at glacier speeds. Given the strong growth and investment in markets for broadband services, falling prices and increased broadband speeds, we urge the Commission to clarify why these regulations are needed and how they square with its own words (from years past) about how the absence of Internet regulation aided the successful promotion of network investment, innovation and growth:

> *The Internet has evolved at an unprecedented pace, in large part due to the absence of government regulation. Consistent with the tradition of promoting innovation in new communications services, regulatory agencies should refrain from taking actions that could stifle the growth of the Internet. During this time of rapid telecommunications liberalization and technology innovation, unnecessary regulation can inhibit the global development and expansion of Internet infrastructure and services. To ensure that the Internet is available to as many persons as possible, the FCC has adopted a "hands-off" Internet policy. We are in the early stages of global Internet development, and policymakers should avoid actions that may limit the tremendous potential of Internet delivery.*[22]

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[21] Considering that only 5.8% of consumers relied solely on landland telephone services last year (including services from ILEC, CLEC and Voice-over-Internet providers), it is not clear why these services are even subject to Title II regulations, much less the inclusion of broadband services. See Stephen J. Blumberg, Ph.D., and Julian V. Luke, "Wireless Substitution: Early Release of Estimates from the National Health Interview Survey, January–June 2016" U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics, December 20, 2016, Table 1, p. 5.

[22] "Connecting the Globe: A Regulator's Guide to Building a Global Information Community, Federal Communications Commission, available at http://www.fcc.gov/connectglobe/.

In summary, the evidence shows that there has been no market failure to justify net neutrality and Title II regulations, and that these Internet regulations impede network investment and reduce consumer welfare.

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Attachments:

Steve Pociask and Joseph P. Fuhr, “Concentration by Regulation,” ACI, January 2016.

Joseph P. Fuhr and Steve Pociask, “Establishing a New Policy Paradigm That Encourages Broadband Deployment and Job Creation,” ACI, December 2016.