Concentration by Regulation

How the FCC's Imposition of Asymmetric Regulations Are Hindering Wireline Broadband Competition in America

Steve Pociask and Joseph P. Fuhr, Jr.

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Executive Summary

When some competitors face regulations that other competitors do not face, these regulations are very likely to affect competition. This occurred some 20 years ago, when high-speed Internet services were first being introduced to consumers. These "asymmetric" regulations created an uneven competitive playing field which fostered divergent market shares between rivals and resulted in significant concentration of the broadband market. However, after these regulations were lifted in 2005, the gap in broadband market share narrowed between competitors. There is a lesson to be learned from this experience.

As Santayana once said "those who cannot remember the past are condemned to repeat it." And so it is with the recent reintroduction of 1930s-style public utility rules (also referred to as *Title II regulations*) on broadband services that have, thus far, more intently targeted regulations on incumbent telecommunications service providers (abbreviated in this study as *ILECs*) than their chief wireline competitors, the cable providers. Not surprisingly, wireline broadband market share is unequivocally concentrating once again, and this time the shift in market share caused by these asymmetric regulations could very well be irreversible.

This study looks at the history of consumer broadband services and how asymmetric regulations have affected and are presently affecting market outcomes. The major findings of this study are:

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- ILECs are not the dominant provider of voice, data or video services to consumers, yet wireline services are subject to stricter regulatory treatment.
- That asymmetric regulation is now stifling ILEC broadband deployment, just as in the past, when Digital Subscriber Line (DSL) services were first introduced.
- Since ILECs that build all fiber networks for voice, data and video must keep their copper networks running, at least for some time, there is a duplication of network costs that discourages the transition to fiber and these costs represent a regulatory burden that other competitors do not face.
- This copper "inertia" coincides with a marked decline in ILEC wireline market share in recent years.
- Following the classification of broadband services as a Title II services in 2015 – for the first time ever – ILECs have sustained back-to-back declines in the total number of broadband subscribers, despite continued growth in the overall broadband market.

This study shows that imposing asymmetric regulations on ILECs affects broadband competition, reduces broadband investment, increases wireline concentration and reduces consumer choice. Policymakers need to learn from these mistakes and end asymmetric broadband regulation. Alternatively, if regulations are truly deemed to be necessary and they are not lifted, then they should be applied equally across all competitors. Given these two options, we find regulatory relief would be a far superior solution compared to imposing similar regulations on other broadband competitors, since the same regulations that impede ILEC investment would also impede competitive investment.

Introduction: No Economic Justification

During the era of the Bell System, local exchange telephone carriers (ILECs) were deemed to be natural monopolies and, in order to keep their monopoly power in check, regulators subjected these companies to public utility-style regulation, also referred to interchangeably as *common carrier regulation* or *Title II regulation*.[1] Today, the telephone is monopoly gone and subsequent anticompetitive risks have been greatly diminished, and with it the economic justification for Title II regulation and onerous regulatory remedies. Yet, there is a reluctance on the part of regulators, as the late Professor Alfred Kahn put it, in "letting go."[2]

Empirical evidence shows that the majority of telephone calls are no longer made on the incumbent's wireline network and choice is prevalent. As the FCC notes, "overall, almost 75 percent of U.S. residential customers (approximately 88 million households) no longer receive telephone service over traditional copper facilities."[3] By last count, 62% of household members either exclusively use wireless services or mostly use wireless services for their telephone services, while only 7.6% exclusively use wired telephone services provided by either cable, incumbent telephone or competitive telephone carriers.[4] In addition, there are various popular computer-based communications and messaging services used by consumers, including text (and voice) messaging, real time video and social media applications.

In the same way that telephone companies no longer corner the market for wireline voice services, they also are not the dominant provider of video or broadband services. As for video services, cable companies still account for the majority of pay TV subscribers, around

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[1] For shorthand, incumbent telecommunication providers will be referred to as ILECs.
[2] Alfred Kahn, *Letting Go: Deregulating the Process of Deregulation*, Institute of Public Utilities and Network Industries, the Eli Broad Graduate School of Management, Michigan State University, 1998.
[3] *In the Matter of Technology Transitions*, FCC 15-97, Report and Order, Order on Reconsideration, and Further Notice of Proposed Rulemaking, August 7, 2015, par. 9.
[4] Stephen J. Blumberg and Julian V. Luke, "Wireless Substitution: Early Release of Estimates from the National Health Interview Survey," January-June 2015, U.S. Department of Health and Human Resources, Centers for Disease Control and Prevention, December 12, 2015, at https://apps.fcc.gov/edocs_public/attachmatch/DA-14-1862A1.pdf.

53%, compared to 34% for satellite and 13% for all telecommunications providers.[5] Meanwhile, over-the-top providers, like Netflix, Roku and Hulu, are prompting some consumers to disconnect traditional cable and video services entirely. Similarly, cable companies provide the majority of wireline-based broadband services, with cable modems accounting for 68%, Digital Subscriber Line (DSL) accounting for 19%, and fiber (provided by both ILECs and cable TV providers) accounting for 11%.[6]

While the ILECs are no longer the leading provider of voice, video or broadband services, rather than recognizing this non-dominance, the FCC has recently moved to reregulate broadband services by applying public utility-style regulations. In the past, these regulations have been used by regulators to set retail and wholesale prices, establish quality of service standards and penalties, set financial rates of return, disallow some investments from the rate base, approve new products, prohibit the discontinuance of outdated services, and create cross-subsidies between services, markets and customers, as well as regulate compliance, operations and billing.

This study will discuss the potential problem of "asymmetric regulation" of broadband services, specifically when Title II regulations are being enforced on ILECs and not their competitors. This asymmetric regulation can lead to shifting market shares, increased concentration, decreased investment, reduced competition and ultimately higher consumer prices. Ironically, increased concentration, caused by regulations, may ultimately lead to more regulation for the entire industry, including the potential for price regulation. If this occurs, then the goal of the Telecommunications Act of 1996 – increased competition and investment in advanced services – would have been missed. One simple solution is for policymakers to embrace a more evenhanded regulatory approach -- one that will spur broadband investments and increase market rivalry, thereby increasing consumer benefits.

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[5] According to data on the National Cable and Telecommunications Association, citing SNL Kagan data, downloaded November 17, 2015 at https://www.ncta.com/industry-data.

[6] Ibid, citing the FCC data. Fiber-to-the-home subscriptions account for 11% of wireline broadband services and are provided by both cable and telecommunications providers.

Government Failure: A Repeat Performance

While markets can fail, so too can regulatory policies. Success, as George Bernard Shaw once noted, is not making the same mistake twice. Unfortunately, federal regulatory policy in the U.S. is on the brink of doing just that.

The Telecommunications Act of 1996 was to provide a "deregulatory framework" for increasing competition and to "accelerate rapidly private sector deployment of advanced telecommunications and information technologies and services to all Americans."[7] Yet, in just a few years following passage of the Act, as the next section will show, new telecommunications regulations put the course of broadband investment and competition in the U.S on the verge of failure. Fortunately, in the years that followed, steps were subsequently taken to mitigate these mistakes and regulations were relaxed, which ultimately spurred the deployment of competing networks.

However, while a crisis was averted then, recent FCC regulatory policies are now on the brink of repeating these mistakes, and, in doing so, irreparably impeding broadband investment and concentrating the wireline market. These new regulations, proposed in the name of "benefiting" consumers and increasing competition, will unquestionably result in declining consumer welfare.

To understand the broadband crisis facing the U.S. today, is it helpful first to see how history is repeating itself.

Early Broadband and Asymmetrical Regulation

Looking back, cable modem services appeared to have a quick start in market deployment, led by a handful of cable modem trials as early as 1995 and followed by service offerings in some select markets.[8] In just a few years, there were millions of cable modem

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[7] Conference Report to the Telecommunications Act of 1996, Pub. L. No. 104–104, 110 Stat. 56.

[8] Adam S. Bauman, "The Cutting Edge," *Los Angeles Times*, May 3, 1995, http://articles.latimes.com/1995-05-03/business/fi-61898_1_cable-modem-hardware.

subscribers in the country. DSL, on the other hand, had a slow start, even though the technology was available and had been publicly tested as far back as 1992 as a Video Dial Tone (VDT) service.[9]

The reason for DSL's slow start is that high-speed VDT networks were subject to common carrier regulations. When ILECs tried to use these high-speed services to deliver video programming, the FCC would not allow ILECs to have control over the content of their video service, effectively putting VDT at a competitive disadvantage relative to cable TV services. Though ILECs filed numerous times to enter the market and compete, in the end, regulations doomed VDT services. Professor Thomas Hazlett, a former FCC Chief Economist, said that the entire regulatory morass could be summarized by a single number, 1.47, "the ratio of VDT [regulatory] filings to VDT subscribers."[10]

The FCC's subsequent regulation of the incumbent high-speed services, referred to then as *Open Video Services*, fared no better. These new regulations required incumbent providers to share at least two-thirds of their video channels with competitors. In short, the initial attempt to deploy high-speed services to residential communities was thwarted by common carrier regulations.

In the years to follow, DSL services for Internet access were deployed, albeit more slowly than cable modem services, due to regulations that singled out ILEC services. As one 2002 study detailed, ILECs faced many regulations, involving number portability, unbundling, interconnection, dialing parity, collocation, line-sharing and other regulations, none of which were imposed on cable TV operators.[11]

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[9] Much of this history is detailed in an economic study. See, Steve Pociask, "Putting Broadband on High-speed: New Public Policies to Encourage Rapid Deployment," *Economic Policy Institute*, Washington, DC, 2002.
[10] Thomas W. Hazlett, "Economic and Political Consequences of the 1996 Telecommunications Act," AEI-Brookings Joint Center for Regulatory Studies, Working Paper 99-8, September 1999.
[11] Steve Pociask, "Putting Broadband on High-speed: New Public Policies to Encourage Rapid Deployment," *Economic Policy Institute*, Washington, DC, 2002.

In fact, common carrier regulations on telephone services quickly spread to its DSL, which is a copper-base service. Specifically, unbundling and line-sharing regulations required ILECs to make network facilities available to competitors at subsidized prices (referred to as *total element long-run cost* or *TELRIC prices*). As an example of the degree of subsidy, Thomas Hazlett cited incumbent telephone investment to be $2,311 per line,[12] compared to $2.92 a month that a competitor in California would pay to rent access to the incumbent's line – a payment insufficient to recover the interest on the incumbent's total investment.[13]

As for other artificially low wholesale prices, one study found that unbundled network element prices gave ILECs only 42% of their normal retail revenues,[14] or as other economists noted, it would take 20 years of productivity-based price reductions to match the one-time shift to lower TELRIC prices.[15] Because of the onerous cost of regulations and the risk associated with renting facilities to competitors at bargain prices, ILECs were discouraged from investing in broadband services.[16]

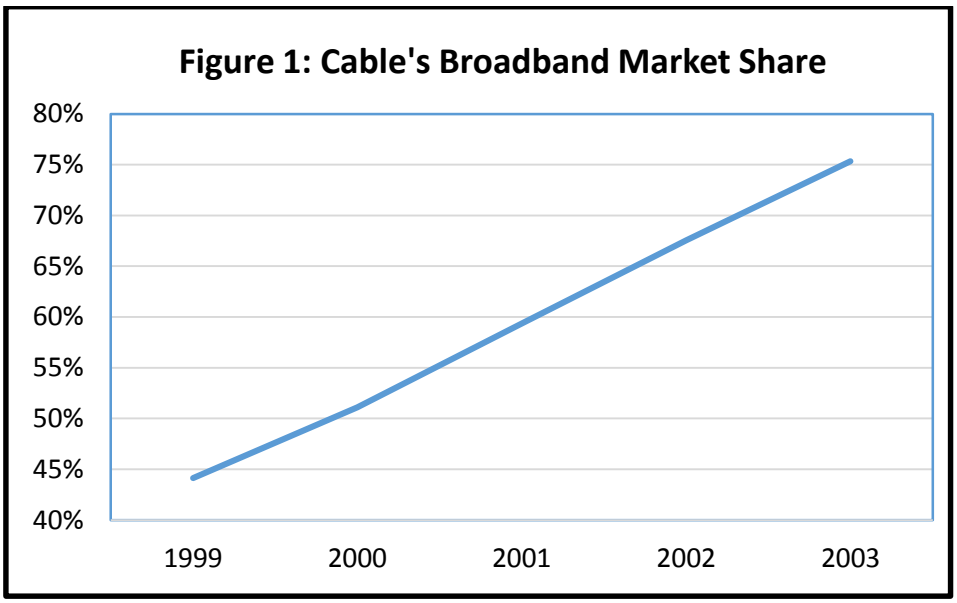
Essentially, onerous common carrier regulation put DSL services at a competitive disadvantage with cable modem services. Regulations had effectively limited incumbent investment, competition and consumer choice, thereby concentrating the market. In 2002, cable modem services were classified as an information service, putting them out of reach of similar onerous regulations. In the same year, these asymmetric regulations were cited as a concern by then FCC Chairman Michael Powell, who stated:

> "The convergence of industries, where advanced networks allow entities in traditionally distinct market segments to enter into each other's markets and

[12] Thomas W. Hazlett, "Regulation and Vertical Integration in Broadband Access Supply," AEI-Brookings Joint Center for Regulatory Studies Conference, Broadband Communications: Overcoming the Barriers, Oct. 2001, p. 12.
[13] Steve Pociask, "Putting Broadband on High-speed: New Public Policies to Encourage Rapid Deployment," *Economic Policy Institute*, Washington, DC, 2002.
[14] Randolph J. May and Larry F. Darby, FCC Comments of the Progress and Freedom Foundation, CC Docket N. 01-338, N. 96-98 and No. 98-147, 2002, p. 24.
[15] Alfred Kahn, Timothy Tardiff and Dennis Weisman, "The Telecommunications Act at Three Years: An Economic Evaluation of Its Implementation by the Federal Communications Commission," *Information Economics and Policy*, Vol. 11, 1999, pp. 330-32.
[16] Steve Pociask, "Competition at Bargain Prices," *America's Network*, December 15, 1998.

into new similar markets, demands that we rationalize our regulatory regime to address these changes."[17]

The disincentive to invest was evident in the broadband market share data. As shown in the chart below (Figure 1) and based on FCC data covering all types of "two-way" high-speed Internet services (including fiber, satellite and other wireless services), cable modem services market share grew from 44.1% in December 1999 to 75.3% in December 2003.[18] The market was more concentrated, due to asymmetric regulations, which ironically increased market power and the potential for anticompetitive behavior.



Asymmetric treatment between cable modem and DSL services continued until 2005, when the FCC issued a policy statement that put DSL in the same classification as cable modems.[19] The end of common carrier regulation meant the end of onerous regulations, including mandatory line-sharing requirements.

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[17] Speech by Michael K. Powell, Broadband Technology Summit, U.S. Chamber of Commerce, Washington, DC, April 20, 2002.

[18] "High-speed Services for Internet Access: Status as of December 31, 2004," FCC, June 2004, Table 2. The chart plots the number of coaxial cable advanced service lines with speeds exceeding 200 kbps in both directions as a percent of all advance services lines.

[19] "FCC Classifies DSL as Information Service," *Tech Law Journal Daily*, Alert No. 1,190, August 8, 2005, at http://www.techlawjournal.com/topstories/2005/20050805a.asp.

At that time, FCC Chairman Kevin Martin declared that the policy change puts "all broadband internet access providers on a level playing field."[20] Commissioner Kathleen Abernathy wrote in her statement that broadband technologies should "not be crushed by the weight of 1930s-era regulations."[21] Effectively, asymmetric regulation of broadband services came to an end.

Symmetric Regulation Reduced Broadband Concentration

If asymmetric regulation contributed to market concentration, then regulatory reforms should produce the opposite. That, indeed, appears to be the case, at least for a while. Shortly after regulations were relaxed, DSL services narrowed its market share gap with cable modem services.[22] In fact, according to FCC data, cable modem market share declined from 61% in June 2005 to 49% June 2007, while DSL share increased modestly.[23]

With all broadband services classified as an information service and out of reach of common carrier regulations, deployment became widespread, consumer demand soared and prices fell. Comparing today to when all broadband services were classified as information services, broadband demand grew seven fold, including a doubling of wireless broadband services in just the last three years.[24] According to the Bureau of Labor Statistics, as inflation increased 45% from October 1998 to October 2015, Internet service provider prices fell nominally by 26%, or nearly 50% in inflation-adjusted terms.[25] Meanwhile, quality of service

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[20] "Chairman Kevin J. Martin Comments on Commission Policy Statement," News Release, FCC, August 5, 2005, at https://apps.fcc.gov/edocs_public/attachmatch/DOC-260435A2.pdf.
[21] "FCC Classifies DSL as Information Service," *Tech Law Journal Daily*, E-Mail Alert No. 1, 190, August 8, 2005.
[22] "Cable vs. DSL: Who has the Market Share," *DSL Reports*, May 26, 2006, citing PEW and Leichtman Research Group, see http://www.dslreports.com/shownews/Cable-vs-DSL-74892; and Ed Oswald, "Report: DSL to Overtake Cable Internet," Betanews, June 19, 2006, at http://betanews.com/2006/06/19/report-dsl-to-overtake-cable-internet/.
[23] Cable modem share fell as a percent of all connections exceeding 200 kbps in both directions. Most of the change was due to an increase in wireless connections, although DSL share increased 5% as a percent of wireline connections. See "High-speed Services for Internet Access," FCC, Status as of December 31, 2008, p. 10.
[24] "High-speed Services for Internet Access" FCC, various publication dates.
[25] Consumer Price Index data downloaded on December 3, 2015 from www.bls.gov, and uses CPI-U city data, not seasonally adjusted.

and speed has indisputably increased. However, while broadband competition appears to have been a success, the regulatory level playing field did not last.

Re-concentration by Reregulation

DSL services are copper-based services with speed and distance limitations. While fiber solutions are very expensive for all wireline broadband competitors, ILECs face another problem. Cable TV companies can put their "triple play" (voice, data and video services) on a single network, but if ILECs build an all fiber network to offer the triple play, it could still be required to operate and maintain the legacy copper telephone network in the same service territory. Effectively, existing telephone service regulations (under Title II) can require ILECs to maintain duplicative networks, at least for some time period. As a result, investment analysts have long questioned the financial wisdom of these fiber buildouts by ILECs.[26]

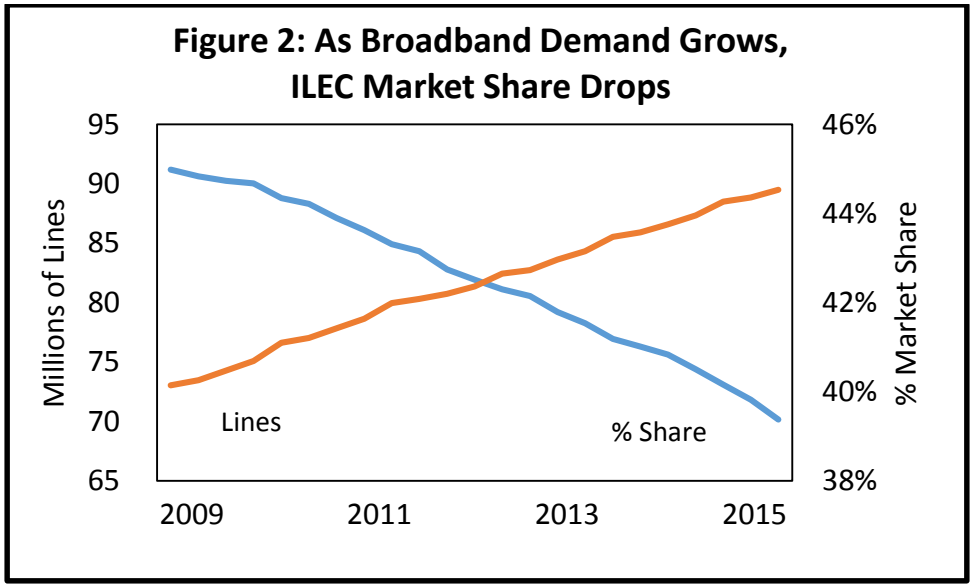
Alternatively, while DSL and voice services can ride on the copper network, because of limitations on DSL, some ILECs have partnered with satellite providers to offer the full competitive array of cable channels – again, essentially utilizing two networks to provide their triple play. While the FCC has concluded that using satellite to complete a triple play was "a disincentive to deploy faster broadband because an FTTP [Fiber-to-the-Premise]," it has done nothing to deal with the root cause – asymmetric regulations.[27] In effect, Title II regulations on the old copper network are impeding the transition from copper-based DSL services to faster fiber-to-the-home broadband services. As shown below (Figure 2), as the total number of broadband lines has continued to grow in recent years, the ILEC's market share (which depicted here includes DSL and Fiber lines) has declined sharply.[28] Maintaining duplicative networks is

[26] For example, see Eric Savitz, "Verizon: Bernstein Turns Bearish; Sees Little Margin for Error," *Tech Trader Daily*, Barron's, October 12, 2010, at http://blogs.barrons.com/techtraderdaily/2010/10/12/verizon-bernstein-turns-bearish-sees-little-margin-for-error/.

[27] A finding by the FCC in "Application of AT&T and DirecTV for Consent to Assign or Transfer Control of Licenses and Authorizations," Memorandum Opinion and Order, MB Docket No., 14-90, July 24, 2015, p. 4 at par. 5.

[28] These data come from Leichtman Research Group, Inc., which provides a comprehensive and quarterly accounting of broadband subscribers by major providers. For more information, see http://leichtmanresearch.com/.

costly and a competitive disadvantage. In effect, Title II regulations on the old telephone network were reducing investment in the next generation of broadband services.



Looking back, the FCC's policy of shifting to "symmetric" broadband regulation in 1995 was largely successful. However, common carrier regulations of copper networks, where DSL is delivered, is now impeding fiber investment by requiring ILECs to maintain multiple networks. This costly impediment is pushing some ILECs to invest less too little in fiber and too much in copper. Rather than encouraging competition, the FCC's policies are effectively concentrating the market, limiting competition and putting consumers at risks of higher prices, due to the lack of a level playing field.

The Regulatory Tipping Point: 2015

Earlier this year, after the courts overturned the FCC's first attempts to get net neutrality rules in place, the FCC re-established Title II regulations on broadband service providers as the means to impose these rules, which gave the FCC broad authority to regulate these services far beyond the scope of "open networks." With this additional regulation, recent reports suggest that several broadband providers are already cutting back investment – some

cutting capital expenditures by as much as 29%.[29] Some have acknowledged a reluctance in offering new innovative services, citing concerns over potential FCC actions.[30] The only meaningful fiber buildout by an ILEC today is a requirement under a merger condition.[31]

While net neutrality rules do affect all broadband providers, Title II regulations appear to have exposed ILECs to new regulations that are not being applied to other broadband providers. These new asymmetric regulations are coming in two major ways:

1. Impeding Technology Transition and Stagnating Fiber Deployment

In 2012, in order to speed fiber deployment, AT&T proposed trials in two of its wire centers that would buildout an all-IP network (using only Internet protocol) for its triple play services, while discontinuing its legacy copper network. While this was an opportunity for the FCC to level the playing field by allowing ILECs to more easily move to fiber-based services without having to keep and maintain a duplicative copper network, the FCC embraced its new Title II power over broadband services by expanding its regulations.

For example, new technology transition rules lengthen the time to review any proposed discontinuance of copper services; it requires that transitioning technologies be made available to competitors at comparable conditions; in notifying consumers of proposed copper retirement, it forbids incumbents from encouraging consumers to switch to an all-fiber service that is different from the legacy service they currently subscribe to; and it allows for a single competing service provider in any market to object (including "informal complaints") to planned copper retirements that may affect them, and that single objection may initiate an enforcement action by the FCC.[32] The new rules allow the incumbent's competitors to hold up

[29] Hal Singer, "Does the Tumble in Broadband Investment Spell Doom for the FCC's Open Internet Order," *Forbes*, August 25, 2015.
[30] Mike Dano, "AT&T has had to 'Shelve a Bunch of Stuff' Because of Net Neutrality," *FierceWireless*, December 3, 2015.
[31] "Application of AT&T and DirecTV for Consent to Assign or Transfer Control of Licenses and Authorizations," FCC, Memorandum Opinion and Order, MB Docket No., 14-90, July 24, 2015.
[32] In the Matter of Technology Transitions, Report and Order, Order on Reconsideration, and Further Notice of Proposed Rulemaking, FCC 15-97, released August 7, 2015, noting paragraphs 5, 101, 49, 34 and 158, respectively.

and potentially stop deployment to an all IP-network. Cable operators are not subject to the same restrictions when building out fiber, but seem fine having these obligations placed on ILEC competitors.[33]

Referring to corporations that buy special access services and their opposition to their competitors (the ILECs) that want to build new fiber-based access services, in his dissenting opinion, one FCC Commissioner Ajit Pai wrote:

> "Corporate interests have told us these new services threaten their business models. Companies are seeking to force their competitors [ILECs] to keep spending money on networks that those competitors no longer want to maintain. Why? So that these companies can continue to use their competitors' networks! To state the argument is to reveal its absurdity. But today the FCC has put the interests of these corporate middle-men over the welfare of consumers."[34]

2. Decreasing Consumer Welfare

From the Technology Transition proceeding, it has become clear that the FCC has an appetite to reregulate the broadband services of the ILECs – all while protecting other competitors that buy wholesale services from the incumbent. This fall, the FCC opened up another proceeding to investigate the pricing plans, terms and conditions in contracts between ILECs and businesses that buy wholesale services, referred to *special access services*.[35] Essentially, special access services are dedicated enterprise broadband lines provided to government, private companies and competitive telecommunications providers. They represent wholesale data services that can be as slow as plain old telephone services or as fast

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[33] When it comes to regulations on a copper to fiber transition, The National Cable & Telecommunications Association has stated that it would like to have them apply "only to legacy services offered by incumbent LECs" and not their services. NCTA's Reply Comments in the Matter of Technology Transitions, November 24, 2015, p. 2, http://apps.fcc.gov/ecfs/document/view;NEWECFSSESSION=vr1mWXXZp1GJpNL5MKDykGwB2yZ2dy2G28hhfyGLMwc5wZpyxKvL!-1135238304!-1678543329?id=60001343996.

[34] In the Matter of Technology Transitions, Report and Order, Order on Reconsideration, and Further Notice of Proposed Rulemaking, FCC 15-97, released August 7, 2015, Dissenting Statement of Commissioner Ajit Pai, at https://www.fcc.gov/article/doc-334747a5.

[35] In the Matter of Investigation of Certain Price Cap Local Exchange Carrier Business Data Services Tariff Pricing Plans, Order Initiating Investigation, FCC, DA 15-1194, released and adopted October 16, 2015, at https://www.fcc.gov/document/business-data-services-tariff-investigation-order.

as fiber optic transmissions. The special access market is generally regarded as being very competitive in denser markets, though market data to verify this has not been publicly released by the FCC, despite the collection of these data over two years ago. The fact is that special access providers have been around for decades, including private companies that used facilities to totally bypass ILECs as far back as 1983.[36]

There is no justification for any competitors to be saddled with propping up the special access market, when other competitors are not. The FCC's recent actions seem focused on protecting competitors that lobby for a competitive advantage, instead of encouraging competition and fiber investment for the benefit of consumers.[37] This asymmetric regulation cannot be justified as fair, beneficial to consumer welfare, or as having any sound economic rationale. After all, ILECs do not send more traffic over their wireline networks -- data, video and voice traffic – than their competitors do.

If these regulations are so important, it may be that they should be applied to all broadband infrastructure providers. However, if regulations are impeding ILEC investment, imposing these same regulations on cable TV operators would produce similar adverse effects. For this reason, we find that easing regulations would be a superior solution to imposing them across all broadband providers.

While Title II regulations on traditional telecommunications services has affected broadband deployment by discouraging fiber investment and eroding incumbent market shares, the early 2015 decision to apply Title II regulations on broadband services has begun to

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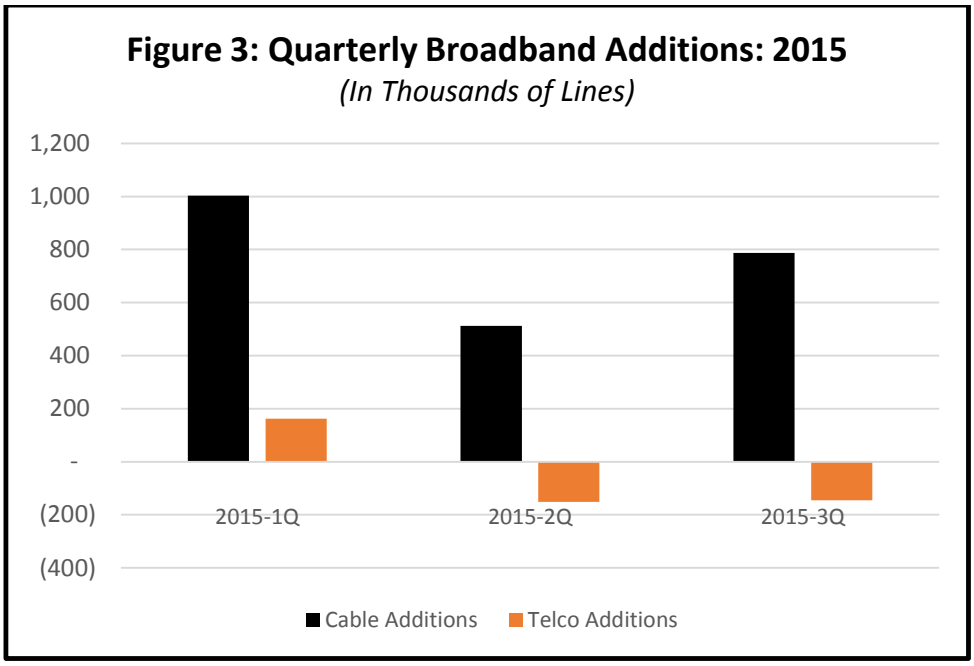
[36] For example, see Andrew Pollack, "Sidestepping the Telephone Company," *The New York Times*, December 1, 1983, at http://www.nytimes.com/1983/12/01/business/sidestepping-the-telephone-company.html.

[37] For a discussion of rent-seeking associated with this special access proceeding, see Fred Campbell "FCC Chairman Wheeler Plans to Give Special Access Favors To Former Lobbying Clients," *Forbes*, October 26, 2015, at http://www.forbes.com/sites/fredcampbell/2015/10/26/fcc-chairman-wheeler-plans-to-give-special-access-favors-to-former-lobbying-clients/; Hal Singer, "The FCC's Competition Agenda," *Forbes*, October 23, 2015, at http://www.forbes.com/sites/halsinger/2015/10/23/the-fccs-competition-agenda/ and; Roger Entner, "Special Access – However Government Preference for Some May Mean Higher Prices for All," *FierceWireless*, October 21, 2015, at http://www.fiercewireless.com/story/entner-special-access-how-government-preference-some-may-mean-higher-prices/2015-10-21.

have a devastating effect. As the chart below shows (Figure 3) – for the first time ever – ILECs faced back-to-back losses in the number of broadband subscribers, while cable has continued to grow. Just as before, when onerous regulations affected market shares and when reclassification to information services led to a rebound, the return to asymmetric regulations is having a consistent and significant effect on competition and market share. It is adversely affecting consumer welfare.



All of this raises questions. How do these asymmetric regulations speed fiber deployment? Who pays the opportunity cost for inhibiting better, faster and cheaper consumer services? Who pays for continuing duplicative networks? How do consumers benefit from these any of this?

Effects of Asymmetric Regulation May Not Be Reversible

Title II regulations are preserving and maintaining duplicative and costly copper networks. That cost is an impediment to fiber deployment that keeps ILECs more reliant on older copper-based DSL technologies. Instead of the FCC relieving non-dominant ILECs of Title II

regulations in more competitive markets, the FCC has recently chosen to make broadband service providers subject to Title II regulations.

Unless there is action soon, the shift in concentration is likely to be permanent. A decade ago, the rollback of asymmetric regulations permitted modest rebound in broadband services for ILECs, because there was brisk growth in subscribers. Today, because the broadband market is so widespread, growing slower and more mature, asymmetric broadband regulation will likely have longer term consequences that could permanently displace and weaken wireline competition. Even if a rebound is possible, ILECs will face a major cost to win back customers. Regulations are costly and delays in lifting these regulations will be even more costly.

Recommendations and Conclusions

Recent imposition of regulations coincides with a reduction in investment and a shift in in market share. The new regulations are inhibiting ILECs' transition to an all IP-network. This means that ILECs will be forced to rely much longer on legacy copper-based DSL services, which will lead to a decrease in market share and an increase in market concentration. The empirical evidence shown in this study demonstrates this and recent data suggest an acceleration in this divergence.

What should policymakers do? There should be substantially less broadband regulation and whatever regulation is deemed to be necessary should be symmetrically applied. The giants of the wireline market should be forced to compete on equal terms for consumers in order to intensify price and service competition. The fact is that the ILECs' wireline services are lagging in the broadband, video and the telephony market. Therefore, they should not be treated as dominant firms for either retail or wholesale services. The FCC's focus on special access regulation is misplaced and is destroying U.S. wireline-based competition.

There needs to be an urgent call for parity. Tilting the market to favor one type of facility-based competitor over another does not create more facility-based deployment or more competition. Tilting the market to favor "renting" over "building" does not make for effective competition that will benefit consumers. Instead, we need public policies that encourage facility-based competition – both wireline and wireless. The choices are simple:

- Policymakers need to end Title II regulations for all providers.
- There needs to be less emphasis on regulation of wholesale services. Less regulation will encourage more facility-based investments, which will lead to the natural development of a healthy, wholesale market; and
- If regulators truly believe that some regulation of wholesale services is necessary – and that may be the case in some rural markets – then regulators need to apply these regulations on a symmetrical and competitively neutral basis.

Ironically, the increase in market concentration currently underway will likely justify future regulations. In other words, asymmetric regulations on ILECs today will eventually lead to asymmetric regulations on cable broadband services tomorrow. It's a self-fulfilling prophecy – regulations will spawn more regulations. For this reason, imposing onerous, but symmetrical, regulations on all providers is a suboptimal solution to simply easing regulations and encouraging unfettered competition today.

Regulations need to be relaxed so that all facility-based providers are treated similarly. There is no economic justification for asymmetric regulations. It cannot be justified on fairness, and there is no consumer benefit from it. In conclusion, we find that regulatory symmetry will encourage competition, which will enhance consumer welfare.