Reply Comments of

International Center for Law & Economics

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Professors and Scholars of Antitrust and Telecommunications Law and Economics

In the Matter of

Applications of Comcast Corporation, Time Warner Cable Inc., Charter Communications, Inc. and Spinco to Assign and Transfer Control of FCC Licenses and Other Authorizations

MB Docket No. 14-57

September 23, 2014

The International Center for Law & Economics ("ICLE") and eleven independent professors and scholars of law and economics file these comments to address general merger review issues and certain specific concerns that were raised in some of the Comments and Petitions to Deny filed in this proceeding.

Joining ICLE in filing these comments are (*institutions provided for identification only*):

- **David Balto,** Former Policy Director of the Bureau of Competition of the Federal Trade Commission
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I. General Responses

A. Merger Specificity

The FCC's inquiry is limited to the proposed merger's likely effect on the public interest.[1] But many of the comments in opposition to the merger take issue with various aspects of the marketplace for residential broadband and video as it exists today. Indeed, much of the criticism seems leveled at decisions made decades ago with regard to cable franchising. But those criticisms, whether valid or not, do not speak to whether – against the backdrop of the relevant markets as they exist today and are likely to exist in the near future – the merger of Comcast and Time Warner Cable ("TWC") is in the public interest. Among many other things, for example, the Comments of the American Antitrust Institute urge the FCC to consider the issue of network neutrality in reviewing the merger.[2] But there is nothing merger-specific about net neutrality, and consideration of that issue (other than as a potentially relevant aspect of the market backdrop) is wholly inappropriate for merger review.

Merger review is not the proper place to address broad, industry-wide issues that are not specific to the proposed merger. Instead of focusing efforts on trying to ad-

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[1] *See, e.g.*, Applications of Cellco P'ship d/b/a/ Verizon Wireless & SpectrumCo LLC and Cox TMI, LLC for Consent to Assign AWS-1 Licenses, Memorandum Opinion and Order and Declaratory Ruling, 27 FCC Rcd. 10698 ¶ 89 (2012); AT&T-BellSouth Order ¶ 56 n.154; Applications for Consent to the Transfer of Control of Licenses and Section 214 Authorizations by Time Warner Inc. and America Online, Inc., Transferors, to AOL Time Warner Inc., Transferee, Memorandum Opinion and Order, 16 FCC Rcd. 6547 ¶ 6 (2001).

[2] Comments of the American Antitrust Institute, In the Matter of Applications of Comcast Corp. and Time Warner Cable Inc. for Consent to Transfer of Licenses and Authorizations, MB Docket No. 14-57.

dress these issues for only a single company through merger review, the FCC would better serve the public interest by addressing such industry-wide issues, if there are any, through the policymaking it is already engaged in or has the authority to engage in. For example, at the same time the FCC is reviewing the proposed merger, it is also engaged in an open Internet rulemaking. As part of this rulemaking, the FCC has hosted roundtables and received over three million public comments. Any rules made as a result of these proceedings will apply industry wide and will address many of the non-merger-specific issues raised by merger detractors. It is far preferable that, to the extent further regulation is necessary, that regulation applies equally to all market participants, which ensures a level playing field.

The remainder of the non-merger specific issues raised, if they in fact are issues of concern at all, will likely be resolved through increased competition. It is clear that both video and broadband are rapidly changing and dynamic markets. Over the next several years, emerging competitors like OVDs in video and mobile wireless and accelerated upgrades to VDSL/VDSL2 in broadband are likely to transform these industries, solving many of the current market structure issues that some commenters contend exist. The proposed merger must be evaluated in the context of this ever-increasing competition. Currently, there are several competing technologies that can be used to connect consumers with the Internet and provide video services. These technologies include fiber, wireless, satellite, and ADSL/VDSL. The FCC should be focusing its efforts on forward looking policies to increase investment and deployment of these technologies by competing companies instead of trying to resolve non-merger specific problems through its power of merger review.

In addition to isolating and addressing only those issues that are merger-specific, the FCC should also properly attribute and consider merger-specific benefits. On top of the efficiencies mentioned below that flow from extending the benefits of Comcast's vertical integration with NBC-Universal ("NBCU") to TWC, there are several merger-specific efficiencies the FCC should take note of:

- Benefits from increasing economies of scale
- Increased bargaining power (insofar as it exists) against inputs that hold market power
- Improved governance structure

The transaction will bring significant scale efficiencies in a marketplace that requires large, fixed-cost investments in network infrastructure and technology. Before either Netflix or Comcast even considered using the Internet to distribute Netflix's video content, Comcast invested in the technology and infrastructure that ultimately enabled the Netflix of today. It did so at enormous cost (tens of billions of dollars over the last 20 years) and risk. Absent Comcast's broadband infrastructure investments we would still be waiting for our Netflix DVDs to be delivered by snail mail, and Netflix would still be spending three-quarters of a billion dollars a year on shipping.

The ability to realize returns—including returns from scale—is essential to incentivizing continued network and other quality investments. The cable industry today operates with a small positive annual return on invested capital ("ROIC") but it has had cumulative negative ROIC over the entirety of the last decade. In fact, on invested capital of $127 billion between 2000 and 2009, cable has seen economic profits of negative $62 billion and a weighted average ROIC of negative 5 percent.[3] Meanwhile Comcast's stock has significantly underperformed the S&P 500 over the same period and only outperformed the S&P over the last two years. The prospect of expanding

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[3] Larry Dignan, *Broadband Networks: Returns on Invested Capital Stink*, SEEKING ALPHA (Dec. 23, 2010), http://seekingalpha.com/article/243441-broadband-networks-returns-on-invested-capital-stink.

economies of scale through this merger and then utilizing that to drive greater capital investment will ensure that this investment continues to accommodate the next transformative innovation in broadband and the content it delivers.

While, contrary to some commenters' assertions, one cannot conclude the Comcast will have increased bargaining power simply because of increased size,[4] it is not clear that this increased bargaining power would harm competition in any event. In fact, increased bargaining power from the newly merged entity on the MVPD-side may help it achieve better position against programmers who have considerable market power themselves. In the current market, major programmers may have considerable bargaining power. For instance, when TWC and CBS engaged in a serious dispute that led to a blackout of CBS content for about a month, TWC lost big: a staggering 306,000 customers in the third quarter of 2014, which comes out to about 3% of TWC's entire subscriber base. Additionally, the increased cost of cable over time is mainly attributable to the ever-increasing costs of programming.[5] The

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[4] *See* MARK M. BYKOWSKY, ANTHONY M. KWASNICA, & WILLIAM W. SHARKEY, HORIZONTAL CONCENTRATION IN THE CABLE TELEVISION INDUSTRY: AN EXPERIMENTAL ANALYSIS (June 2002), *available at* http://transition.fcc.gov/Bureaus/OPP/working_papers/oppwp35.pdf.

[5] *See* Robert Gessner, *Programming Costs Drive Cable Bills Higher*, TVNEWSCHECK (Mar. 14, 2014), http://www.tvnewscheck.com/article/74809/programming-costs-drive-cable-bills-higher/page/1 ("Clearly, both the network owners and content providers can claim their product has improved significantly over the years. But, that's not the point. The question still is which of the two elements is contributing more to the increase in consumer cost. It is clear from this analysis that the cost of the network has risen by about 3.3% per year for the past 35 years, adding about $16 per month overall. Program content has risen by about 17.6% per year during that same period, adding almost $44/month overall.").

average programming cost per video subscriber for the top three cable providers increased from $24.15 in 2008 to $34.06 in 2012.[6]

A reduction in programmers' bargaining power vis-a-vis distributors could allow distributors to better hold prices down. The highly competitive video distribution market would ensure that any fall in programming costs will flow eventually to consumers. In other words, the greater bargaining position of the merged Comcast-TWC entity could eventually allow consumers to receive programming at lower prices.

Procompetitive justifications aren't just about scale, they're also about governance. The integration between Comcast and TWC would bring Comcast's vertically integrated structure to TWC's distribution network, giving the combined entity greater ability to coordinate with programmers, and to use intellectual property and various other forms of intangible business know-how (management, R&D, etc.).[7] Institutional knowledge about programming and its distribution from NBCU and its incorporation by Comcast (and TWC via the merger) can improve management's ability efficiently to distribute programming and to engage with other programming entities.

It is important to remember that what generally motivates these mergers is not the incentive to engage in anti-competitive conduct, but rather a belief by the managers and owners of one company that they can do better managing another company

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[6] SNL KAGAN SPECIAL REPORT, U.S. MULTICHANNEL SUBSCRIBER UPDATE AND PROGRAMMING COST ANALYSIS (June 2013), *available at* http://go.snl.com/rs/snlfinancialllc/images/SNL-Kagan-US-Multichannel-Subscriber-Update-Programming-Cost-Analysis.pdf.

[7] *See generally* Enghin Atalay, Ali Hortaçsu & Chad Syverson, *Vertical Integration and Input Flows*, 104 AM. ECON. REV. 1120 (2014).

than its current managers can.[8] In the normal course there are at least two types of constraints on managers of companies: competition in product markets and the market for corporate control. If a manager is doing a bad job in head-to-head competition with another firm, his company is not going to be earning sufficient revenue. The manager may get booted. Meanwhile, the market for corporate control brings the takeover threat to bear on inefficient management, as well. Comcast undoubtedly looks at TWC's relatively poor performance as a potential growth opportunity – a way to increase its revenue (over the company's purchase price) by improving its existing business model and operating the firm more efficiently than its current managers can. While direct competition might accomplish this in a typical market, because head-to-head competition in cable is so difficult (as is well known, Comcast and TWC don't overlap in any markets) the best way for Comcast to bring the benefits of its better management to TWC's consumers is by directly imposing its better management practices on TWC through merger. The FCC shouldn't foreclose any of the avenues by which improved performance can be brought to TWC's customers and shareholders.

B. Market Definition

Several commenters focused on the increased market share of the combined Comcast-TWC entity and argued that this allows a monopoly at the national level. Aside from the fact that big is not necessarily bad, this analysis has created confusion about the relevant market for analysis. Several commenters, in particular, focused on *AT&T-MediaOne* as the relevant precedent. But that case, involving a merger from

[8] *See generally* Henry G. Manne, *Mergers and the Market for Corporate Control*, 73 J. POL. ECON. 110 (1965).

2000 in which the FCC actually did *not* find a competitive issue nor analyze the relevant market for broadband or the geographic market, is inapposite.[9]

Since year 2000, there FCC has had significant experience with broadband. In more recent cases dealing with the ISP broadband marketplace, the FCC has found that the relevant market for analysis is local.[10] In these cases, the FCC found that the broadband market is competitive, and when there is little or no geographic overlap among ISPs that seek to merge, then there is no reduction in competition.[11] The FCC

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[9] *See* In the Matter of Applications for Consent to the Transfer of Control of Licenses and Section 214 Authorizations from MediaOne Group, Inc., to AT&T Corp., Docket No.99-251 (Jun. 5, 2000), *available at* http://transition.fcc.gov/mb/att_m1.html, at ¶ 16 ("We find it unnecessary to determine in this proceeding whether a distinct broadband Internet access market exists.").

[10] *See, e.g.*, In the Matter of Applications for Consent to the Transfer of Control of Licenses and Section 214 Authorizations by Time Warner Inc. and America Online, Inc., to AOL Time Warner Inc., Docket No. 00-30 (Jan. 11, 2001), *available at* http://transition.fcc.gov/Bureaus/Cable/Orders/2001/fcc01012.pdf, at ¶ 74 ("***The relevant geographic markets for residential high-speed Internet access services are local***. That is, a consumer's choices are limited to those companies that offer high-speed Internet access services in his or her area, and the only way to obtain different choices is to move. While high-speed ISPs other than cable operators may offer service over different local areas (e.g., ADSL/VDSL or wireless), or may offer service over much wider areas, even nationally (e.g., satellite), ***a consumer's choices are dictated by what is offered in his or her locality***.") (emphasis added).

[11] *See, e.g.*, In the matter of Applications for Consent to the Transfer of Control of Licenses from Comcast Corporation and AT&T Corp., to AT&T Comcast Corporation, Docket No. 02-70 (Nov. 13, 2002), *available at* https://apps.fcc.gov/edocs_public/attachmatch/FCC-02-310A1.pdf, at ¶ 153 ("Comcast and AT&T Broadband ***largely compete in separate geographic markets***, and, to the extent their service areas overlap, we find no material increase in concentration that would raise the potential of competitive harm.") (emphasis added); *id.* at ¶ 128 (consumers' choices "limited to those companies that offer high-speed Internet access services ***in his or her area***.") (emphasis added); In the Matter of AT&T Inc. and BellSouth Corporation Application for Transfer of Control, Docket No. 06-74 (Dec. 29, 2006), *available at* https://apps.fcc.gov/edocs_public/attachmatch/FCC-06-189A1.pdf, at ¶ 114 ("As the

should continue this reasoned analysis and reject "national broadband share" as a meaningful metric: the relevant market is a local one. Because Comcast and TWC largely do not compete in local markets, this merger does not reduce competition in the relevant markets.

If anything, the *MediaOne* case actually illustrates the dangers of agency hubris. No one can predict with certainty how markets will develop, especially when the "perennial gale of destruction" blows.[12] The DOJ required AT&T to divest MediaOne's interest in Road Runner broadband Internet access service to resolve antitrust concerns.[13] At the time, AT&T owned a controlling interest in Excite@Home, then the largest provider of broadband Internet access, with Road Runner the second largest. The DOJ's fear was that, without this divestiture, the merger would have had an anticompetitive effect on the emerging broadband market.

However, the DOJ's real concern about Excite@Home and Road Runner wasn't about the high-speed Internet service itself, but about the "aggregation, promotion, and distribution of broadband content"[14] on the walled-garden platforms that those two entities offered directly. But the business model that DOJ was concerned about

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Commission has previously found, high-speed Internet access services, as distinct from narrowband services, constitute a relevant product market for purposes of determining the effects of a proposed merger on the public interest. ***The Commission also has found previously that the relevant geographic markets for residential high-speed Internet access services are local. We believe that both of these market definitions remain appropriate*** for the purpose of our public interest analysis.") (emphasis added).

[12] *See* JOSEPH SCHUMPETER, CAPITALISM, SOCIALISM, AND DEMOCRACY (1942).

[13] *See* United States v. AT&T Corp., and MediaOne Group, Inc., Case No. 1:00CV01176 (May 25, 2000), *available at* http://www.justice.gov/atr/cases/f4800/4842.pdf.

[14] *Id.*

proved to be short-lived: Excite@Home went bankrupt in 2001, and the walled garden-approach of AOL and others is no longer dominant among ISPs. Similarly, in 2005, Blockbuster looked so dominant in home video that the FTC barred it from acquiring Hollywood Video. Now the entire brick-and-mortar video rental industry has all but disappeared, while streaming services like Netflix, Hulu, and Amazon Instant Video have proliferated. How can regulators accurately predict the competitive effects of a merger in a world where technology moves so fast that whole industries can disappear in a few years' time?

C. Vertical Integration - What Did We Learn from *Paramount*?

One set of benefits that must be considered are those arising from TWC's customers being able to take advantage of the vertical integration of Comcast-NBCU as a result of the merger.[15] The benefits of vertical integration include:

- Reduction in service-specific transaction costs[16]
- Increased content production
- Elimination of double marginalization
- Increased incentives for investment in infrastructure

[15] 2010 FTC & DOJ Horizontal Merger Guidelines § 10.0 ("The Agencies will not challenge a merger if cognizable efficiencies are of a character and magnitude such that the merger is not likely to be anti-competitive in any relevant market."); § 4.24 of Non-Horizontal Merger Guidelines ("An extensive pattern of vertical integration may constitute evidence that substantial economies are afforded by vertical integration. Therefore, the Department will give relatively more weight to expected efficiencies in determining whether to challenge a vertical merger.")

[16] 2010 FTC & DOJ Horizontal Merger Guidelines § 10.0 ("incremental cost reductions may reduce or reverse any increases in the merged firm's incentive to elevate price").

- Likely pass-through of lower prices and higher quality video programming to consumers

Studies have consistently found that vertical integration in the cable industry does not harm consumers, and, often, has substantial benefits for them.[17] And as we noted in our Comments in this proceeding, the merger changes little overall in terms of incentives for vertical foreclosure: Comcast currently has no ownership interest in the vast majority of programming it distributes — and it eagerly distributes it and it makes its own content widely available for distribution by competitors. Nothing about the proposed merger will change any of that. The combination of TWC's distribution networks with Comcast's NBCU content does not appreciably increase Comcast's content holdings, but it does bring the benefits of a more vertical structure to more subscribers. The *Paramount*[18] decision's effect on the movie industry is a real world example from which we can learn the negative effects that vertical disintegration can have on consumer welfare.

Paramount limited the ability of movie studios, the content creators, to vertically integrate with theaters and to bundle their various films. This decision led to a marked decrease in the quantity of content.

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[17] *See, e.g.*, Christopher Yoo, *Comments on Comcast-NBCU Merger, Before the FCC*, MB Docket No. 10-56,at 32-33 ("Most empirical studies that have assessed the welfare impact of vertical integration in the cable industry have similarly found that vertical mergers do not harm and likely benefit consumers or are ambiguous. Only one study (by Ford and Jackson) found that vertical integration in the cable industry reduced consumer welfare, and that was by a mere $0.60 per cable subscriber per year, an amount that a recent survey of the empirical literature on vertical integration conducted by four members of the FTC staff termed 'miniscule.'").

[18] *See* United States v. Paramount Pictures, 334 U.S. 131 (1948) (landmark case restricting block-booking and forcing major movie studios to divest themselves of their movie theater chains).

> [One of the most] noticeable trend[s] is from 1950 to 1955, when output share from the seven majors, excluding United Artists, fell by nearly 30 percent.... After 1951, the year by which all studios had spun off their theatre holdings, output of the major studios dropped significantly and rental rates rose accordingly. Although this reaction had beneficial results for the independent producers, the increase in rental prices severely worsened the plight of exhibitors" and consumers.[19]

Transaction costs explain this reduction in consumer welfare. Vertical integration reduced both ex ante costs from negotiation and ex post costs from monitoring. As studios lost control over distribution, they "became more uncertain about revenues, [and] their discount rates went up...Thus, transaction cost increases meant supply contracted, which led to market excess demand and rising rental rates."[20] Essentially, the studios could only afford to produce the most profitable content, thus curtailing the quantity of content produced.

Similarly, transaction costs in the cable market are high because licensing content is complicated.[21] The process of licensing the MGM library presents a tangible example

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[19] Gregory M. Silver, *Economic Effects of Vertical Disintegration: The American Motion Picture Industry, 1945 to 1955* 16-17 (London School of Economics Working Paper No. 149/10) ("This sharp drop in output illustrates one of the most interesting ironies of Paramount: that many of the typical characteristics of a restrained market became more apparent in the industrial organisation after divorcement than before it. M.A. Adelman, a prominent MIT economist of the 1950s stated that the signs of a controlled market 'are not size, or agreement, but restricted output, higher prices, and excess capacity.'").

[20] *Id.* at 19.

[21] Gregory L. Rosston, An Economic Analysis of Competitive Benefits from the Comcast-NBCU Transaction (May 4, 2010) ("There are many issues to resolve and agree upon, including the ability of the

of this largely unseen complexity. The sticker price of the revenue from licensing rights to content, content which is already in existence and fully completed, is a misleading figure,

> as it had to be split with others who had rights in the titles. Each title had its own contractual terms governing payments to partners, talent, guilds, and third parties. Just making these payments entailed issuing more than 15,000 checks per quarter. Not only did titles have different pay-out requisites, but their future revenue stream depended on factors specific to each movie, such as the age of its stars, its topicality, and its genre. To evaluate the library, Viacom [a prospective licensee] assigned a team of fifty of its most experienced specialists to evaluate how much each and every title would bring on over a decade. The Herculean job took the team two months.[22]

Reduced transaction costs, a benefit of vertical integration, are very likely to facilitate an increase in the sort of high-value programming that consumers desire. A drama with high production-value or a documentary that requires extensive research is expensive to create and, therefore, becomes more risky as the licensing becomes less certain. A vertically integrated firm can reduce that risk by increasing the certainty of licensing, making the production and distribution of that content more likely and at

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content provider to determine the amount and type of content that will be made available under certain conditions, the level of restrictions on licensing content to other distributors and for other services, most favored nation ("MFN") clauses, required marketing efforts by the parties, rights over the sale of advertising, release timing for programming, quality of programing, and many other factors.").

[22] EDWARD J. EPSTEIN, HOLLYWOOD ECONOMIST 2.0: THE HIDDEN FINANCIAL REALITY BEHIND THE MOVIES (2012), section 865.

a lower cost.[23] The FCC should embrace these benefits of extending vertical integration to TWC customers. Extending the licensed content of Comcast-NBCU could reduce the risk involved for the new merged entity in creating new content.

Another reason a cable operator may want to own content is to reduce the costs of obtaining it. Program networks generally charge cable operators license fees on a per-subscriber, per-month basis. But a cable operator can eliminate these costs by owning the channel.[24] This pro-competitive effect is called the elimination of double

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[23] Rosston, *supra* note 21 (in reference to Xfinity Fancast TV: "Developing such new platforms requires risky, business-specific investment...Comcast has incurred significant upfront and ongoing expenditures for its new distribution platforms...However, expenditures such as these may be profitable only if sufficient content is available now and in the future at arm's length terms without protracted delay. While Comcast has made significant investments in developing new delivery platforms, it will have a greater incentive to make these investments (and make them sooner) when it expects to have more efficient access to sufficient quality and variety of content...Content providers, however, also need to ensure that new revenue streams will provide the financial support necessary to justify the large investments that are required to create high-quality, professionally produced programming before they risk undercutting established revenue streams by allowing their content to be delivered over new distribution platforms."); see also Gregory L. Rosston & Michael D. Topper, Response to Comments and Petitions Regarding Competitive Benefits and Advertising Competition, In the Matter of Applications of Comcast Corporation, General Electric Company, and NBC Universal Inc. for Consent to Assign Licenses or Transfer Control of Licensees, MB Docket No. 10-56, at 2 (July 21, 2010), *available at* http://www.comcast.com/nbcutransaction/pdfs/REDACTED%20Rosston-Topper%20Reply%20Report%20-%20FINAL.pdf [hereinafter Rosston & Topper, Response to Comments] ("Comcast's track record demonstrates that it significantly increases programming investments in its networks that it controls.").

[24] Hazlett, *Vertical Integration in Cable Television: The FCC Evidence* 5 (GMU Law Studies, Oct. 19, 2007), *available at* http://arlingtoneconomics.com/studies/vertical-integration-in-cable-television.pdf ("Firms that create or purchase inputs would be expected to employ these internal assets over external purchases, given transactional efficiencies available. In cable TV, for instance, program networks routinely charge cable operators license fees on a per-subscriber, per-month basis. These charges

marginalization—and it often leads to lower prices for consumers. The same effect arises when licensing films for distribution, either in theaters or on television:

> Along the metaphoric road of getting movies to the greater public, the studios act as the toll collector. The major studios collect this toll in the form of a distribution fee not only on the movies that they produce and finance but on other people's movies that they distribute. No matter how well or badly a movie fares at the box office, no matter how much money outside investors have sunk into it, the studio takes its cut from the gross emanating from the box office, the video store, and the television stations.[25]

Myopic focus on Comcast's carriage decisions misses the larger questions about incentives for greater content production and whether new content can reach consumers. Preventing the combination of content and distribution[26] could lead to fewer opportunities for independent programmers to reach cable TV audiences because it could reduce incentives for cable operators to invest in infrastructure,[27] thereby reducing the incentive to invest in valuable content which relies on distribution. In addition to the cable operator, other content producers are likely to benefit from

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result in each additional subscriber costing more to the operator. Such marginal costs can be eliminated, however, by owning the channel.").

[25] EPSTEIN, *supra* note 22, at section 1055.

[26] For example, by blocking or placing unnecessary conditions on the proposed merger because of vertical foreclosure concerns.

[27] It is important to note that Comcast has invested more in infrastructure than TWC has, which is likely due, at least in part, to incentives from past vertical integration. *See* DIANA G. CAREW & MICHAEL MANDEL, U.S. INVESTMENT HEROES OF 2013: THE COMPANIES BETTING ON AMERICA'S FUTURE 10 (Sept. 2013), *available at* http://www.progressivepolicy.org/wp-content/uploads/2013/09/2013.09-Carew-Mandel_US-Investment-Heroes-of-2013.pdf.

these capacity expansions. These investments are what lead to expanded channel capacity in the first place.[28] One scholar described this process as a virtuous circle in which

> Cable TV systems invest in program networks [and] they simultaneously invest in complementary assets… Better content improves the value of distribution conduits, just as improved transport facilities make cable programming more valuable. Hence, if cable operators see profits available from making new programming available, they enjoy incentives to build additional capacity (adding channel slots to cable infrastructure) in order to realize those returns. Other content producers are likely to benefit because the capacity expansions are likely to benefit more than just the cable operator. Given economies of scale and scope in capacity upgrades, an operator expanding its distribution network for some of its own programming can simultaneously add capacity to deliver much more.[29]

A related way vertical integration can be pro-competitive is by increasing incentives for innovation. The evidence suggests that when a company is vertically integrated,

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[28] Hazlett, *supra* note 24, at 9 ("Again, any evidence of favoritism exhibited by cable TV operators towards their own programming must be evaluated in the light of these market outcomes. Even where favoritism may exist, and cannot be explained by production or transaction cost efficiencies, dynamic efficiencies may well result. These occur where operators, partly in response to economic incentives offered by the lack of regulation, undertake to expand channel capacity. As seen currently, the dominant share of the capacity created by cable operators is allocated to unaffiliated program networks. Hence, the net effect of the incentives in place is to facilitate entry by non-MSO basic cable channels.").

[29] *Id.* at 6.

it is easier to bring innovative products to market more quickly. Comcast's own development is informative:

> [H]istorical adoption patterns of video on demand (VOD), DVD day-and-date release, Fancast Xfinity TV, and advanced advertising demonstrate that the launch and expansion of these products took longer than expected or necessary because of limits on the quantity, quality, and variety of content that was available to Comcast. There is no claim that the launch and delivery of new offerings was possible without vertical integration; rather, the critical point is that vertical integration can accelerate the launch and expansion of new products, services, and platforms, and increase experimentation.[30]

Vertical integration with NBCU and other content providers may allow the new combined Comcast-TWC entity to bring innovative products like these to the market much quicker and to more consumers because of a reduced concern about risk.[31]

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[30] Rosston & Topper, Response to Comments, *supra* note 23; see also *id.* ("In fact, DirecTV's example of Comcast gaining access to Sony/MGM content demonstrates this point...Comcast was unable to use contractual means along to overcome these frictions and had to participate in Sony's purchase of MGM to reach an agreement for VOD rights to Sony and MGM content. This access to content allowed Comcast to create 'Free Movies' category on VOD.").

[31] NBCU Comments, UK Competition Commission, http://www.competition-commis-si-on.org.uk/assets/competitioncommission/docs/pdf/inquiry/ref2010/movies_on_pay_tv/pdf/universal_response_to_issues_statement.pdf ("The current exclusive supply arrangements are usual and typical in other geographic markets, and considered by NBC Universal to be the most efficient way to optimise returns and protect the value of content to customers and consumers in subsequent windows, which is particularly important given the significant financial investments and risks involved in movie pro-

Finally, it is important to note that discussions of likely efficiencies from vertical integration are not purely academic. Consumers receive a pass-through rate of approximately 50% once the reduced price and increased investment in product and infrastructure are taken into account.[32] In his analysis of the 2002 AT&T-Comcast transaction, Howard Shelanski (among other things, former Chief Economist at the FCC) stated:

> The case for pass-through efficiencies is compelling for a firm that faces competition, particularly competition as vigorous at that in the MVPD market…Reductions of the direct costs of procuring programs will result in both a lower cost per-program for subscribers and in an increased number of programs being made available to subscribers…Efficiency gains from the merger may also be passed through to consumers in a less direct way through increased investment in network upgrades and the development and deployment of innovative services.[33]

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duction. Any change to the nature of these arrangements, even if it were possible, would create uncertainty and threaten to jeopardise the number and quality of films produced by NBC Universal.”).

[32] Rosston & Topper, Response to Comments, *supra* note 23.

[33] Mark Israel and Michael L. Katz, The Comcast/NBCU Transaction and Online Video Distribution (May 4, 2010) (FCC ECFS Filing), available at http://ecfsdocs.fcc.gov/filings/2010/05/04/6015593666.html

D. Foreclosure

High market share alone, without foreclosure, raises little antitrust or public interest concerns.[34] This is particularly true in markets characterized by technological innovation, multidimensional competition and economies of scale. As Harold Demsetz has put it:

> [o]nce perfect knowledge of technology and price is abandoned, [competitive intensity] may increase, decrease, or remain unchanged as the number of firms in the market is increased . . . . [I]t is presumptuous to conclude . . . that markets populated by fewer firms perform less well or offer competition that is less intense.[35]

Under the classic economic model, the prospect of monopoly profits encourages new entrants and new entrants drive down prices to competitive levels. It is true that barriers to entry exist in video and broadband. However, these barriers to entry are due to the substantial cost of entering into business and are not due to the exercise of market power by existing players. And despite these high costs, entry is occurring and Comcast has little ability to restrict it. The merger will not change this because this new entry and competition are coming from other technologies like satellite and wireless. Examining this intermodal competition is useful in determining foreclosure because while cable companies generally do not overlap in service areas, other

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[34] *E.g.*, United States v. International Harvester Co., 274 U.S. 693 (1927) ("The law . . . does not make the mere size of a corporation, however impressive, or the existence of an unexerted power on its part, an offense, when unaccompanied by unlawful conduct in the exercise of its power.").

[35] Harold Demsetz, *The Intensity and Dimensionality of Competition*, in THE ECONOMICS OF THE BUSINESS FIRM: SEVEN CRITICAL COMMENTARIES 137, 140-41 (1995).

technologies, like fiber, often compete with cable companies for the provision of broadband and video services.

Take the competition for the provision of broadband Internet services. From 2009 to 2013 the market share measured by technology for residential connections of at least 3 mbps download speed saw a drop in cable's market share from 74% to 66%.[36]

	2009		2010		2011		2012		2013
	Jun	Dec	Jun	Dec	Jun	Dec	Jun	Dec	Jun
Total Fixed	31,161	36,844	39,037	41,769	45,263	47,427	53,070	59,828	65,041
Cable	23,025	27,548	29,398	30,742	32,321	32,693	35,583	41,561	43,061
%	74%	75%	75%	74%	71%	69%	67%	69%	66%

This same time period saw ADSL/VDSL connections roughly triple from 4.9 million to 14.4 million, fiber to the premises connections over double from 3.2 million to 6.5 million, and satellite connections go from 0 to 788 thousand.[37] Perhaps the greatest technology success story is mobile wireless Internet, which saw its connections of 3 mbps and higher grow from a mere 196 thousand to almost double that of cable at 72 million.[38]

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[36] Internet Access Services: Status as of June 30, 2013 at 9, FCC (June 2014), available at https://apps.fcc.gov/edocs_public/attachmatch/DOC-327829A1.pdf.

[37] *Id.*

[38] *Id.*

The market for MVPD services tells a similar story. From 2010 to the end of June 2012, total cable MVPD subscribers decreased from 59.8 million to 57.3 million.[39] During this same time period, satellite based MVPDs increased their subscribers from 33.4 million to 34 million and telephone based MVPDs increased their subscribers from 6.9 million to 8.6 million.[40] And these figures do not take into account consumer shifts to OVD services.[41]

The transaction will also not give Comcast MVPD monopsony power. The merged company's national MVPD market share will remain below 30% after the divestitures. Two court decisions and subsequent market developments like OVDs make clear that 30% market share is not sufficient to increase Comcast's bargaining power vis-à-vis programmers to allow Comcast to foreclose/exert bottleneck power over programmers. The FCC's Office of Plans and Policy ("OPP") conducted experiments that support these court findings.[42] The OPP found that an MVPD's bargaining power did not differ substantially whether it served 27% of the market or 51% of the market.[43] Based on these findings, Comcast would need much more market share than the merger provides in order to increase its bargaining power to the extent necessary to threaten harm, and, in any event, it is far from clear that increased bargaining power

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[39] 15th Annual Report on Video Competition at 14-16, FCC (July 22, 2013), available at https://apps.fcc.gov/edocs_public/attachmatch/FCC-13-99A1.pdf.

[40] *Id.* at 61-62.

[41] *Id.* at 62-63.

[42] Mark M. Bykowsky, Anthony M. Kwasnica, & William W. Sharkey, *Horizontal Concentration in the Cable Television Industry: An Experimental Analysis* (OPP Working Paper Series, July 2002), *available at* http://transition.fcc.gov/Bureaus/OPP/working_papers/oppwp35.pdf.

[43] *Id.*

would actually harm consumers, particularly if it means lower program acquisition costs. The OPP numbers also support the conclusion that Comcast will not gain sufficient bargaining power to be at a significant advantage over its horizontal competitors.

Likewise, there are minimal concerns of foreclosure of non-affiliated programming by a vertically integrated Comcast. While there is evidence of exclusion in the market for distribution, exclusion is minimal at best. Economist Tanseem Chipty finds that "[o]perators who own premium services offer, on average, one fewer premium service and one to two fewer basic services than do other operators."[44] This is hardly the type or degree of harm that drives critic's concerns. On the contrary, the evidence suggests a vibrant marketplace, with a growing number of successful participants. The number of top-twenty networks owned by cable operators dropped from 41% to 27% from 1992 to 2005.[45] At the same time, there was a dramatic increase in the number and proportion of unaffiliated cable networks.[46] "It is unlikely that, were

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[44] *See* Tasneem Chipty, *Vertical Integration, Market Foreclosure, and Consumer Welfare in the Cable Television Industry*, 91 AM. ECON. REV. 428, 429 (2001).

[45] Hazlett, *supra* note 24, at 13 ("In 2005, just 27% of the twenty most profitable cable TV program networks were owned by cable TV operators...This represents a substantial decline in the level of vertical integration exhibited in earlier years. In 1992, for example, cable operators owned 41% of the top twenty program networks."). This trend has continued as Comcast, DirecTV and others have sold interests in several cable TV program networks in the past few years. *See* In the Matter of Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming, Fifteenth Report, Appendix B-1 (Jul. 19, 2013), *available at* https://apps.fcc.gov/edocs_public/attachmatch/FCC-13-99A1.pdf#page=189.

[46] *Id.* at 7 ("[T]he overall number of cable TV networks has expanded from 106 in 1994 to 531 in 2005. During this time, cable-owned networks increased from 56 to 116. In other words, non-cable

cable operators using vertical integration to foreclose independent rivals from accessing consumers (viewers and subscribers), unaffiliated programmers would launch hundreds of new channels during this period."[47]

Even assuming critics are correct and a vertically integrated distributor would want to restrict the availability of content, one should still recognize the limitations imposed by the marketplace. Now, more than ever, there is little reason that networks and other content owners must rely on cable for distribution. And where there is more than one MVPD provider, networks can choose among them. If a content owner does not find the prices for traditional distribution appealing, it can use other distribution outlets. Among these are self-distribution online and online distribution through another outlet, such as Hulu or Netflix.

A common fear is that vertical integration will kill "independent" programming. However, it is unclear what is meant by "independent." If it means "not affiliated with a distribution network," this amounts to an unjustified preference for ABC's "The Bachelor" (owned by Disney) over NBC's "The Biggest Loser" (owned by Comcast). If it means "not affiliated with a network," this amounts to an unjustified preference for "Wheel of Fortune" (started by Merv Griffin) over CBS's "The Price is Right." Both "The Voice" on NBC and "Survivor" on CBS were developed by the same independent producer—Mark Burnett. It seems extremely unlikely that Comcast would refuse to distribute "Survivor," or forego the licensing fees and withhold "The Voice" from competing distributors. The complex incentives of the marketplace make

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networks were about 33% fewer than cable-owned channels in 1994; by 2005, they were about 400% greater.")

[47] *Id.*

it impossible to draw simplistic conclusions, as so many of the commenters challenging the merger seek to do. And in any event, there is no reason to think the proposed merger will have any harmful effect in this regard.

Related to these points, and responsive to claims from Netflix and others that Comcast has the incentive to foreclose a competitive threat from new distribution sources, the facts suggest otherwise. For example, TiVo, which makes digital video recording and streaming products, filed comments in support of the merger. As TiVo notes,

> Over the course of the past several years, Comcast has partnered with TiVo to enable the provision of Xfinity On Demand to TiVo Premiere and TiVo Roamio customers in all of Comcast's current markets.... By integrating Xfinity on Demand, TiVo is able to provide its customers with a unique offering of being able to search for content across linear and video-on-demand cable services, as well as Internet-delivered services such as Netflix, Hulu Plus, YouTube, and more. This deployment demonstrates that providing retail devices with the full array of pay TV content can be achieved in innovative ways that do not undermine pay TV operators' business models.[48]

Particularly as more and more content and access move to Internet-based distribution, it is difficult to square Comcast's efforts to bolster TiVo's competitive offerings with claims that it is working to subvert, say, Netflix or Roku. Instead, both TiVo and Netflix offer alternative products to some of Comcast's offerings, but are also current

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[48] TiVo, Comments on Applications of Comcast Corporation, Time Warner Cable Inc., Charter Communications, Inc. and Spinco to Assign and Transfer Control of FCC Licenses and Other Authorizations, MB Docket No. 14-57 *available at* http://apps.fcc.gov/ecfs/document/view?id=7521817200.

complements. There is no clear incentive to subvert them and, more importantly, absolutely nothing about this merger that would increase whatever incentives Comcast may have to do so.

This point was addressed directly by the FCC in its review of the Adelphia/Comcast/Time Warner merger in 2006.[49] In response to claims from Free Press that the merger would give the companies incentive to "block their customers' access to non-affiliated providers of VoIP (such as Vonage) and video programming competitors (such as TiVo or Netflix),"[50] the FCC noted that

> Commenters and petitioners do not offer evidence that Time Warner and Comcast are likely to discriminate against Internet content, services, or applications after the proposed transactions are complete; nor do they explain how the changes in ownership resulting from the transactions could increase Time Warner's or Comcast's incentive to do so.

The same is true today, and the complete absence of evidence tying any purported discriminatory incentives to the proposed transaction speaks volumes.

II. Specific responses

A. Concerns Over Vertical Arrangements

Many commenters seem committed to re-litigating the Comcast/NBCU merger. To the extent that there are vertical concerns from the previous NBCU deal, they are addressed in that consent order and solving them will be as simple as extending the

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[49] Adelphia Order, MB Docket No. 05-192.

[50] *Id.* at ¶ 213.

consent order to TWC.[51] Indeed, the commenters do not point to any episodes where Comcast has used NBCU content in an anti-competitive fashion.

Concerns of whether an OVD can gain access to Comcast owned content are over-stated. The NBCU consent order addresses this issue. According to the FCC order,

> [f]or any Online Video Programming that any C-NBCU Programmer licenses to any Affiliated or non-Affiliated MVPD for online display, the C-NBCU Programmer shall provide that Online Video Programming at fair market value and on non-discriminatory prices, terms and conditions to any other MVPD for online display.[52]

In the consent decree with the Department of Justice, Comcast is bound to a wide range of terms requiring Comcast to make Comcast owned content available of comparable programming on economic equivalent terms to OVDs.[53] In addition, any agreements Comcast has with production studios concerning the distribution of video programming must contain either a grant of a right to provide the content to OVDs or the retention of the right for the production studio to provide the content to OVDs.[54]

Every OVD has challenges involved in gaining access to the content necessary to make their services attractive to consumers. Each OVD has responded to this need

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[51] Their extension should be seen as a pro-competitive benefit of this merger.

[52] FCC 11-4 at 122

[53] Modified Final Judgment at 9-14, United States et al v. Comcast Corporation et al, No. 1:11-cv-00106 (2013).

[54] *Id.* at 16.

for content in different ways. Netflix has created its own award winning shows like House of Cards and Orange is the New Black. OVDs like DramaFever and Crunchyroll license foreign produced content and subtitle it for domestic consumption. Other OVDs, like YouTube, allow users to generate their own content. OVD Twitch.tv grew from a website which allowed users to broadcast themselves playing videogames over the Internet[55] to a website that covers gaming events, features videogame related shows, broadcasts star video game players, and allows ordinary users to broadcast themselves playing videogames.[56] Twitch.tv currently has over 60 million visitors per month[57] and has concurrent viewership that rivals cable networks.[58] Twitch.tv was just purchased by Amazon for $970 million.[59] While, as discussed above, Comcast is legally required and financially incentivized to provide much of its content to OVDs, it seems that the concern over OVDs general access to content is also overstated. OVDs have had great success in originating and distributing new content and will continue to do so post-merger.

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[55] Casey Newton, *TwitchTV's hook is giving game players an audience*, SFGATE (Dec. 17, 2011), http://www.sfgate.com/business/article/TwitchTV-s-hook-is-giving-game-players-an-audience-2411088.php.

[56] *All About Twitch*, TWITCH, http://www.twitch.tv/p/about.

[57] *Id.*

[58] *Twitch: We compete with cable networks*, CNN, http://edition.cnn.com/video/data/2.0/video/business/2014/09/03/qmb-twitch-ceo-emmett-shear-intv.cnn.html

[59] Ryan Mac, *Amazon Pounces On Twitch After Google Balks Due To Antitrust Concerns*, FORBES (Aug. 25, 2014), http://www.forbes.com/sites/ryanmac/2014/08/25/amazon-pounces-on-twitch-after-google-balks-due-to-antitrust-concerns/. In earlier comments professors stated that Twitch was being purchased by Google. This was incorrect, the deal with Google was not closed due to antitrust concerns and Amazon purchased Twitch instead.

B. Concerns About Internet Interconnection

The key points that should be noted at the outset are that Internet content providers have multiple ways to deliver their traffic to any ISP, including Comcast, and that the vast majority of those paths are in highly competitive markets. These alternative paths include the transit providers, settlement-free peering partners and CDNs, as well as direct connections with ISPs themselves. At the same time, Internet content providers have always paid to deliver their traffic to ISPs, whether Comcast or any other ISP.

Comcast has publicly stated that there are several thousand such commercial transit delivery relationships, over 40 settlement-free peering partners and numerous such CDN delivery relationships. And, taking the transit market as an example to examine the highly competitive nature of these different paths to deliver traffic to Comcast, transit prices available to Internet content providers have fallen by a remarkable 99.94% on a price per Mbps basis since 1998.[60] The availability of these multiple alternative avenues to deliver traffic to Comcast, and the ready availability of access to a transit market where prices have been falling precipitously, together firmly constrain Comcast's ability to set prices for direct connections. Critics who claim that this merger will enable Comcast to leverage its greater market share to foreclose Internet content providers, or act as a "bottleneck," are conveniently ignoring the existence of this constraint on Comcast's pricing freedom.

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[60] *See Internet Transit Prices - Historical and Projected*, DR. PEERING INTERNATIONAL, http://drpeering.net/white-papers/Internet-Transit-Pricing-Historical-And-Projected.php.

To the extent that any questions remain about the operation of these commercial arrangements, they are not merger-specific. In fact, the merger will not change the interconnection arrangements that already exist in the market.

In addition to appreciating the fact that Comcast's bargaining power is constrained for the reasons noted, it is also important to appreciate that the bargaining power of Internet edge providers is not nearly as insignificant as some critics would claim. At the outset, we must recognize that edge providers come in all shapes and sizes; one size does not fit all. Some, like Netflix, generate an overwhelming percentage of traffic and are driving the exponential growth in traffic. Others, which make up the vast majority of the Internet, create far less volume. Meanwhile, in addition to generating a large share of the traffic and driving the increase in the overall volume of traffic, many of the big players, like Netflix and Google, have their own backbone and CDN networks, as well.

Post-merger, the bargaining power of smaller edge providers will not be affected at all. That's because those small edge providers (who happen also to be the vast majority of participants in the Internet edge ecosystem) will be able to choose from the multitude of choices in a highly competitive market to deliver their Internet content to Comcast. In fact, in the vast majority of the cases, these Internet edge providers will not have any direct bargaining relationship with Comcast at all because they will continue to deliver traffic to Comcast through transit, settlement-free peering or CDN partners of Comcast.

Further, the fact that there is no persistent or serious congestion at peering links into Comcast – as has been clearly established by independent research by David

Clark of the Massachusetts Institute of Technology[61] – means that these Internet edge companies are able to deliver their content without any hindrance, with or without this merger. As a result, there is little reason to believe that the merger's increased national broadband market share will affect the bargaining power – or the characteristics of content delivery – of small edge providers.

Meanwhile, post-merger, the bargaining power of the small number of edge providers that generate vast amounts of traffic will not be affected either. That's because in addition to the existence of the multitude of alternative highly competitive paths to deliver traffic to Comcast discussed earlier, these large edge providers will also be able to leverage the high demand for their Internet content among Comcast's broadband subscribers, as well as their enormous traffic volumes, to negotiate at least on even terms with a merged Comcast.

On the first issue of leveraging their popular Internet content to drive bargaining power in their favor, there is no better example than the case study of the Time Warner Cable and CBS dispute discussed earlier. That dispute clearly showed the ability of a content provider, in that case a programmer, to leverage the popularity of its content to tilt the bargaining scale in its favor. Those same dynamics would apply on the Internet if Comcast or any other ISP tried to foreclose Netflix or any other popular Internet content provider, or otherwise to act as a bottleneck. It is decidedly in Comcast's interest to negotiate with Netflix to provide Netflix's high-

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[61] Massachusetts Institute of Technology, *Measuring Internet Congestion: A Preliminary Report* (Jun. 18, 2014) at 2. A summary of Dr. Clark's research is attached to this Reply Comment as Appendix A and is also available at https://ipp.mit.edu/sites/default/files/documents/Congestion-handout-final.pdf.

demand content to its broadband subscribers at optimal quality and as efficiently as possible.[62]

On the second issue of leveraging enormous traffic volumes to drive bargaining power in their favor, the research by Dr. Clark discussed above provides important insights. Many analysts and commentators have pointed out that large Internet edge providers are able to route their enormous traffic in ways to exert commercial pressure on ISPs.[63] The research by Dr. Clark further highlighted the ability of large edge content providers to both determine, as well as avoid (or exploit) congestion at a moment's notice:

> Congestion does not always arise over time, but can come and go essentially overnight as a result of network reconfiguration and decisions by content providers as to how to route content."[64]

This analysis shows that the proposed merger should not present any concerns regarding Comcast exploiting its bargaining power vis-à-vis Internet edge providers in

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[62] *See* Hilary Lewis, Alex Ben Block, *Time Warner Cable Loses 306,000 TV Subscribers Amid CBS Dispute*, THE HOLLYWOOD REPORTER (Oct. 31, 2013, 6:17 AM), http://www.hollywoodreporter.com/news/time-warner-cable-loses-306000-652131; *see also* Comments of Joint Academics and Experts at 5, In the Matter of Applications of Comcast Corp. and Time Warner Cable Inc. for Consent to Transfer of Licenses and Authorizations, MB Docket No. 14-57.

[63] *See* Fred Campbell*, Netflix Secretly Holds Subscribers Hostage to Gain Favorable FCC Internet Regulations*, CENTER FOR BOUNDLESS INNOVATION IN TECHNOLOGY (Sept. 16, 2014), http://cbit.org/blog/2014/09/netflix-secretly-holds-subscribers-hostage-to-gain-favorable-fcc-Internet-regulations/.

[64] *Measuring Internet Congestion*, *supra* note 61 at 2.

a manner that would allow Comcast to foreclose or impede their access to its subscribers.

There is similarly no basis for government interference with the typical business disputes between powerful entities that have given rise to the complaints that animate these putative concerns, either. Given the enormous traffic volumes generated by large content providers like Netflix and Google, there is likely to be congestion absent edge provider/ISP collaboration to efficiently route that traffic. This means these entities will *and should* have a more direct relationship, and the demands of balancing and managing that traffic suggest no reason to think that such relationships should be settlement free. There is no reason to believe that the balance of bargaining power between the merged entity and major content providers will be tipped in favor of Comcast. If anything, current trends suggest continuing gains in bargaining power for major content providers.

Some commenters, like Netflix,[65] have pointed to facts such as Comcast's allocation of upload and download speeds as evidence of the unfairness of Comcast's interconnection fee policy, but these arguments ignore how data is actually consumed. No rational consumer believes she is paying to use her maximum bandwidth allocations every minute of every day. In fact, it would be extremely difficult for any consumer to actually do so. Consumers know they are paying to send and receive data *up to* their plan's maximum speeds on an intermittent basis. A consumer's usage of the Internet will see actual upload and download speeds vary wildly depending on what the customer – and her neighbors – are doing. For surfing the web or checking

[65] Petition to Deny of Netflix, Inc., In the Matter of Applications of Comcast Corp. and Time Warner Cable Inc. for Consent to Transfer of Licenses and Authorizations, MB Docket No. 14-57.

email, a typical consumer is using very little of either her upload or download bandwidth allotments. If a consumer wishes to download a purchased movie or videogame, then she will likely be using her maximum download bandwidth for a short burst, and very little of her upload bandwidth. If a consumer wishes to upload the photos she took on a recent vacation, then she will likely be using her maximum upload bandwidth and very little of her download bandwidth. Because consumers aren't constantly using their maximum bandwidth allocations, Netflix's argument that settlement free peering is impossible due to the way Comcast allocates its upload/download ratio is nonsensical.[66] If a Comcast customer chooses to stream a Netflix movie at the highest offered quality, while also uploading thousands of vacation photos as fast as she can, then even with a 105/20 data plan her actual consumption ratio would be 25 mbps down/20 mbps up.[67]

The fact that consumer bandwidth consumption habits vary both over time and between consumers actually illustrates the fairness of the interconnection fee models that are available in the market. As an ISP, Comcast must make pricing and network infrastructure decisions based on how customers use their allotted bandwidth. Comcast may rationally choose to make settlement free peering arrangements with networks that have a data send versus receive ratio in line with their projections of normal customer usage. In effect Comcast is using this ratio as a proxy for a balance in contribution to network value. If a network sends unusually large amounts of data to Comcast's network compared to the data it receives from Comcast, then it is also

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[66] *Id.*

[67] *Internet Connection Speed Recommendations*, Netflix Help Center, https://help.netflix.com/en/node/306. This assumes the customer is streaming Netflix's Ultra HD quality at its recommended speed and uploading at the customer's maximum upload bandwidth.

rational to allocate a price based on the inferred value that each party brings to the transaction. It has been estimated that Netflix's customers account for 34% of total Internet traffic downloaded in North America during peak evening hours.[68] Netflix has 35.7 million U.S. customers,[69] while there are 94 million fixed Internet connections in the U.S.[70]

There is a procompetitive justification for Comcast allocating a price for direct connections, just like there is a price for transit access, based on the value that it and Netflix brings to the table. For the reasons outlined earlier, Comcast is constrained by the existence of alternative highly competitive delivery paths and the enormous demand for Netflix's content. To derive anticompetitive motives or effects from these dynamics would betray economic logic.

Regardless of interconnection practices, there is nothing wrong with a two sided market for paying for data transmission through the last mile. Two sided markets occur when both the consumer and another party pay for a consumers access to a product. There are many examples of two sided markets that consumers are accustomed to and probably value. When a consumer buys a magazine, he is likely paying a low price for the magazine because the magazine contains advertising targeted at the consumer. Likewise, when a consumer pays for cable he is paying a lower rate due to the commercials displayed. Examples of two sided markets are even found among OVDs. Hulu customers pay a lower subscription rate for television

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[68] Rex Crum, *Netflix claims even more peak Internet traffic*, MARKETWATCH (May 14, 2014), *available at* http://www.marketwatch.com/story/netflix-claims-even-more-peak-Internet-traffic-2014-05-14.

[69] *Id.*

[70] Internet Access Services: Status as of June 30, 2013, *supra* note 36, at 11.

content because of the commercials Hulu displays. Extreme changes in Internet consumption due to new online services may necessitate a two sided market in order to more fairly allocate costs to those services and the consumers of that service.

Two sided markets can actually benefit consumers in two ways. First, consumers that are not changing their data consumption habits should not have to pay to subsidize consumers that are. If data consumption increases due to a new service then charging that service for the increase in traffic is an efficient and fair way of allocating costs to only the individuals that use that service. Second, charging the company providing the service is more favorable than the consumer because companies are generally in a better negotiation position than individual consumers. This is because while each consumer only represents one Internet subscription, a company's business can equal the value of many customers. This increased negotiating power should lower the overall cost of consuming the services data.

III. Conclusion

The implication that this merger is aimed at, or will have the effect of, increasing Comcast's power to control prices in the cable and broadband markets is unsupported. Not only does the merger confer clear, market-specific and procompetitive benefits on the merging companies, criticisms of the merger and its likely effects are insufficiently grounded in the economic realities of the rapidly changing markets in which the companies operate.

The various concerns, both general and specific, raised by some commenters in this proceeding lack sufficient factual and theoretical basis to support a conclusion that conditioning or thwarting the proposed merger would be in the public interest. As we have discussed, many of these critiques are rooted in assumptions derived from outdated economics that equate increasing firm size with anticompetitive harm. Instead, and in particular in these markets, increasing size is more likely a condition of survival and sustained success rather than an indication of market power.

The complicated dynamics of the video distribution and broadband markets preclude the legitimate application of simple precepts: Erstwhile competitors like Comcast and Netflix are not simply rivals, but also complements; seller power exerts an enormous constraint on distributors' conduct; consumer demand is constantly shifting and altering underlying relationships among firms; multiple distribution and interconnection paths deter foreclosure and preclude distribution bottlenecks; etc. Not surprisingly, past history suggests that efforts by regulators to predict and shape industry evolution in these markets is severely limited. Nothing has changed in that regard, and we urge the Commission to act with restraint here.