

Are Government-Owned Networks Abusing Market Power in the Set-Top Box Market? A Review of Rates

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Introduction

In the movie *Tin Men* (1987), a car salesman asks Bill Babowsky (played by Richard Dreyfuss) what he wants to pay for a Cadillac, to which Babowsky responds: "What do I really want to pay? I want to pay nothing." In reality, despite our preferences, we don't get to pay nothing for products and services; we have to pay prices that at least cover the costs of producing them.

Nevertheless, humans are prone to judge prices without much regard to cost. Take, for instance, the rental fee for a video set-top box. According to an informal survey of set-top box prices conducted by Senator Edward Markey (D-Mass.) and Senator Richard Blumenthal (D-Conn.), the average American household spends \$7.43 per month to lease a set-top box.¹ According to Senator Blumenthal, these fees for set-top boxes are "hideously vexing" as well as "unjust and unjustifiable."² Political interests groups agree. Public Knowledge and the Consumer Federation of America assert that set-top box fees are an "abuse of market power"³ and a consequence of the "exceptional ability to impose excess charges on consumers."⁴ Without evidence of its own, the Federal Communications Commission ("FCC") cites the Blumenthal-Markey Survey as prime evidence for its controversial proposal to force multichannel video providers to surrender their video stream, without compensation, to third-party service providers and set-top box manufacturers seeking profits in the video marketplace.⁵

Despite this political hailstorm about allegedly "high" prices, the problem remains that the Blumenthal-Markey Survey contains no information about the underlying costs of providing and supporting set-top boxes by the video industry. As such, claims about "unjust" prices based on "market power," as well as the FCC's central argument for government intervention, cannot be supported, unless the relevant standard is "I want to pay nothing."

*What can we conclude from the fact that government-run systems charge prices for set-top boxes equal to those of the private sector? *** A more sensible interpretation of the evidence, one based on economic theory, is that the prices charged for set-top boxes by both public and private providers are based on the full cost of providing them, or less.*

Still, the question of high prices has been raised, albeit carelessly, so perhaps it deserves some attention. In this PERSPECTIVE, I address the relationship of set-top box prices to costs by asking what the government would charge for a set-top box. To do so, I look at set-top box prices actually charged by government-owned and operated video systems. In many places across the country, the government is in the business of

leasing set-top boxes for television services through municipally-owned and operated communications networks. Municipal cable systems are found to charge, on average, a price of \$7.65 per month for a set-top box, which is slightly above the average price of private providers reported in the Blumenthal-Markey Survey (\$7.43 per month).

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What can we conclude from the fact that government-run systems charge prices for set-top boxes equal to those of the private sector? Are these government systems charging “unjust and unjustifiable” prices? Are they exploiting customers by levying “hideously vexing fees?” Are municipal networks “abus[ing] market power in the set-top box market” and exploiting the “exceptional ability to impose excess charges on consumers?” I find these explanations hard to swallow. After all, the FCC, the White House, and the aforementioned political interest groups all hold out these government systems as paragons of virtue.⁶ A more sensible interpretation of the evidence, one based on economic theory, is that the prices charged for set-top boxes by both public and private providers are based on the full cost of providing them, or less.⁷

Survey of Set-Top Box Prices

There are well over one hundred government-owned and operated communications systems in the United States.⁸ Some offer video services to residential consumers, providing an opportunity to collect data on the prices charged for set-top boxes by government systems. In gathering these data, I limit my attention to government-owned networks that offer video services directly to consumers.⁹ My survey includes prices obtained from the websites of the government providers.¹⁰ Like private providers, in some cases the first box is free (that is, the costs are loaded into the programming fees); in those cases, the prices reported are for additional boxes. This treatment of prices follows the approach of the Blumenthal-Markey Survey, which permits legitimate comparisons to those results. In all, I was able to gather a sample of HD set-top box prices for 26 municipal video systems.

According to the Blumenthal-Markey Survey, the average price for a set-top box from private providers is \$7.43 per month. No details are provided on how this figure is computed.¹¹ My own calculations from the Blumenthal-Markey Survey responses produces a simple (unweighted) average price for a HD set-top box (to the extent that can be determined) of about \$7.08. This \$0.35 difference in means (about 5%) is within the confidence interval. The subscriber-weighted average price is only \$6.00.

The summary statistics from my review of set-top box prices are provided in Table 1. Information on private systems is taken from the responses to the Blumenthal-Markey Survey (10 observations). From the sample of municipal providers (26 observations), the average HD set-top box has a monthly fee of \$7.65, with a standard deviation of 2.04. The minimum price is \$4.95, the maximum price is \$12.95, and the median is \$7.25.

Table 1. Set-Top Rental Fees by Provider Type

	Municipal Systems	Private Systems
Average	7.65	7.08
St. Deviation	2.04	1.99
Min	4.95	2.35
Median	7.25	7.00
Max	12.95	10.00
Obs.	26	10

Private providers have lower values across the board. The mean of the private systems is \$7.08 (or, \$7.43 according to Blumenthal and Markey). The median is \$0.25 smaller, and the minimum price of \$2.35 is well below the municipal systems minimum of \$4.95.¹² Even so, the prices are comparable. A means-difference test does not reject (at standard levels) the null hypothesis that the difference between the two averages is zero.¹³

A few anecdotes from these data may also be insightful. EPB in Chattanooga, the current poster-child of municipal broadband goodwill, charges \$8.50 per month for an HD set-top box.¹⁴ Greenlight in North Carolina charges \$4.95 for the first but \$12.95 for a second set-top box.¹⁵ In contrast, Comcast, the nation's largest provider of cable service, charges \$2.20 and \$2.50 per month for a HD set-top box.¹⁶ No municipal provider charges a fee that low. DirecTV, the nation's largest satellite provider (now part of AT&T), charges \$6 per month for an HD set-top box.¹⁷ Cox Cable, like EPB, charges \$8.50 for a set-top box.¹⁸ Some providers, both public and private, offer the first set-top box at no fee.

The results of this review of set-top box prices charged by municipal and private video systems shows clearly that there is little difference between the two. If anything, the prices of the municipal systems are a bit higher, but this difference is not significant. Consequently, any label put on the prices and motivations of the private providers must also apply to the government-owned and operated video systems.

Conclusion

In this PERSPECTIVE I have shown that the monthly prices of set-top boxes for municipally-owned and operated video systems are equal to those charged by private providers. Consequently, the claim that the prices charged by private providers for set-top boxes are “unjust”, “unjustifiable,” “hideously vexing,” an “abuse of market power,” and a “failure of competition,” must apply with equal force to the municipal systems leasing set-top boxes to video consumers.

Yet, economic theory shows there is no motivation for video providers to seek profits in the set-top box.¹⁹ You can't make money charging high prices for something consumers don't want. A plausible alternative take on the evidence, therefore, is that that both public and private firms set prices just to cover the full costs of the set-top box and its maintenance, or less.

Clearly, there is more to this set-top box issue than meets the eye.²⁰

NOTES:

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¹ Markey, *Blumenthal Decry Lack of Choice, Competition in Pay-TV Video Box Marketplace*, PRESS RELEASE, Office of Senator Ed Markey (July 30, 2015) (available at: <http://www.markey.senate.gov/news/press-releases/markey-blumenthal-decry-lack-of-choice-competition-in-pay-tv-video-box-marketplace>.)

² *Id.*

³ S. Stella, *A Competitive Video Set-top Box Market Could Save Consumers Billions*, Public Knowledge (January 20, 2016) (available at: <https://www.publicknowledge.org/press-release/a-competitive-video-set-top-box-market-could-save-consumers-billions>).

⁴ *Letter to Marlene Dortch from Mark Cooper and John Bergmayer*, MB Docket No. 15-64 (January 20, 2016) (available at: http://consumerfed.org/wp-content/uploads/2016/01/1-20-16-Set-Top-Box-Cost_Letter.pdf).

⁵ *In the Matter of Expanding Consumers' Video Navigation Choices Commercial Availability of Navigation Devices*, FCC 16-18, NOTICE OF PROPOSED RULEMAKING AND MEMORANDUM OPINION AND ORDER, __ FCC Rcd __ (rel. February 18, 2016) at ¶ 13.

⁶ M. Cooper, *Comparing Apples to Apples: How Competitive Provider Services Outpace the Baby Bell Duopoly*, Consumer Federal of America (November 21, 2013) (available at: <http://www.consumerfed.org/pdfs/comparing-apples-to-apples-11-2013.pdf>); T. Wheeler, *Removing Barriers to Competitive Community Broadband*, OFFICIAL FCC BLOG (June 10, 2014) (available at: <http://www.fcc.gov/blog/removing-barriers-competitive-community-broadband>); *Community-Based Broadband Solutions: The Benefits of Competition and Choice for Community Development and Highspeed Internet Access*, Executive Office of the President (January 2015) (available at: http://www.whitehouse.gov/sites/default/files/docs/communitybased_broadband_report_by_executive_office_of_the_president.pdf); Remarks of Gigi B. Sohn, Counselor to the Chairman, Office of Chairman Tom Wheeler, Fiber to the Home: 'Fiber on Fire' Conference, Anaheim, California (June 30, 2015) (available at: <https://www.fcc.gov/document/remarks-gigi-b-sohn-fiber-fire-conference>); S. Stella, *Public Knowledge Applauds Chairman Wheeler for Supporting Community Broadband*, Public Knowledge Press Release (February 2, 2015) (available at: <https://www.publicknowledge.org/press-release/public-knowledge-applauds-chairman-wheeler-for-supporting-community-broadba>); S. Gustin, *Lawmakers Ask FCC to Preempt States on Municipal Broadband Bans*, MOTHERBOARD (August 19, 2014) (available at: <http://motherboard.vice.com/read/lawmakers-ask-fcc-to-preempt-states-on-municipal-broadband>).

⁷ Or, perhaps the prices provide very little information, since the customer cares only about the sum of the costs of the video and any related equipment. In many cases, at least one set-top box is provided at no costs, indicating that the cost of that box has been rolled into rates. T.R. Beard, G.S. Ford, L.J. Spiwak, and M. Stern, *Wobbling Back to the Fire: Economic Efficiency and the Creation of a Retail Market for Set-Top Boxes*, 21 COMM LAW CONSPECTUS 1-58 (2012) (available at: <http://phoenix-center.org/papers/CommLawConspectusSection629.pdf>). *C.f.*, G.S. Ford, *Do Municipal Networks Offer More Attractive Service Offerings than Private Sector Providers? A Review and Expansion of the Evidence*, PHOENIX CENTER POLICY PERSPECTIVE NO. 14-01 (January 27, 2014) (available at: <http://www.phoenix-center.org/perspectives/Perspective14-01Final.pdf>).

⁸ M. Zager, *Census of Community Fiber Networks Rises to 165*, BROADBAND COMMUNITIES (August/September 2015) (available at: <http://www.bbpmag.com/Features/0815Census-of-Community-Fiber-Networks-Rises-to165.php>); G.S. Ford, *The Impact of Government-Owned Broadband Networks on Private Investment and Consumer Welfare*, State Government Leadership Foundation (April 6, 2016) (available at: <http://sglf.org/wp-content/uploads/sites/2/2016/04/SGLF-Muni-Broadband-Study-1.pdf>).

⁹ Some municipal systems rely on third parties to provide services over the government network, and these third parties are typically private firms.

¹⁰ Not all of these systems list detailed prices or prices at all, so these systems are excluded from the sample.

- ¹¹ See, e.g., H. Singer, *The Sketchy Stat Behind the FCC's "Unlock The Box" Campaign*, FORBES (February 5, 2016) (available at: <http://www.forbes.com/sites/halsinger/2016/02/05/the-sketchy-stat-behind-the-fccs-unlock-the-box-campaign/#35206cf369b8>).
- ¹² The minimum of \$2.35 is a simple average of Comcast's reported prices of \$2.20 and \$2.50.
- ¹³ The samples are not very large, so the test statistic is bootstrapped (1,000 replications). An assumption of unequal variance has little effect on the result. The test produces a (bootstrapped) z-statistic of 0.76 on a means difference of \$0.56. Nor can the null hypothesis that the mean of the municipal systems equals \$7.43 be rejected.
- ¹⁴ <http://epb.com/home-store/television>.
- ¹⁵ <http://www.greenlightnc.com/about/cable>. In the calculation of the statistics, I take an average of the two.
- ¹⁶ <http://www.markey.senate.gov/imo/media/doc/Response%20--%20Comcast%20%202012-11-14.pdf>.
- ¹⁷ <http://www.markey.senate.gov/imo/media/doc/Response%20--%20DirecTV%20%202012-11-14.pdf>.
- ¹⁸ <http://www.markey.senate.gov/imo/media/doc/Response%20--%20Cox%20%202012-11-14.pdf>.
- ¹⁹ *Wobbling Back to the Fire*, *supra* n. 7.
- ²⁰ G.S. Ford, *The FCC's Cynical Set-Top Box Play*, THE HILL (February 3, 2016) (available at: <http://thehill.com/blogs/pundits-blog/technology/268004-the-fccs-cynical-set-top-box-play>); T. Shields, *Cable Companies Don't Want FCC to Loosen Rules on Set-Top Boxes*, BOSTON GLOBE (February 18, 2016) (available at: <https://www.bostonglobe.com/business/2016/02/17/cable-sees-armageddon-plan-wrest-set-top-that-google-backs/YEyCu35KhPyXIDz9kc2fqI/story.html>); C. Kang and E. Steel, *FCC Proposes Changes in Cable Set-Top Box Market*, NEW YORK TIMES (January 27, 2016) (available at: <http://www.nytimes.com/2016/01/28/technology/fcc-proposes-changes-in-set-top-box-market.html>).