

# A Price Index for Bandwidth?

Bandwidth is getting cheaper ... or is it? A survey from Northwestern University points to data problems that need fixing.

By Steven S. Ross ■ *Broadband Properties*

Two researchers from the Kellogg School of Management at Northwestern University say quality-adjusted bandwidth costs have declined only slightly in the past decade. They're wrong, but their paper ([www.kellogg.northwestern.edu/faculty/greenstein/images/htm/Research/WP/CSIO-WP-0102.pdf](http://www.kellogg.northwestern.edu/faculty/greenstein/images/htm/Research/WP/CSIO-WP-0102.pdf)) raises questions for American broadband policy makers.

Shane Greenstein and Ryan McDevitt (now at the University of Rochester) wonder why broadband prices have not followed the sharp downward trend of consumer electronics. They hint at monopoly forces but ignore the obvious: Unlike consumer electronics, networks are labor-intensive – labor accounts for 80 percent of construction costs and 90 percent of operating expenses. Networks are a service industry, and bandwidth is not a manufactured product. Labor costs haven't fallen. Although Greenstein says the cost of running a network is minimal after it is built, he ignores the cost of amortizing capital.

The annual reports of major broadband providers – Comcast, Cox, Time Warner Cable and the RBOCs – show that average monthly revenue has been steady for a decade. Greenstein notes that in 2004, the median cable modem contract price was about \$45 for 3 Mbps downstream, and in 2009 the median price was \$53 for 8 Mbps.

But what a decade it was! In 2001, fewer than 5 percent of Internet users had broadband connections, and most broadband users settled for 256 Kbps or less. Today, only 14 percent of Internet subscribers use dial-up, and most broadband users enjoy speeds of 1.5 Mbps to 10 Mbps – a 6- to 40-fold increase in bitrate with huge increases in reliability.

*The lack of reliable data about broadband makes it hard for researchers to draw meaningful conclusions – and for policymakers to justify recommendations about Internet policy.*

## SHORTCOMINGS

Greenstein and McDevitt used a list of 1,500 U.S. cable and DSL pricing plans from 2004 to 2009 compiled by U.K.-based Point Topic. But without market share data, they could not produce a weighted average or construct a true price index.

Because they omitted plans not offered in two consecutive years, they missed low-price promotional plans. The lack of data on actual bandwidth – providers are not exactly honest in that department – ignores an important issue. No FTTH offerings are included. The authors end up estimating quality-adjusted price reductions of at most 10 percent over the five-year period.

But wait! Their approach is still more accurate than that of the U.S. Bureau of Labor Statistics (BLS), which compiles the official consumer price indices. BLS reports a 3 percent drop in five years, including a 3.1 percent increase from 2007 to 2009. The Kellogg methodology highlights the need to implement the National Broadband Plan's call for truth-in-advertising for broadband speeds.

International price comparisons, which have many of the same flaws, show

that U.S. monthly prices per Mbps of raw data capacity are far higher than the world average. Is this discrepancy due to monopolistic practices and the lack of open networks in the United States – in contrast with Europe, where only 60 percent of first-mile fiber systems are owned by incumbents? Or is the discrepancy due to the lack of the massive government subsidies seen throughout Asia and in small European countries?

I'm not sure. But I know subsidies have accelerated broadband benefits in Asia and that the dead hand of the regulators has slowed growth in Europe. In this country, we have both the dead hand and minimal government support. And if the biggest network builders in the United States are profiteering, the news has yet to reach Wall Street.

The National Broadband Plan offers meaningful help for data gathering. Says Greenstein, "Without real data and statistics, decisions are based solely on who has better arguments – in essence, a debate. A better consumer price index will help produce better decisions for the future of the Internet and its users." For that, the Bandwidth Hawk thanks the Kellogg School of Management. **BBP**

## About the Author

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