



## Are Broadband Prices “Too High?”

*In Connecting America, its recently released National Broadband Plan, the Federal Communications Commission (FCC) emphasized repeatedly and in different contexts the importance of “affordability” of broadband services. A variety of new policy initiatives were predicated on the need to remove barriers to, achieve, promote, ensure, advance, or otherwise enable “affordability.” After decrying, the “dearth of consistent, comprehensive, and detailed data” on the matter and lamenting that the “data that do exist are imperfect,” the Plan commits to monitoring “affordability” and taking remedial regulatory steps if it does not improve.<sup>1</sup> In consideration of this focus on affordability, The American Consumer Institute was recently challenged to assess the “affordability” of consumer access to broadband networks. This ConsumerGram sets forth the beginning of a consumer welfare centric approach. But, more importantly, it is put forth as an offset to rationalization on vague “affordability” grounds of policy initiatives which may balance harm consumers.*

### Introduction

We provide below three data sets germane to the issue of affordability of broadband access and the merits of various policy approaches. These address respectively three questions: what are the trends in broadband prices and service value; are there indications of pricing abuses borne of monopoly or market power; and what is the overall context of consumer prices?

Prices for most goods and services have increased in the past five years, some more so than others. Few have actually declined.

Wireless and wireline broadband service providers have underperformed the S&P 500 during the last five years both in terms of average profit margin and in terms of return on capital. There’s no suggestion in this data that these firms are using market power to inflate broadband prices.

Whether or not broadband services are “affordable” for a given consumer depends on individual preferences and incomes as well as the price. We cannot answer the question if all we know is the price. We cannot answer even if we also know the price-to-income ratio for a consumer. While the daily cost of broadband compares favorably to the price of a large cup of coffee, the cost of doing a load of laundry or the daily cost of taking care of a pet dog, whether or not a consumer thinks broadband is “affordable” depends on both context and the individual’s value priorities. Two consumers with the same income may disagree about affordability because of differences in the value they place on a particular good or service. Surveys show, for example, that as a group, families with children tend to place a higher value on broadband and are more likely to find a way to afford it.

---

<sup>1</sup> FCC Plan at 38.

Price Trends for Selected Consumer  
Goods and Services Categories  
2004-2009

<b>BLS Consumer Product or Service Category</b>	<b>% Change 2004-2009</b>
<b>All Items</b>	<b>13.6%</b>
<b>Food</b>	15.3
Bread	30.0
Potatoes	20.8
Peanut butter	20.0
Food at Pub. Schools	17.0
Rice, Pasta Cornmeal	36.9
Dried beans, peas, lentils	55.7
Fruits and vegetables	17.2
Eggs	30.2
<b>Housing</b>	13.1
Rental Housing	13.1
Primary Residence Rental	16.4
<b>Fuels/Utilities</b>	25.9
Utilities/Transportation	18.5
Public Transportation	19.5
Energy	32.0
Household Energy	24.3
Airline Fares	23.3
Motor Fuel	39.1
Water, Trash, Sewage Ser.	30.9
<b>Medical Care</b>	20.7
<b>Education</b>	31.7
College Tuition	35.7
Child Care/Nursery Sch.	23.7
<b>Funeral Expenses</b>	24.7
Telephone Services	5.3
Wireless communications	-4.4
Internet Access Services, et al	-22.7

### 1. Trends in Consumer Prices

The Bureau of Labor Statistics monitors consumer prices and reports their behavior in great detail. The table on the preceding page reports data derived from the most recent BLS

Report.<sup>2</sup> The data speak for themselves. Prices for most goods and services have increased in the past five years, some more so than others, and a few (wireless communications services and Internet access services including electronic information services) have actually declined.

Consumer prices overall have increased more than 13%; food prices are up more than 15%; housing is up over 13%; fuels and utilities are up more than 25%; medical care up more than 20%; education expenses are up nearly a third; and, funeral costs are up more than 25%. Except for families whose income has grown substantially in the past five years, these goods and services are increasingly “unaffordable.” There are some notable outliers in the BLS CPI data. These include only modest increases in telephone service prices (prices increased in nominal terms but have declined in real terms and relative to the CPI); actual rate declines for wireless communications services (down 4.4% in nominal terms); and, sharply declining prices for BLS-defined, internet access services (including information services).

## 2. Trends in DSL and Cable Broadband Rates

Although the BLS data suggest that the trend in prices for access to communications services is more encouraging than for consumer goods and service generally and for specific consumer budget items, they do not break out broadband access services specifically. Fortunately, a recent academic study from Northwestern University contains sample data that adequately characterizes price change for both telco provided DSL and cable modem services over the 2004-2009 timeframe. The Greenstein and McDevitt study estimates that DSL rates rose by .8% and cable broadband rates (including those provided via fiber connections) rose 5%.<sup>3</sup>

**DSL and Cable Services**  
**2004-2009 Average Rates and Cents per Bit per Second**

	2004	2009	Change 2004-2009	% Change 2004-2009
<b>Price DSL</b>	\$58.11	\$58.61	\$.50	.8%
Speed Downstream	1,959	3,616	1,657	85%
Cents/bits/second	0.0296	0.0162	-0.0134	-45.2%
<b>Price Cable</b>	\$48.86	\$51.35	\$2.49	5%
Speed Downstream	3,341	6,002	2,661	80%
Cents/bits/second	0.0146	0.0085	-0.0061	-41.7%

Source: Greenstein and McDevitt

Economists and policymakers have long recognized the difficulties of measuring price changes for a good or service that is increasing in quality or consumer value over time. Failure to adjust definitions or measures of output results in overestimates of “real” price changes and the cost of living. A frequent example is the substantial increase over time in the price of light bulbs (the name assigned to the illumination devices attached to electrical circuitry) accompanied by a

<sup>2</sup> CPI Detailed Report: Data for January 2010, available at <http://www.bls.gov/cpi/cpid1001.pdf>.

<sup>3</sup> Shane Greenstein and Ryan McDevitt, “Evidence of a Modest Price Decline in US Broadband Services,” Working Paper #0102, Center for the Study of Industrial Organization at Northwestern University, January 2010, Tables 3a and 3b. The data used in this study are derived from surveys by Point Data and adjusted by Greenstein and McDevitt who explain potential inaccuracies in the data set and their modifications to it. We agree and note that our reading of data from other sources suggests some potential inaccuracies. Those should have minimal impact on impressions drawn from our estimated changes in prices per bit per second.

dramatic reduction in cents per lumen-hours.<sup>4</sup> Although the sticker price per bulb is higher, consumers get more value per dollar spent since the increase in the bulb's lifetime exceeds the increase in its price.

In this regard, a bonus, a very welcome bonus, from the Greenstein/McDevitt study is the data they derive on price per unit of broadband throughput – a good indicator of the added value consumers derive from their broadband service provider. Consumers are getting more bang for their broadband buck and the Greenstein/McDevitt study provides an estimate. In addition to changes in monthly charges for DSL and Cable Modem based broadband services, the table above reports the Greenstein/McDevitt estimates of the average increases in speed (measured in bits per second) enjoyed by consumers. And, on that measure, consumers are enjoying lower real rates – in excess of a forty percent reduction -- measured by cents per bit per second of downstream data flows. Analogously, a similar situation would be reflected if the price of a “gallon” of gasoline was modestly increasing over time, but concurrently consumers were getting 80% more ounces or three additional quarts per “gallon.” Quality or content changes require redefinition of the unit of output for which prices are being tracked.

We hasten to add a related point here. Advocates for greater government involvement in broadband markets place great stock in international comparisons of broadband development. As with comparison of apples to oranges, the results depend very much on which of their respective, and numerous, characteristics we choose for comparison. The most authoritative economic analysis to date of various ranking schemes concludes: “The declining rank of the U.S. is primarily a statistical anomaly having little to do with broadband investment or adoption. The change in rank is due to differences in household sizes across countries, changing methods of counting broadband connections across countries, and simple regression to the mean.”<sup>5</sup>

According to OECD data, the US leads OECD countries and others in several different measures of investment. And, other expert studies rank the US first, second or third when alternative indexes of Internet readiness or connectedness are utilized.<sup>6</sup> Our point here is not so much to “pick a rank” for US Internet performance among other nations, but to caution as to the limited analytical value or policy relevance of such rankings. The recent FCC National Broadband Plan was quite complimentary about US broadband performance and, notably in this context, did not emphasize the widely-quoted but increasingly discredited OECD rankings of broadband penetration.

### **3. Broadband Rates and Market Power**

All the foregoing would be interesting, but with different policy implications if price changes for telecom and cable broadband service providers were shown or suspected to be the product of market power and thereby contributing to monopoly returns. The table below, based on data taken from annual reports to the SEC, refutes any such fear or claim. Based on audited data, the table shows that returns (measured by profit margins or return on invested capital) for

---

<sup>4</sup> William Nordhaus, “Do Real-Output and Real-Wage Measures Capture Reality?” The Economics of New Goods, Timothy F. Bresnahan and Robert J. Gordon (eds.), NBER Studies in Income and Wealth, No. 38. While the price of light bulbs has increased over the years, the cost to consumers measured in cents per thousand lumen-hours has declined by a factor of about 22: “...price indexes miss much of the action during periods of major technological revolution.” At p. 39.

<sup>5</sup> Scott Wallsten, “Understanding International Broadband Comparisons,” Technology Policy Institute, May 2008 at p. 17.

<sup>6</sup> Wallsten at 33-34.

broadband service providers are below, and some notable cases well below, the average for all S&P 500 index companies.

### Five Year Returns for Selected Firms

	5-Year Av. Profit <u>Margin</u> (%)	5-Year Avg. Return on <u>Capital (%)</u>
S&P 500	11.4	10.7
Telephone Network Providers		
AT&T	10.7	5.0
Verizon	7.1	4.7
Qwest	2.4	1.8
Wireless Network Providers		
Sprint	-19.4	-10.5
US Cellular	4.8	3.6
Metro PCS	6.8	3.8
Leap	10.6	4.6
Cable Network Providers		
Comcast	7.0	1.8
Time Warner Cable	-5.7	NA
Cablevision	-3.4	-2.6

### Conclusion

It is fair to ask: “Are broadband services “affordable?” It is also reasonable to expect variations on the simple responses of yes, no, maybe and we do not know. The answer is circumstantial and depends on the meaning of “affordability.” In a fundamental sense the affordability of a good or service to a specific consumer depends on three things – consumer income, consumer preferences, and price. Price alone tells us little outside the context of consumer incomes, tastes, service qualities and overall inflationary trends in the surrounding economy. Policies to promote affordability must reflect all of these. It is well established by Pew survey data that price is only one, and not necessarily the most important, factor influencing broadband adoption. Certainly, income is a limiting factor that may compel some Americans to go without broadband as it compels them to do without other goods and services. Whether prices are “too high” is a different question altogether.

Are broadband prices “too high?” The question reminds of the oft repeated television commercial querying: “Is Ed ‘Too Tall’ Jones, too tall?” Useful and reliable answers will reflect the context – compared to what and for what purposes are we inquiring.

**Posted March 25, 2010**

*The American Consumer Institute is a nonprofit educational and research institute. For more information or to contact us, visit [www.aci-citizenresearch.org](http://www.aci-citizenresearch.org).*