

The Need for Speed

COMPASS LEXECON

Research

Access to high-speed Internet service is fast becoming a necessity that consumers cannot live without. Nonetheless, a sizeable minority remain unconnected. With policymakers working on efforts to make broadband more widely available and affordable, a recent report by Compass Lexecon, an FTI subsidiary, helps to inform the debate.

Broadband Internet can transmit billions of bytes over fiber-optic cables. The economic benefits of high-speed Internet can also be measured in the billions. According to a pioneering

new study by Compass Lexecon's Mark Dutz, Jonathan Orszag and Robert Willig, American consumers enjoy more than \$30 billion of net benefits per year from access to broadband Internet connections.

As part of economic stimulus legislation passed earlier this year, the U.S. Federal Communications Commission is charged with developing a national broadband strategy "to ensure that all people of the United States have access to broadband capability." Indeed, even though broadband adoption has increased more than sixfold since 2001, some 43% of U.S. households have yet to adopt high-speed access in their homes. The Compass Lexecon findings underline the potential benefits of accelerating broadband adoption.

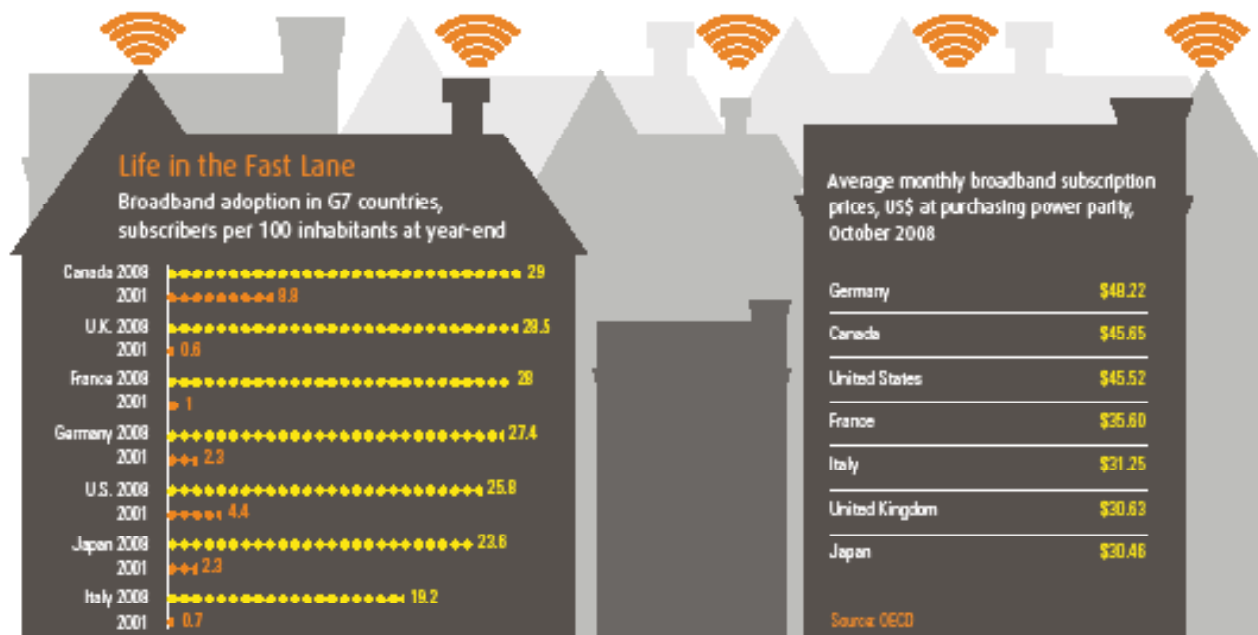
Size of the Prize

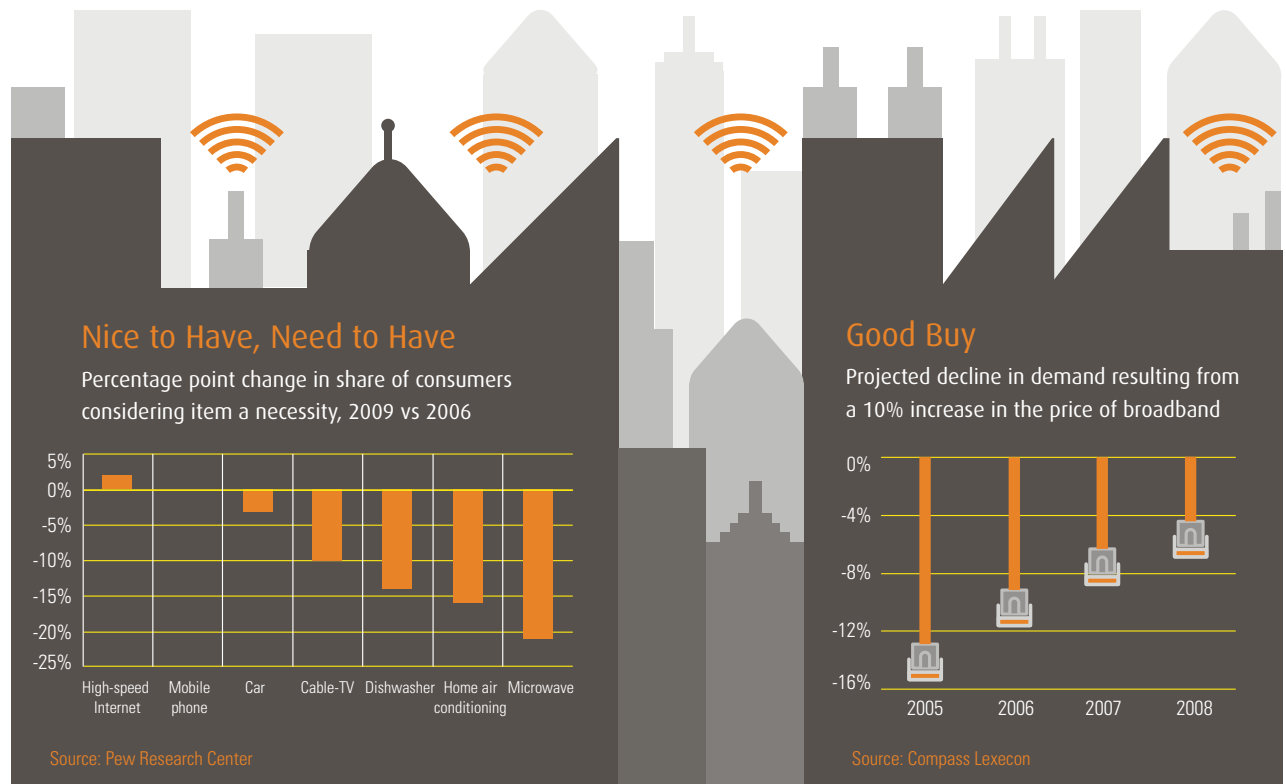
In a survey of American consumers in April, the Pew Research Center found that around one third of respondents

considered high-speed Internet a necessity. And broadband was one of the few items to grow in importance in surveys over the past three years.

But just because something is desirable doesn't necessarily make it useful. Thus, the researchers at Compass Lexecon sought to quantify the benefits of household broadband for consumers, deploying an array of econometric tools in the process. The goal was to identify the 'consumer surplus' associated with broadband access – that is, the value of the service to subscribers above what they actually paid for it. If the actual value of a service is less than its price, nobody will buy it. On the other hand, if the value surpasses its price, buyers receive benefits from the service that are not captured simply by how much is spent on a particular service.

To determine the actual surplus from broadband Internet access, Compass Lexecon's researchers analyzed a sample of broadband purchasing data for 30,000 households from the





largest 100 metropolitan areas in the U.S. between 2005 and 2008, and then extrapolated up their findings to the U.S. population. Based on pricing and adoption rates in the sample, the researchers could estimate consumers' willingness to pay for broadband under a variety of conditions.

A 10% rise in the price of broadband would have led to a 15% decline in demand in 2005 whereas, in 2009, a 10% rise in price would result in only a 7% decrease.

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Thus, growth in the value of broadband to consumers increasingly outstrips a rise in its price, implying that the size of the total consumer surplus is growing. At current prices, the net consumer surplus for broadband is \$31.9 billion per year; Compass Lexecon estimates, up from \$20.1 billion in 2005.

Onwards and Upwards

There are strong reasons to believe that the true value of broadband is significantly larger than these estimates. The research looked only at fixed-line broadband use at home and estimated the aggregate consumer surplus. Outside of the scope of the study were mobile wireless broadband, consumer gains as the productivity gains from business users are passed on, and the producer surplus enjoyed by broadband providers, as well as firms whose services become more economical or feasible as the speed of Internet access increases.

Finally, broadband access can also be considered an 'experiential good' – once consumers experience high-speed Internet access, they tend to value it more highly than if

they had not experienced it before. The size of the consumer surplus would therefore grow if the current share of households with dial-up or no Internet access were to try broadband for the first time.

For companies, the case for greater broadband adoption is compelling. Compass Lexecon researchers found that 22% of workers with broadband regularly access their employer's network from home versus only 8% of employees with dial-up access. Given the well-established benefits to employee productivity and retention that stem from flexible working practices, anything that can be done to make working away from the office easier should be encouraged. Broadband also allows firms to open new sales channels, develop new product markets and expand customer-service possibilities.

The steady expansion of Internet access over the past 15 years has revolutionized the workplace, not to mention the world. The next step is expanding access and affordability to broadband, which promises to deliver billions of new opportunities across all segments of American society. ■