



News Coverage

The Georgetown Center for Business and Public Policy

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September 2009 –The recent study released by Senior Policy Fellow Dr. Robert Shapiro and Dr. Kevin Hassett, "[Towards Universal Broadband: Flexible Broadband Pricing and the Digital Divide](#)" has received the following media attention:

[Communications Daily](#)*, 9/2/2009

The fastest way to bring universal broadband access to all Americans is to charge higher prices for the biggest bandwidth users, said a study by Georgetown University senior fellow Robert Shapiro funded by the university. The shift in Internet use from text to video is ramping up demand for bandwidth, and could slow the spread of broadband without significant investment, Shapiro said. He projected that a \$300 billion investment over the next 20 years in broadband infrastructure will be needed to provide universal access throughout the nation. "The question is how do we pay for that investment," he said in a conference call with reporters. Two approaches were examined in the study. One would raise prices for all users, the second would raise prices for the 20 percent of users that are the heaviest consumers of broadband. The latter model would speed broadband access to the poorest households in the U.S., Shapiro said. He did not quantify what price increase would be needed to achieve broader access. The report said the university's Center for Business and Public Policy provided support for the research and that the views and analysis were solely those of the authors.

*Communications Daily is available through subscription only

[Study Touts Flex Pricing for Universal Broadband](#)

by **Chloe Albanesius**

PC Magazine 9/1/09

A flexible pricing model for broadband will help the United States reach universal broadband access by 2017, according to a new study released by Georgetown University.

Those projections, however, only hold true if bandwidth hogs pick up the tab for 80 percent of the projected \$300 billion in infrastructure investments that will be needed over the next 20 years, according to a report from the university's Center for Business and Public Policy.

At this point, about 35 percent of people who make less than \$20,000 annually have access to broadband. That number increases to 53 percent for those making between \$20,000 and \$30,000, about 82 percent of people making between \$75,000 and \$100,000, and 88 percent of those with incomes over \$100,000 per year.

If the U.S. continues on its current rate of adoption, about 99 percent of people making less than \$30,000 per year could have access to household broadband by 2017, according to the report. However, that's assuming that the Internet also stays the same, which – given the increased audio and video usage online – is not going to happen.

To keep up with the pace of the Web, this country is going to need an investment of about \$300 billion over the next 20 years, but how do we pay for that?

Researchers Robert Shapiro and Kevin Hassett ran two simulations: spreading that \$300 billion equally among all broadband users; and using a flexible pricing model in which the minority of high-bandwidth users would pay a higher price.

Spreading out the price equally, only about 79 percent of people making less than \$30,000 would have broadband home access by 2017, according to Shapiro and Hassett. Using a flexible pricing model? About 98.5 percent.

To reach the second conclusion, however, the study puts 80 percent of the costs – or \$240 billion – on the top 20 percent of users. Shapiro and Hassett, however, were not too concerned given that high bandwidth users will go to any lengths to retain their level of service.

"Heavy users are assumed to be relatively price insensitive, so their broadband subscription rates remain unaffected by price increases," the report said.

The duo acknowledged that they do "not have adequate data to assess this assumption, but it is reasonable given the likelihood that habit formation would drive consumers to continue the practices that have driven their high bandwidth usage to date."

This type of flexible pricing plan is already in effect for Comcast residential customers, who are restricted to 250GB of usage per month. AT&T is also running bandwidth cap tests, and Time Warner was testing a similar system but backed out temporarily amongst customer backlash.

Shapiro, however, stopped short of admitting that his plan was actually calling for bandwidth caps.

"We're not talking about a bandwidth cap," Shapiro said during a call with reporters. "We were looking simply at the different pricing models and their impact on the projections of broadband uptake based on these income sensitivities."

The report does not specify how ISPs should implement pricing, Shapiro said. "The most important thing to me as an economist is the flexibility – that is, Internet providers can better determine than I can the particular model that works best."

[Can "flexible broadband pricing" fix the digital divide?](#)

By Matthew Lasar

Arstechnica 9/1/09

Two economists say that if consumers with the biggest taste for bandwidth don't pay "a little more" for their appetite, it will take too long to bridge the digital divide.

For Clinton administration economic advisor Robert J. Shapiro, the broadband powered Internet has been something like an all-you-can-eat restaurant, where everybody pays the same tab, no matter how much they consume. But of late the bistro's owners have discovered a rather disturbing trend. "There's some small percentage of its customers who come in and consume five desserts, six desserts, seven desserts, and three main courses," he explains. "People with really big appetites."

So what do they do next, the proprietors ask themselves. "We're going to have to raise our prices to finance this extra consumption by these people," Shapiro says they decide. But: "Do we ask everybody to pay more money? If we do we're going to lose a lot of our customers, or not attract more customers who would have eaten a normal amount."

The solution is simple: if you eat five desserts, you pay a little more, they conclude. "Well, if you represent twenty percent of all broadband users and you're going to consume eighty percent of bandwidth," Shapiro concludes, "then economically you should, the most efficient result is, that you pay a little more."

If you've followed debates over broadband pricing and network management over the last few years, you've probably heard something like this analogy at some point. But Shapiro and former Federal Reserve economist Kevin A. Hassett at the Georgetown Center for Business and Public Policy have given it a somewhat different spin, arguing that some people paying a little more is the solution to bridging the digital divide.

"If costs are shifted more heavily to those who use the most bandwidth and, therefore, are most responsible for driving up the cost of expanding network capabilities, the digital divergence among the races and among income groups can be eliminated much sooner," they write. In fact, their new study projects that if the biggest bandwidth consumers pay more of the bill for network expansion, almost all Americans will adopt some kind of broadband service by the second half of the next decade. But without embracing that policy, the study warns, 13 percent will not subscribe, even among consumers who earn \$75,000 or more.

Digital delay

Shapiro and Hassett suggest that while the country has made some progress in closing the divide since the Department of Commerce first identified the problem in 1995, this nasty recession we're in has slowed the good news down, at least for the moment. Broadband adoption grew only slightly for African-Americans between 2008 and 2009, they say (43 to 46 percent growth so far), while among whites it has jumped from 57 to 65 percent.

Citing Pew surveys, the authors note that high speed Internet penetration is still heavily skewed, with about 88 percent of those in the \$100,000 plus bracket range having access, while only slightly more than half of \$20 to \$30k households signed on. Price is the strongest determinant of broadband adoption, they say, and lower income consumers are particularly sensitive to changes in subscription rates, which have risen slightly of late. This hasn't stopped continued broadband account purchasing, they note, but has probably slowed it down.

"The link between prices and broadband adoption suggests that higher prices for all consumers will slow the drive to universal broadband and expand the gap that now separates white from African-American and the less affluent from wealthier citizens," they suggest.

Meanwhile ISPs are under big pressure to keep up with the growing demand for video and audio—the investment price tag for needed expansion costing as much as an extra \$300 billion over the next two decades, they predict (Shapiro and Hassett took their data here from a 2007 U.S. Internet Industry Association study).

Flat rate = flat growth

So how should broadband rates be adjusted to fund this investment price tag? Shapiro/Hassett's economic projections conclude that a "flat rate" pricing model gets the country 79.4% penetration for people under \$30k by 2017, and 86.4% for people over \$75,000 in the same year. But in a scenario in which "80 percent of the additional cost [is] allocated to the 20 percent of very high bandwidth users," even lower income household broadband adoption will rise to 98.5 percent in 2017.

"To the extent that lower-income and middle-income consumers are required to pay a greater share of network upgrade costs, we should expect a substantial delay in achieving universal broadband access," the study concludes. "Our simulations suggest that spreading the costs equally among all consumers—the minority who use large amounts of bandwidth and the majority who use very little—will significantly slow the rate of adoption at the lower end of the income scale and extend the life of the digital divide."

At a press conference Georgetown held for the study on Tuesday, we asked Shapiro exactly how he thought ISPs should distribute future billing among consumers. "The most important thing to me is flexibility," he told us. "Internet providers can better determine than I can the particular model that works best. What we need, frankly, is an economic and regulatory environment that allows that flexibility to our broadband providers, because if we don't, we may significantly slow the spread of broadband."

The problem for regulators, of course, will be extending to ISPs the kind of flexibility that encourages investment, and not the kind that invites the proposed price gouging data caps that Time Warner Cable finally withdrew after weeks of public outrage.

Blog Coverage

[Universal broadband: when and for how much?](#)

by Wendy Wigen, [EDUCAUSE](#), 10/1

If current broadband adoption trends continue in the United States, we will achieve 99% penetration of broadband by 2016. But there is a catch. The Internet is changing. New video-based content demands bandwidth levels that will require upward of a \$300 billion investment in improved infrastructure. Assuming we want to meet this demand, who is going to pay? That was the thesis upon which the study, "Towards Universal Broadband: Flexible Broadband Pricing and the Digital Divide" is based.

On September 1, Dr. Robert Shapiro introduced this new study (co-authored by Dr. Kevin Hassett) with a straightforward discussion of their research findings. In order to achieve ubiquitous broadband adoption, disparities caused by race, geography and household income must be eliminated. Yet, the price increases that are necessary to pay for new infrastructure only exacerbate this digital divide.

The study compared two pricing models: the current pricing structure which is basically a flat rate monthly fee, and a flexible, or tiered, pricing model based on usage. Using an “all-you-can-eat” restaurant as an analogy, Shapiro explains how raising prices for all customers to pay for improvements needed by the heavy users will slow the adoption at the other end of the spectrum... the low end user. The author’s conclusion is that, if our public policy is to reach a state of ubiquitous broadband adoption sooner rather than later, then we should adopt a flexible pricing model that will continue to attract the low-end user while still providing the improvements needed for the high-end user.

Of course there are other ways of attacking this issue as well. The EDUCAUSE paper, A Blueprint for Big Broadband advocates government matching funds to offset the capital needed to build advanced networks. This infusion of money would be tied to a requirement to keep prices “affordable” and to keep networks “open” and therefore is not attractive to many of the larger network operators. However, with 2200 applications for the first round of funding in the recent broadband stimulus program, it still seems to be a viable alternative. The problem for the EDUCAUSE community in a tiered or flexible pricing proposal is that we *are* the heavy users.

[What Price, Broadband?](#)

by Bret Swanson,

Maximum Entropy, 9/3

See this new paper from economists Rob Shapiro and Kevin Hassett showing how artificial limits on varied pricing of broadband could severely forestall broadband adoption.

To the extent that lower-income and middle-income consumers are required to pay a greater share of network costs, we should expect a substantial delay in achieving universal broadband access. Our simulations suggest that spreading the costs equally among all consumers — the minority who use large amounts of bandwidth and the majority who use very little — will significantly slow the rate of adoption at the lower end of the income scale and extend the life of the digital divide.

If costs are shifted more heavily to those who use the most bandwidth and, therefore, are most responsible for driving up the cost of expanding network capabilities, the digital divergence among the races and among income groups can be eliminated much sooner.