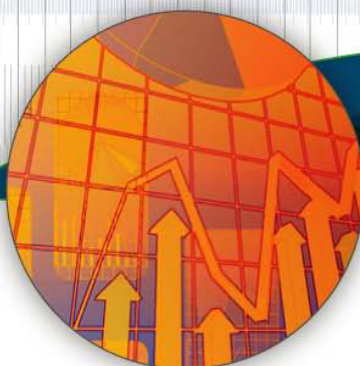
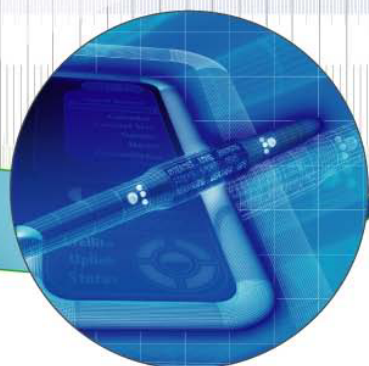


Broadband in America: Access, Use and Outlook



Broadband in America: Access, Use and Outlook

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The discussion surrounding how best to promote broadband Internet access in the United States relative to other countries persists, with compelling arguments mounting on all sides. The principal goal of this paper is to look beyond the issue of national rankings and examine broadband in America from the eyes of the US consumer.

The broadband debate until now has been decidedly macro in scope. But the decision to adopt broadband at home is largely decided by individuals and their households. This paper focuses on the micro underpinnings of broadband adoption - what individuals and households are doing and how they perceive the broadband landscape. While much of the broadband debate has focused on the US' relative position vis-à-vis other countries, this paper sidesteps that piece of the debate by centering squarely on US households. By doing so, this study is able to shed light on consumer perceptions of the following questions:

- Who has broadband, who doesn't, and why?
- What compels a household to subscribe to broadband at home?
- Does speed matter?
- How do consumers use the Internet at home and how does having a broadband connection impact usage?
- What is the inclination of households towards broadband adoption into the future?
- What is the outlook for consumer broadband in the US?

The findings of the study are clear. The prevalence of broadband in the home has grown significantly. For the first time, there are more households with broadband than without. Above and beyond broadband at home, access outside the home is also playing a vital role in the broadband story. Taken together, 72 percent of all adults either have broadband at home or regularly access a broadband connection outside the home.

Moreover, the findings of this study reveal that media-rich digital entertainment, content and services like online video and streaming audio play a central role in the decision to subscribe to broadband at home and a major motivation towards upgrading in the future. The study also clearly finds that greater facilities-based competition should help improve Internet connection speeds - a major catalyst for broadband adoption - and broadband subscription costs - a major deterrent to broadband adoption.



Key Insights

- **Broadband Adoption in the US is Robust**

57.8 million US households subscribe to broadband at home - 51 percent of all households - an increase of 21 percent in the last 12 months

- **Broadband is the Primary Internet Connection in US Homes**

Seventy-five percent of US adults with Internet access at home subscribe to broadband

- **Broadband Access Outside the Home is a Vital Component of Total Access**

42.6 million adults - 43 percent of all adults without broadband at home - regularly access a broadband connection outside the home

- **Seventy-two percent of All US Adults Regularly Access a Broadband Connection**

In addition to 51 percent of adults with home broadband, 21 percent of adults without home broadband regularly access a broadband connection outside the home

- **Speed Matters**

Sixty-five percent of current broadband subscribers upgraded for a faster Internet experience

- **Broadband Adoption Growth to Continue**

Forty-four million adults - 20 percent of non-subscribers - expect to have broadband at home within the next two years

- **Increased Digital Entertainment Use is a Major Driver of Adoption**

Current subscriber adults with Internet connectivity at home point to increased media-rich digital entertainment use as a key motivating factor in the decision to upgrade to broadband

- **Price is a Major Deterrent to Broadband Adoption**

Fifteen percent of all non-subscribers say price is the number one reason they don't have broadband at home

Who Has Access to Broadband?

Access to broadband in the US is a vital concern for a myriad of reasons. Multiple studies suggest wide diffusion of broadband will lead to broad economic growth, including both job and income expansion. Broadband access enlarges lines of communications which can boost competitiveness in an increasingly global business environment. Furthermore, increased broadband access also brings with it the hope of widely disseminating knowledge and improving and increasing services like healthcare and distance learning. Increased broadband access also augments technology use, spurring innovation and other positive outcomes as a result.

Today, over 57.8 million US households subscribe to broadband at home - an increase of 21 percent in just the last 12 months. But perhaps even more remarkable than the 51 percent of US households currently subscribing to broadband at home is that 75 percent of all US households with Internet connectivity at home subscribe to broadband. This highlights the paramount role broadband plays in home Internet connectivity and only strengthens the importance of ensuring robust access to broadband in the US.

As broadband increases as the primary Internet connection of choice in US homes, so does its tenure. The average broadband household has had broadband for 3.7 years. But this figure masks the extreme growth broadband has experienced in recent years. As mentioned earlier, in just the last year, the

number of US adults with broadband at home has grown by 21 percent. Moreover, 28.5 million US households - 49 percent of all broadband households - have had broadband at home for three years or less.

While much of the broadband debate has focused specifically on broadband at home, this is only part of the broadband story. US adults are also increasingly accessing broadband connections in numerous places outside the home. Today, 46.2 million US adults without broadband in their home regularly go online through a broadband connection outside of their home. Together, 72 percent of all US adults either have a broadband Internet connection at home or regularly go online through a broadband connection outside of the home.

These additional 46.2 million individuals go online from access points at work, friends and relatives homes, public libraries and government centers, schools and universities, and even through portable devices like wireless phones. Table 1 highlights the percent of US adults regularly accessing broadband at locations outside their home by the type of Internet connection they have at home. These results highlight how broadband Internet connections outside of the primary residence have become an ever-important component of broadband access - painting a much more enlightening and complete vision of broadband access.

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Table 1
Percentage of Consumers Accessing Broadband Elsewhere by Type of Home Internet Connection

	Total US	Broadband at Home	Internet (Not Broadband at Home)	No Internet at Home	No Computer at Home
Percent of all US Adults	—	51%	17%	7%	26%
Percent Accessing Broadband Outside the Home	53%	61%	51%	36%	41%
Your Workplace	32%	43%	30%	18%	14%
Public Access Locations (i.e., Library or Government Center)	21%	16%	23%	17%	29%
Wireless "Hotspots", such as a Coffee Shop	9%	14%	4%	3%	3%
School or University	15%	18%	16%	8%	12%
Relative's House	18%	21%	14%	11%	18%
Friend's House	16%	17%	11%	10%	17%
Through Blackberry or PDA Device	5%	8%	2%	1%	1%
Through Wireless Phone	7%	9%	6%	6%	6%

*Not Mutually Exclusive



Speed Matters

Connection speeds matter in an absolute sense when it comes to broadband access; faster speeds can help facilitate service offerings and other Internet-based applications at home. Many also argue faster speeds define what is possible - setting the stage for a plethora of yet undiscovered or underutilized Internet-related service offerings, applications and innovations.

Speed appears to matter for US households as well. Sixty percent of broadband households indicate they first subscribed to broadband because they wanted a faster connection and greater speed at home. Additionally, five percent of households indicate they wanted to download files faster or the previous connection they had was too slow or frustrating. Collectively, 65 percent of current broadband subscribing households (37.5 million households) upgraded to broadband because of speed.

At the same time, however, 82 percent of households do not know the speed of their home broadband connection. It is clear while households indicate broadband speed is important, it is important to them in a relative sense and not an absolute sense. Households do not appear to care about the actual speeds they achieve with their broadband subscription as long as that connection allows them to perform tasks, run applications, and gain information quickly and effectively.

With the help of competition, consumer demand for increased speed could also indicate a positive trend for future broadband speed. Recall, 49 percent of all broadband subscribing households have had broadband for under three years - so for a large number of households broadband is still a comparatively new service. If relative speed is what actually matters, these results suggest speeds will increase in the future as households - after becoming accustomed to a certain speed range over a longer length of time - begin desiring and demanding faster connections. This might indicate Internet speeds in general and broadband speeds specifically will continue to increase into the future as service providers increase the amount of bandwidth households have access to in an effort to appease customers who want faster speeds and increased bandwidth.

The Service Provider Landscape

In almost every market, competition is important for consumers in establishing competitive pricing and a choice of service offerings. The positive news is that, in the market for broadband at home, consumers perceive to have at least minimal choice in broadband service providers. Today, a typical US household perceives the presence of 2.2 different providers of broadband service in their area. Currently, 21 percent of households state that they have only one service provider from which they can purchase broadband in their geographic locale. For those households that have broadband, this does not appear to impact price nor their decision to subscribe to broadband - suggesting competition in some markets is helping consumers in other markets.

There is a risk in markets with a single provider of a given service that the sole merchant will constrain output and raise prices - charging the monopolist's price. Across the board, however, consumers are reporting that the average monthly price paid for broadband by US households is \$40 a month. This average does not appear to change in areas where consumers perceive there to be more than one provider.

These findings do not disprove that lone service providers have or exercise market power in geographic areas where they are the only service provider option, but these findings do suggest any market power or discrimination does not show-up in aggregate data on pricing and adoption. Reduced or limited competition could impact a plethora of broadband characteristics - from price to speed to customer service to service offerings. Furthermore, just because geographic areas with a single service provider do not exhibit monopolistic signs in aggregate does not mean some of these service providers are restricting output and raising prices now or that they could at any point in the future. Ensuring competitive markets ensures households have access to the widest array of available service offerings at competitive prices. This is most important when examining households who reported that they have not upgraded because it is too expensive (more discussion later in report). As witnessed in other communication service markets, more competition will bring down prices and incentives providers to upgrade their service offerings.

Finally, bundling of services appears to be used frequently

and broadband providers appear to leverage the installed base of current customers. Only 18 percent of households subscribe to broadband from a provider that does not also provide the household's telephone or television services - with 21 percent of households receiving broadband from a company that provides both the households' telephone and television subscriptions. Broadband subscribers are almost equally divided among cable (46.6 percent) and DSL (49.9 percent), with 3.9 percent having a broadband connection besides cable or DSL.

Understanding Where Broadband Service Is Not Available

Not every household in the US can subscribe to broadband. In certain geographic areas, broadband is simply not available. The results of this study find 11 percent of households perceive they do not have a broadband service provider in their area. But of these roughly 12.5 million households, 53 percent (6.6 million households) do not have a home computer and 14 percent (1.7 million households) do not have any type of Internet connectivity at home.

Because households either do not have a home computer or do not have some type of Internet connection at home, there might be less incentive for these households to be fully informed about potential broadband providers in their area. Therefore these results might overstate the true number of households that are unable to subscribe to broadband. Nevertheless, only 23 percent of these households (2.9 million US households) claim their primary reason for not subscribing to broadband is that it is not available where they live.

Of the 12.5 million households ascertaining there is no broadband provider in their area, 42 percent are in urban areas, 19 percent are in suburban areas, and 39 percent are in rural areas. The percentage of households in urban areas without even a single potential service provider might add credence to the idea that some households are simply uninformed about their options. Clearly, more work needs to be done to get specific and accurate information on the reach of current broadband service. Knowing precisely what areas are served is a fundamental prerequisite to effective policymaking on this issue.

72 percent of all US adults either have a broadband Internet connection at home or regularly go online through a broadband connection outside of the home.

65 percent of current broadband subscribing households (37.5 million households) upgraded to broadband because of speed.

Of households with Internet connectivity at home, 75 percent have a broadband connection



The Demographics of Broadband Adoption

There are four distinct consumer groups in the midst of the broadband debate. These groups include (1) households with no computer at home, (2) households with no Internet connection at home, (3) households with some other type of Internet connectivity at home, and (4) households with broadband at home. Understanding the demographic make-up of these subgroups helps to explain their inclination towards broadband adoption at home and their use of broadband away from home.

The Non-Internet and Non-Computer Households

A major element of the broadband narrative is the significant number of households without a home computer or without home Internet connectivity of any flavor. Approximately 30 million households do not have a home computer. This figure alone represents over half of the US households without broadband. An additional eight million households with a home computer do not have Internet access at home of any type. What do we know about these households and their attitude toward home broadband?

When asked to characterize their current attitude toward broadband, 34 percent of households without a home computer say the primary reason they don't subscribe to broadband is because they don't own a home computer. An additional 16 percent of households without a home computer say they would like broadband, but can't afford it and 11 percent say they just don't want another bill.

For households with home computers but without Internet connectivity, the primary response offered by 25 percent of these households was they would like to have broadband, but can't afford it. At the same time, 22 percent of households with a home computer but without Internet at home say they would not use it enough if they had it and 12 percent flatly said they were not interested in broadband.

Households without home computers and households without Internet access do appear to be well informed about the rough price of broadband. On average, these households perceive the monthly cost of broadband as \$36 and \$35 respectively - only slightly less than the average price of \$40 a month paid by the households subscribing to broadband.

Describing their current attitude toward home broadband as wanting it, but not being able to afford it is an important theme with these two subgroups of households.

Only 14 percent of all non-subscribers say they want it and can't afford it. And yet, 60 percent are households without home computers and an additional 18 percent are households without Internet.

While cost is a concern, 45 percent of these households have either satellite or cable television subscriptions - lower than the national average, but still significant. These results suggest many of these households have a finite budget for entertainment and communications expenditures and have opted to spend these dollars elsewhere for the present time. As broadband services evolve and converge, these households could easily reallocate these dollars towards broadband services. If the goal is increased home broadband adoption, then ensuring that media-rich entertainment is easily accessible on the Web should help accomplish this. Greater competition among broadband service providers should also help improve the cost-benefit analysis households perform by lowering prices, increasing available services and speeds, or both.

The percent of US adults without a home computer or home Internet access - 33 percent of all households - are perhaps the biggest, though often most ignored, part of the broadband debate. Much of this segment of the population does go online through a broadband connection - with 40 percent of adults indicating they regularly access a broadband connection outside the home.

Regression analysis sheds some light on why select households do not own computers - suggesting education, income, age and race are statistically significant influences on home computer ownership. Adults with a college degree are 10 percent more likely to own a home computer than adults with a high school degree and adults without a high school degree are 36 percent less likely to own a home computer than adults with a high school diploma. Furthermore, adults with annual household income greater than \$40,000 are 21 percent more likely to own a home computer than adults with an annual household income under \$40,000. Adults over the age of 65 are 21 percent less likely to own a home computer than adults under the age of 30. Finally, Hispanic adults are 11 percent less likely to own a home computer than Caucasian adults. African Americans and other minorities appear statistically no less likely to own a home computer than Caucasian adults with similar backgrounds.

The Households with Internet Connectivity at Home Other Than Broadband

Of the 68 percent of households with Internet connectivity at home, 75 percent have a broadband connection and 25 percent have some other type of home Internet connection - most notably of course is dial-up. In many instances, this subgroup of the population shares characteristics with the segment of the population discussed above - the slice having either no computer at home or no Internet access of any type at home, but there are notable distinctions. For example, regression analysis suggests income is not a significant factor in differentiating between households with broadband and households with other Internet connections.

The most influential characteristics in distinguishing between broadband households and households with non-broadband Internet connectivity are education, age and geographical location. Adults with a college degree are 13 percent more likely to have broadband at home instead of dial-up compared with adults with a high school diploma. Adults over the age of 65 are 30 percent more likely to have dial-up instead of broadband compared with adults under the age of 30. Adults in urban and suburban areas are respectively 19 percent and 21 percent more likely to have broadband as their Internet connection compared with an adult living in a rural area. Other characteristics, notably children in the household, have no statistically significant impact on the decision to adopt broadband at home.

US Adults with Home Broadband Access

Table 2 highlights both broadband adoption as a percent of the total population and broadband adoption as a percent of the population with home Internet connectivity. Broadband penetration across the entire population can be deceiving because the penetration rate is artificially lowered by households that either have no home computer or have no Internet connectivity at home. For example, while only 24 percent of US adults over 65 have broadband, 57 percent of all 65+ US adults with Internet access at home have broadband. Table 2 clearly shows, across a host of demographic details, there is hardly a single characteristic where broadband adoption as a percentage of home Internet connectivity is less than 50 percent.

Table 2
Broadband in America

	% of Total	% Subscribing to Broadband at Home (Penetration Rate)	% of Internet Connected Home Subscribing to Broadband (Penetration Rate)
Age			
18-29	20%	52%	77%
30-49	39%	62%	79%
50-64	25%	50%	76%
65+	17%	24%	57%
Race			
White (non Hispanic)	70%	55%	81%
Black	12%	33%	75%
Hispanic	12%	45%	79%
Other	6%	54%	74%
Education			
Less than High School	8%	13%	58%
High School	32%	37%	67%
Some College	25%	53%	76%
College +	36%	71%	81%
Household Income			
Less than \$30K	28%	30%	72%
\$30K-\$50K	23%	36%	60%
\$50K-\$75K	19%	65%	80%
Greater than \$75K	30%	79%	86%
House Type			
Single Family Home	74%	54%	75%
Townhouse	6%	68%	83%
Condo	3%	50%	86%
Apartment	13%	39%	84%
Mobile home	5%	24%	45%
Own	73%	55%	77%
Rent	27%	42%	75%
Urban	49%	53%	80%
Suburban	26%	64%	83%
Rural	25%	33%	55%



How do Americans use Broadband?

We now turn to how Americans use broadband. Adults with broadband at home spend on average 2.4 hours each day online - compared with 1.9 hours for individuals with a home Internet connection other than broadband. These two figures are statistically indistinguishable - suggesting US adults with home broadband connections and those with other home Internet connections use the Internet from home each day a statistically equivalent amount. But while these two groups of individuals might use the Internet at home a similar amount of time each day, their use of the Internet within that time is very different.

As already mentioned, in addition to the 112.2 million US adults with a home broadband connection, 46.2 million adults regularly access broadband outside of the home. Together, over 158.4 million US adults regularly access a broadband connection or have a broadband connection at home.

This section will explore how US adults with a home broadband Internet connection use the Internet at home differently than other segments of the population. This section will also explore how US adults use the Internet while utilizing broadband Internet connections away from home.

Internet Use at Home: Comparing Those with Broadband and Those Without

As one would expect, for the most part households with broadband at home tend to perform Internet-related tasks more than households with non-broadband Internet connections. But this is not always the case. Regardless of their home Internet connection type, there are several Internet-related tasks households perform at home at roughly an equal rate. For example, 45 percent of households with a broadband Internet connection at home go online to do homework or schoolwork compared with 43 percent of households with an Internet connection other than broadband. On the other hand, banking online is performed by 66 percent of households with a home broadband connection versus 39 percent of households with a home Internet connection other than broadband.

Table 3 illustrates these results for a diverse list of online activities. The findings are clear, households with broadband

engage in sundry list of activities - and they do them significantly more than households without broadband. This is especially true with media-rich digital entertainment.

While upgrading to broadband for greater bandwidth is only part of the motivation behind households' decision to get broadband at home, these findings do suggest activities like viewing video content and streaming audio are important Internet activities for homes with broadband and clearly factored into the decision process.

Table 3
Performing Internet-Related Tasks From Home - Broadband and Non-Broadband

Online Activity	Broadband Connection	Other Home Internet Connection	Difference
Online Banking	66%	39%	27%*
Getting Directions	83%	58%	25%*
Viewing Video Content	46%	23%	23%*
Streaming Audio	46%	23%	23%*
Getting News	74%	52%	22%*
Downloading Music	42%	21%	21%*
Telecommuting	38%	22%	16%*
Home Networking	23%	8%	15%*
Shopping	73%	59%	15%*
Surfing the Web	85%	71%	14%*
Uploading Photos	58%	45%	14%*
Downloading Photos	52%	39%	13%*
Posting on Blogs	18%	6%	12%*
Playing Games	58%	47%	11%*
Reading Blogs	27%	17%	10%*
Instant Messaging	47%	38%	9%
Downloading Movies	14%	5%	8%*
E-mailing	94%	86%	7%*
Social Networking	33%	26%	7%
Buying or Selling on eBay	38%	31%	7%
VoIP	8%	2%	6%*
Uploading Movies	9%	5%	4%
Uploading Music	28%	25%	3%
Homework	45%	43%	2%

* Statistically significant at the 5% level

Broadband Use Away From Home: Comparing Subscribers to Non-Subscribers

Time spent online suggests some self-selection is likely taking place when it comes to choosing a home Internet connection. While US adults with broadband or non-broadband Internet connections at home spend a similar amount of time online at home, this is not the case away from home. US adults with a broadband connection at home use the Internet away from home more than any other segment of the population - averaging 1.8 hours a day online while away from home compared to 1 hour for non-broadband subscribers. The real insight comes from individuals with home computers but no Internet access at home - who spend on average just 23 minutes a day online.

These results might suggest there is a self-selection bias when it comes to selecting a home Internet plan. The segment of the population using the Internet the most self-selects a broadband connection while consumers finding little need for an Internet connection - let alone a home broadband connection - tend to use the Internet infrequently even when accessing the Internet outside of the home.

Table 4 reaffirms this conclusion. If there were significant market failures in the home Internet connection marketplace, one might expect individuals without broadband Internet connections at home to be heavy and active users of broadband Internet connections away from home. Furthermore, one would likely expect to see these individuals engage in the activities aided most by a fast connection and wide bandwidth when they were online via broadband connections.

Table 4 suggests the majority of individuals without a broadband Internet connection at home do not become heavily engaged in a multitude of online activities and tasks when they do go online via a broadband connection outside their home. Table 4 shows that for the most part, individuals without a broadband connection at home are on average no more likely to perform these broad activities online from a broadband connection away from home than they are from a dial-up connection at home.

Table 4
Percent of Individuals Engaging in Online Activity on a Broadband Connection Away From Home

Online Activity	Broadband at Home	Internet (Not Broadband at Home)	No Internet at Home	No Home Computer
Total Population	51%	17%	7%	26%
Downloading Movies	2%	5%	2%	4%
Downloading Music	8%	4%	6%	12%
Downloading Photos	10%	9%	4%	8%
Buying and Selling on eBay	6%	12%	5%	5%
E-mailing	48%	41%	16%	20%
Getting Directions	35%	24%	17%	20%
Getting News	35%	23%	10%	17%
Doing Homework	15%	15%	6%	16%
Instant Messaging	14%	7%	0%	8%
Online Banking	18%	13%	6%	5%
Playing Games	10%	11%	10%	15%
Posting on Blogs	4%	1%	4%	1%
Reading Blogs	5%	6%	4%	6%
Shopping	14%	11%	7%	11%
Social Networking	7%	5%	3%	7%
Streaming Audio	12%	8%	3%	10%
Surfing the Web	32%	31%	10%	22%
Telecommuting	12%	4%	4%	7%
Uploading Movies	2%	1%	2%	3%
Uploading Music	4%	4%	8%	7%
Uploading Photos	9%	9%	5%	8%
Viewing Video Content	11%	13%	2%	9%
VoIP	4%	1%	0%	1%



Where Will Broadband Go From Here?

The findings from this study suggest broadband adoption will continue to grow in the foreseeable future. A full 20 percent of non-subscribers expect to have broadband at home within the next two years. This includes 19 percent of households without a home computer and 25 percent of households with a home computer but currently without Internet access.

While 12.5 million households maintain they do not have access to broadband at home, only 4.2 percent of all US households (4.8 million) claim the primary reason they do not have broadband is because it is not available in their area. This suggests most households wanting a broadband connection at home can get one.

One question remains. When all households have access to broadband and all markets are competitive, will all households upgrade to broadband?

Understanding Households That “Never” Expect to Have Broadband at Home

While there are many that assume all households want broadband service, this does not appear to be strictly the case. There are numerous households - in the snapshot of time - that just don't seem to want it. Part of understanding how broadband adoption will grow in the US is understanding when and under what conditions households will eventually subscribe to broadband at home. Convoluting this logic is that 54 percent of US adults without broadband at home say they will never subscribe to it. If this group holds to their intention and never adopts broadband at home, the highest broadband adoption the US will ever enjoy is 73 percent of all adults.

But buried within this finding is a sign of the slow progression households make towards having broadband in their home and an indication that preferences and intentions change over time. Only 26 percent of households maintaining they will never subscribe to broadband currently have any type of Internet connection at home. Sixty-two percent of these households don't even have a home computer. These results might suggest the slow transition a household goes through as it acquires a home computer, makes the decision to subscribe to some type of Internet, and then ultimately and eventually upgrades to broadband service if broadband was not the first Internet connection.

Regression analysis sheds some light on the characteristics influencing individuals that say they will never get broadband. Interestingly, the main influences are not employment status, rural location, or income. For this subgroup of the population, regression analysis suggests the primary influences are education and age. US adults with college educations are two percent less likely to say they will never get broadband at home and US adults over the age of 65 are 30 percent more likely to say they will never get broadband at home. It seems clear, that many adults over the age of 65 are content with dial-up services or for that matter, no Internet connection at home at all and are self-selecting to never get a home broadband connection.

Why Haven't Some Internet Subscribers Upgraded to Broadband?

When asked to describe their current attitude toward broadband at home there are four key responses given by households with dial-up Internet connectivity at home. At the top of the list, 25 percent of these households say they would like to have broadband, but it is not available in their area. This is equivalent to 3.7 percent of the entire US population - roughly 4.2 million households. As Table 5 illustrates, also among the top four reasons, 19 percent of these households say dial-up works fine and 13 percent say they just don't want another bill.

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Table 5
Why Current Internet Subscriber Haven't Upgraded to Broadband Yet

You would like it, but it is not available where you live	25%
Dial-up service works just fine	19%
You just don't want another bill	13%
You don't know enough about it	12%

And yet, this subgroup of the population shows a high proclivity towards adopting broadband at home. Twenty-four percent of dial-up users expect to have broadband at home within the next three years and another 21 percent expect to have it at home within four years.

While much of this segment appears content with dial-up and not wanting “another” bill, the disparity between what these households pay each month on average for Internet (\$20) and what broadband subscribers pay (\$40) continues to converge. As the price discrepancy between Internet access and broadband access lessens, it will likely influence some of the 43 percent of Internet connected households claiming they will never upgrade to broadband to finally take the step and subscribe to broadband at home.

What Activities Would Non-Subscribers Engage In If They Had Broadband At Home?

Examining what Internet-related activities non-subscribers would engage in if they had broadband at home offers insights into some of the possible motivations spurring households to subscribe. The clearest and cleanest comparison is observing how individuals who currently have Internet at home would change their current online behavior if they had broadband. As Table 6 highlights, given the option of broadband at home, individuals with current home Internet connectivity would decrease activities like e-mailing and surfing the web and would drastically increase the amount of digital entertainment they enjoy. It is clear, online activities like downloading music and movies and streaming audio are powerful motivations for upgrading to broadband.

Table 6
Percent of Households Engaging in Online Activities

Online Activity	Current Internet Use at Home	Use Given Broadband at Home	Difference
Downloading Movies	5%	21%	16%
Streaming Audio	20%	33%	14%
Downloading Music	14%	28%	13%
Uploading Movies	4%	14%	11%
Home Networking	7%	16%	9%
Homework	32%	40%	8%
Telecommuting	16%	23%	7%
Viewing Video Content	20%	27%	7%
Buying or Selling on eBay	27%	32%	6%
Online Banking	32%	38%	6%
VoIP	2%	7%	5%
Uploading Music	21%	25%	4%
Downloading Photos	33%	37%	4%
Getting News	42%	45%	3%
Instant Messaging	31%	33%	2%
Posting on Blogs	4%	6%	1%
Reading Blogs	11%	10%	-1%
Playing Games	36%	34%	-1%
Getting Directions	57%	55%	-3%
Surfing the Web	64%	60%	-5%
Shopping	51%	46%	-5%
Social networking	21%	15%	-6%
Uploading photos	40%	33%	-7%
E-mailing	79%	69%	-10%



Conclusion

The macro implications of micro decisions are significant for the future of broadband in the US. Currently, things appear to be moving forward in a healthy direction. Adoption of broadband at home has grown significantly in the last three years and signs point to a strong near-term future for adoption.

At the same time, a significant number of Americans without broadband at home are left uncompelled to upgrade. As the study results show, for many of these households the cost-benefit equation does not yet tilt in their favor. Greater competition among service providers should tip the lure of broadband adoption towards the consumer by lowering price (a current impediment) and/or increasing speed (a current motivation).

A major motivation of broadband adoption is broadband speed relative to dial-up speed, and households adopting broadband are using their new service for a myriad of online activities. Consumers indicate that the chief driver of increased broadband adoption is media-rich digital entertainment pursuits. This is reconfirmed by the large number of households without broadband that indicate they are most interested in engaging in increased digital entertainment when they do get broadband.

The findings of this study reconfirm our belief that an increase in facilities-based competition along with a proliferation of compelling media-rich online applications - with a concurrent avoidance of undue mandates or limitations on web content and services - is the best way to promote continued broadband adoption. Again, this study only reveals consumers' attitudes towards adopting broadband. To facilitate effective policy making and to gain a better understanding of broadband deployment and penetration, increased and more effective gathering of data on the geographic thresholds of broadband service is vital.

Methodology

The report described herein was designed and formulated by the Consumer Electronics Association (CEA). The quantitative study was administered via telephone interview to a random national sample of 893 US adults between May 17 and 20, 2007.

The margin of sampling error at 95 percent confidence for aggregate results is +/- 3.28 percent. Sampling error is larger for subgroups of the data. As with any survey, sampling error is only one source of possible error. While non-sampling error cannot be accurately calculated, precautionary steps were taken in all phases of the survey design, collection and processing of the data to minimize its influence.

As is common practice in survey research, the data was weighted to reflect the known demographics of the population under study. In this survey, weights were applied to cases based on gender, age, race and geographic region. As a result, this data can be generalized to the entire US adult population.

The bases shown on all charts and tables are weighted bases. All percentages in the text, charts and tables included in this report are also based on weighted data.

CEA designed this study in its entirety and is responsible for all content contained in this report. During the fielding of this study, CEA employed the services of Opinion Research Corporation to conduct telephone interviewing. The telephone interviewing employed industry standard random-digit dialing and computer assisted telephone interviewing (CATI).

The Consumer Electronics Association is a member of the Marketing Research Association (MRA) and adheres to the MRA's Code of Marketing Research Standards.

Note: In the analysis and presentation of some data, the following figures were used in calculations.

Total US Population: 294 million

Total US Adult Population: 220 million

Total US Households: 114 million

The above data are 2007 projections made by CEA, based on the US Census Bureau's 2005 American Community Survey.