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Broadband Subscription and Internet Use in New Mexico

Bureau of Business and Economic Research

University of New Mexico
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Table of Contents

List of Figures

List of Tables

1. Introduction

The New Mexico Department of Information Technology's (DoIT) Broadband Program, funded by the Broadband Technology Opportunity Program (BTOP), serves as a coordinating agency of statewide initiatives to broaden the availability and promote adoption of high-speed internet in New Mexico. As part of this effort, DoIT has contracted UNM's Bureau of Business & Economic Research (BBER) to provide an analysis of patterns and barriers to broadband adoption in New Mexico. This report summarizes the results of this analysis.

The report draws upon a survey of 1,000 households across New Mexico. The survey, conducted in December 2012, queried home internet access and internet technologies; barriers to home access; patterns of internet use both in the home and outside the home; digital literacy and access to resources to enhance digital literacy. The survey also collected a wide range of socioeconomic and demographic information, including geographical location, from the survey participants. The dataset will be available to the public at the New Mexico Broadband Project's website (http://www.doit.state.nm.us/broadband/).

The results of the survey closely track those of surveys conducted by national organizations, including the Computer and Internet Use survey included in the US Census Bureau's Current Population Survey (CPS), which is sponsored by National Telecommunication and Information Administration (NTIA). According to the most recent CPS internet survey (July 2011), 53.3% of New Mexicans access the internet from home. According to our survey, (December 2012) home internet use by New Mexicans is 54.9%. The consistency of these results lends strong support for the reliability of the survey results.

The findings of this study can be summarized as follows:

- New Mexico lags behind other states in the rate of home internet adoption, and specifically broadband subscription. The 2011 CPS placed New Mexico 50th of the states plus the District of Columbia in home internet adoption.
- In New Mexico, as in other parts of the U.S., there are consistent if unsurprising patterns in internet access and broadband subscription. In general, households with higher incomes, higher levels of educational attainment and individuals either working or studying full time are more likely to have home internet access. Young and early middle age adults are much more likely to have home internet access than older persons. Likewise, households with children and those living in more urbanized areas are more likely to have internet.
- In urban areas, the barriers to home internet adoption and broadband subscription are more closely associated with affordability and a perception that the internet is of little value, and less closely associated with limited access. In tribal and rural areas, concerns for affordability and interest follow similar patterns as in urban areas but lack of access is much more often a barrier to home subscription.
- The concern for affordability and the perception that the internet is of limited value very much defines the Digital Divide in New Mexico. In simple terms, one is either engaged in the digital world or one is not, and there is little evidence that those who are not engaged are much concerned to overcome the divide. The results of the survey are consistent and persuasive in this regard. Among other non-subscribers, the most common stated reasons for non-adoption are 'no computer in home', 'don't know how to use it' and 'never considered it',). These reasons are offered five times more often than 'not available in my area.' Further, there is little indication that non-subscriber to home broadband act to substitute other means of access to offset the absence of access at home. They are much less likely to use the internet outside the home; less likely to subscribe to mobile wireless services that provide internet access; and of course, they are less likely to know how to use the internet. Finally, 49% of those without home internet report that they are unwilling to pay even $5/month for broadband service in the home.

Internet advocates should continue to press for better internet infrastructure in underserved areas, especially New Mexico's tribal areas. The results of this research as well indicate that equal attention must be given to initiatives to increase the demand for high-speed internet access. This should begin with public awareness programs directed toward identifiable populations that make clear the importance of internet access for social and economic welfare. Policies to promote demand should also include more aggressive digital literacy programs, again targeted at populations that too often feel excluded from the digital world. Finally, policies should recognize that a significant barrier to access, and in some cases a large part of the broader concern for affordability, is the up-front costs of a device to access the internet at home.

This report includes four main sections. The first part is a brief description of the survey instrument and survey methodology. The second part is a detailed examination of the survey results, including a description of patterns of home internet access and broadband subscription, barriers to home access, patterns of internet use in the home and outside the home, digital literacy and access to supporting resources. The data is considered in relation to key socioeconomic and demographic characteristics. The next section, also using the survey data, uses Logit econometric modeling techniques in an effort to isolate the socioeconomic determinants of home broadband subscription and internet use. The final section is a review of policies to promote internet adoption, with a focus on demand side initiatives. The final section offers a list of recommended strategies to promote broadband subscription and internet use in the state, and a brief rationale for these strategies.

2. Survey Methodology

Data analyzed in this study were collected through using a carefully designed survey. The semi-final design of the survey was concluded on June 31 2012 in Deliverable 1 and was based on a comprehensive literature review that evaluated broadband studies completed to date as well as comparable survey products. The survey was amended in November 2012 to account for a study conducted by John Horrigan in August 2012 where Smartphones were considered as a potential substitute for at-home broadband subscription. Based on discussions with the client and other NMDOIT-funded organizations, it was decided that questions asking which internet devices were used at home would be asked immediately following the qualifying questions and willingness to pay questions. These would be used to filter subsequent questions regarding broadband subscription and internet use at home.

As of November 2012 the subcontracted telephone polling agency, ProDATA Team Inc., purchased a list of 44,979 phone numbers of which at least 25% contained cell phone numbers. (Cell phone numbers were included in the study to eliminate selection bias which would have occurred had the respondents only been contacted on landline numbers.) The survey was administered using Computer Assisted Telephone Interviewing (CATI) technology that provides the interviewer with the survey instrument. The interviewer reads a list of questions that are contingent upon prior responses. CATI software can screen for logically inconsistent answers, such as a respondent-provided ZIP code that is not actually located in the State of New Mexico.

The survey data was conducted with the following "hard quota" constraints to ensure that the data gathered was relevant to the population at risk for not having broadband at home:

- 7% (n=70) Native American, plus or minus 10%
- 30% (n=300) households with 1 or more children < 18, plus or minus 10%
- 20% (n=200) head of households who are seniors 65+, plus or minus 10%

Finally, to ensure that respondents were not adversely affected by polling fatigue, data collection was scheduled to occur approximately one month after the November 2012 general

election. Data was collected from December 6 to December 13 2012 resulting in 1,063 completed surveys. The subcontracted polling agency then conducted quality control tests to pare the sample down to the 1,000 completed surveys used in our analyses.

Upon receipt of the final data, BBER compared the results with population estimates generated by the US Census Bureau's 2006-2010 American Community Survey (ACS). Analysis revealed that the survey sample was skewed with respect to annual household income. Specifically, income data provided by survey participants tended to be one of two extremes of the response scale. Distribution with respect to other demographic and socioeconomic variables was within reasonable bounds. To correct the distribution of the survey data records were weighted such that the percent of survey respondents in each of seven income categories was proportionate to that of the Census' statewide estimates.

A second procedure was implemented to restore 31.3% of the 1000 survey records for which respondents opted not to provide income data. For these records, income values were imputed with use of the Multiple Imputation Method (MIM): a well-documented procedure by which missing values are estimated on an averaged basis. In this case, annual household income was estimated as a function of education, age, gender, employment status, and population density of 'immediate neighborhood' (a measure of urban/rurality). After pooling the five sets of imputed values with the original data, it was confirmed that the distribution of income remained proportionate to the Census population estimates.

3. Broadband Adoption and Internet Use in New Mexico: Analysis of Survey Results

3.1 Home internet adoption in the US and New Mexico

According to the Census Bureau's July 2011 Current Population Survey (CPS) of internet use, sponsored by the National Telecommunications and Information Administration (NTIA), New Mexico ranks next to last of the 50 states and the District of Columbia in prevalence of internet access from the home. The study found that 60.3% of New Mexico households are connected to the internet versus 71.7% of all U.S. households. Nationally and in New Mexico, the majority of households with access to the internet are connected via a broadband connection: 68.6% of U.S. households and 57.4% of New Mexico households have a broadband connection. Again, New Mexico ranks 50th out of the states and the District of Columbia in number of households with access to the internet via high-speed broadband. 2.3% of U.S. households and 2.0% of New Mexico households access the internet using a telephone line (dial-up access).

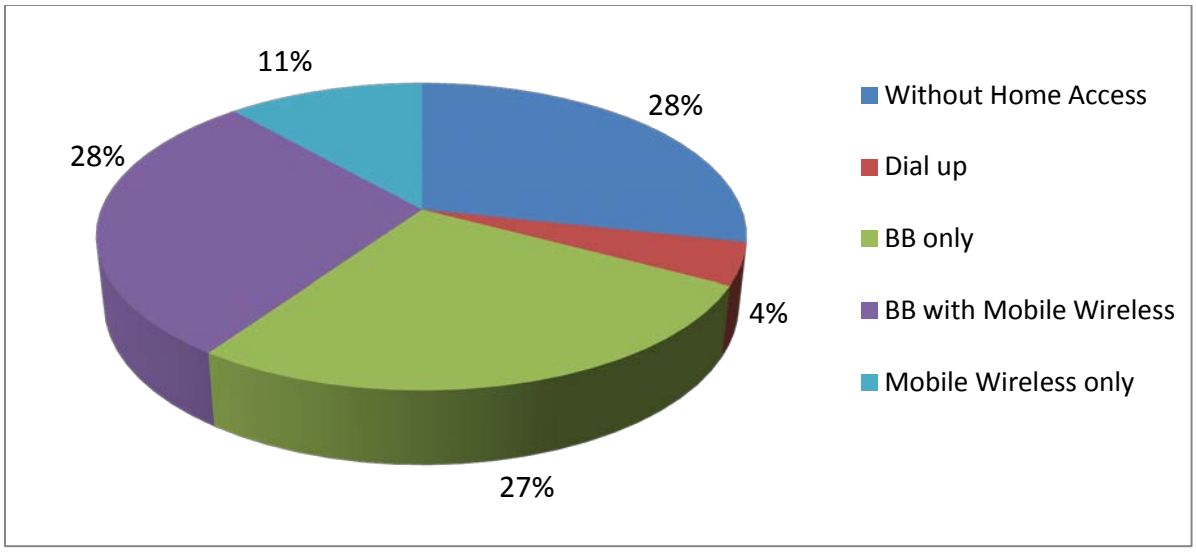
UNM's BBBER surveyed 1000 New Mexico households in November and December of 2012 regarding home internet access and use. The findings of the survey complement the CPS survey, but are not directly comparable to the national study cited above due to different definitions of broadband and mobile access.[1]

According to the UNM BBER study, 72.2% of NM households have access to the internet from home. As in the CPS study, the large majority of New Mexicans access the internet from home with a broadband connection, including cable, DSL or fixed satellite connections. 55% of all New Mexican households (or about three quarters of households with internet access) are linked to the internet with fixed broadband technology. As illustrated in Figure 1, slightly more than half of those with fixed broadband (or 28% of all households) have both fixed broadband and internet access via mobile wireless (e.g. Smartphones with a data plan); 27% have fixed

[1] CPS data does not differentiate between fixed and mobile broadband access. It does collect data on the devices used to access the internet but use patterns are not separately tallied.

broadband only. In addition to those with fixed broadband access, another 10.8% have internet access via mobile wireless devices alone. Finally, 4% of all New Mexican households can connect to the internet only by means of dial-up service.[2]

Figure 1. Home Internet Adoption Rate by Technology



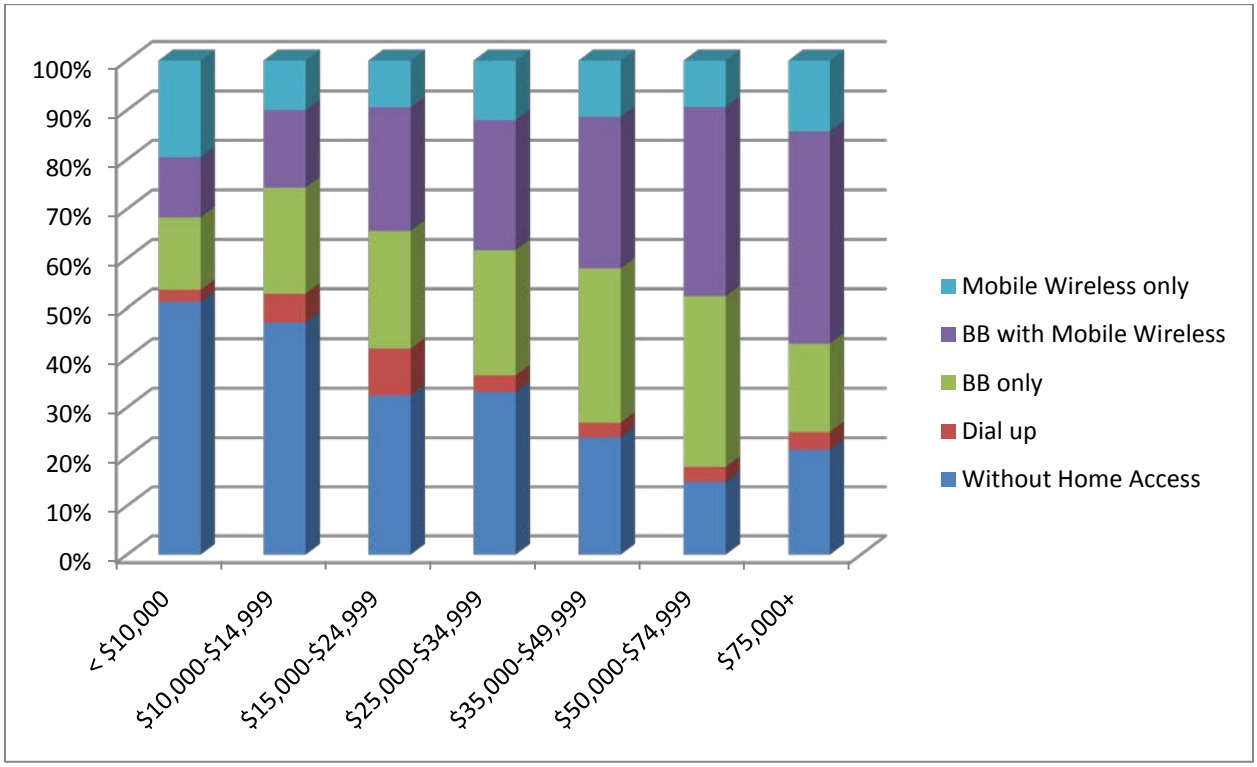
Source: UNM BBER Survey of Internet Adoption and Use in New Mexico, 2012.

3.2 Demographics of Home Internet Adoption in New Mexico

In general, internet access from home correlates to higher income, higher level of education, and younger age. As depicted in Figure 2, more than four of five (82%) of households with an annual income greater than $50,000 have internet access, while only 57% of households with annual income under $15,000 are connected to the internet.

[2] Just over 7% of those with home internet access were unable to identify the technology used in their home.

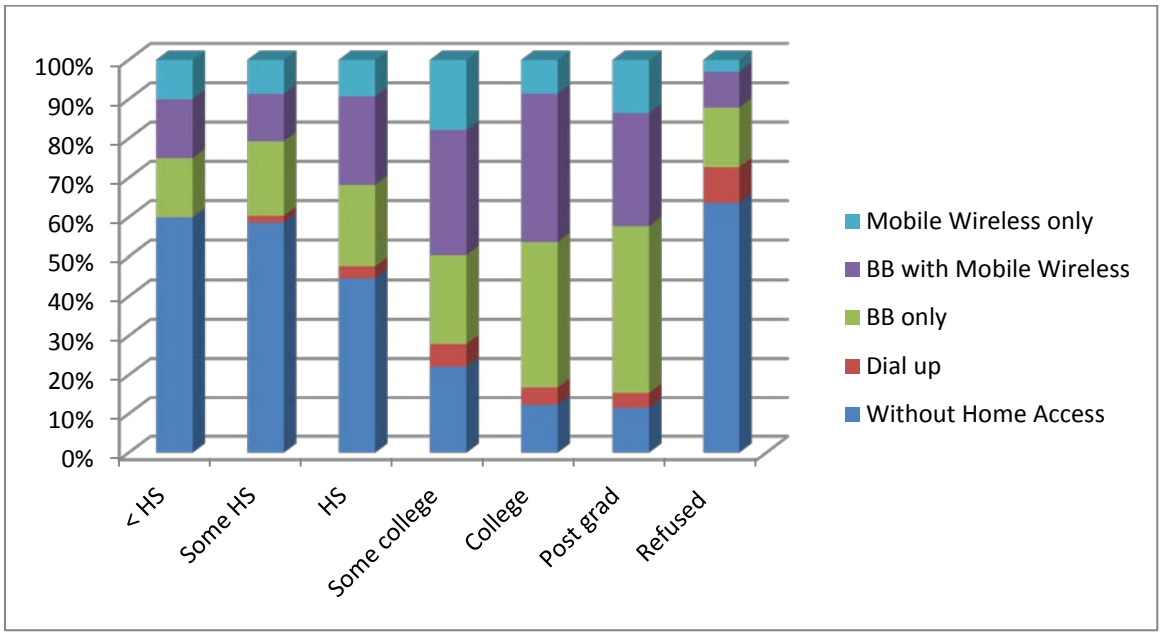
Figure 2. Home Internet Adoption Rate by Technology and Income



Source: UNM BBER Survey of Internet Adoption and Use in New Mexico, 2012.

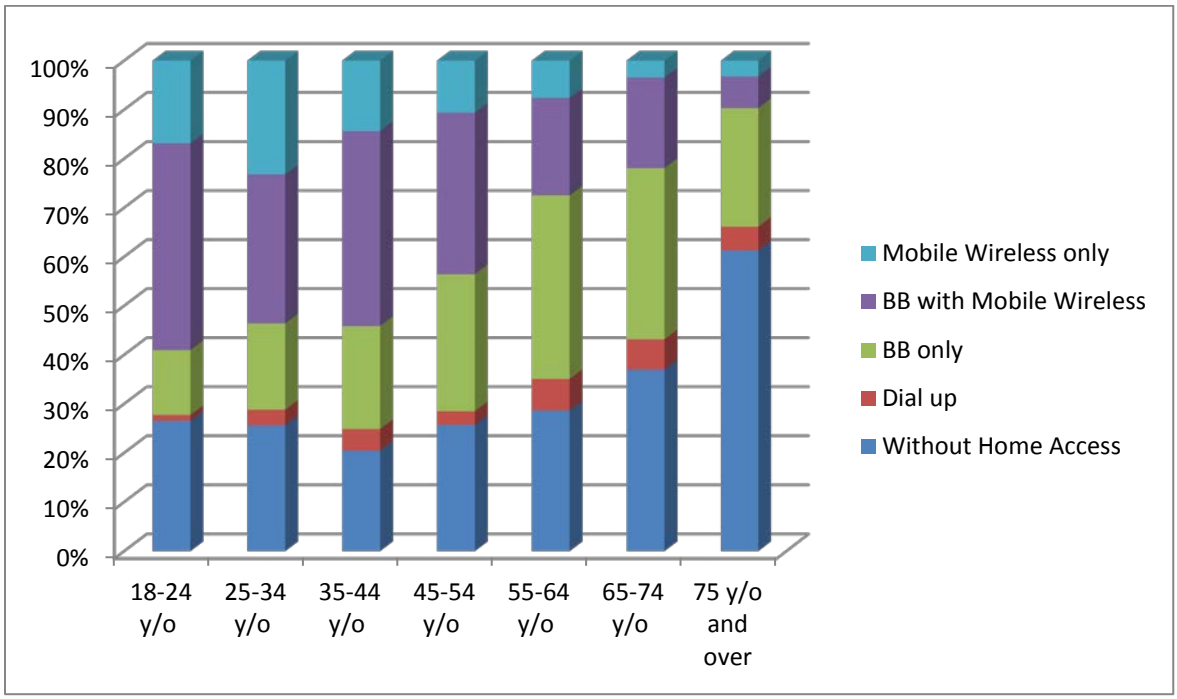
Education also plays a role in at home internet subscription as shown in Figure 3, 84% of respondents with at least some college education have internet access at home, while only 56% of those with a high school degree or less are connected to the internet. Finally, as portrayed in Figure 4, age is also correlated with home broadband adoption. 76% of respondents 35 years of age or younger have internet access while 58% of respondents 65 years of age or older do not have access.

Figure 3. Home Internet Adoption Rate by Technology and Educational Attainment



Source: UNM BBER Survey of Internet Adoption and Use in New Mexico, 2012.

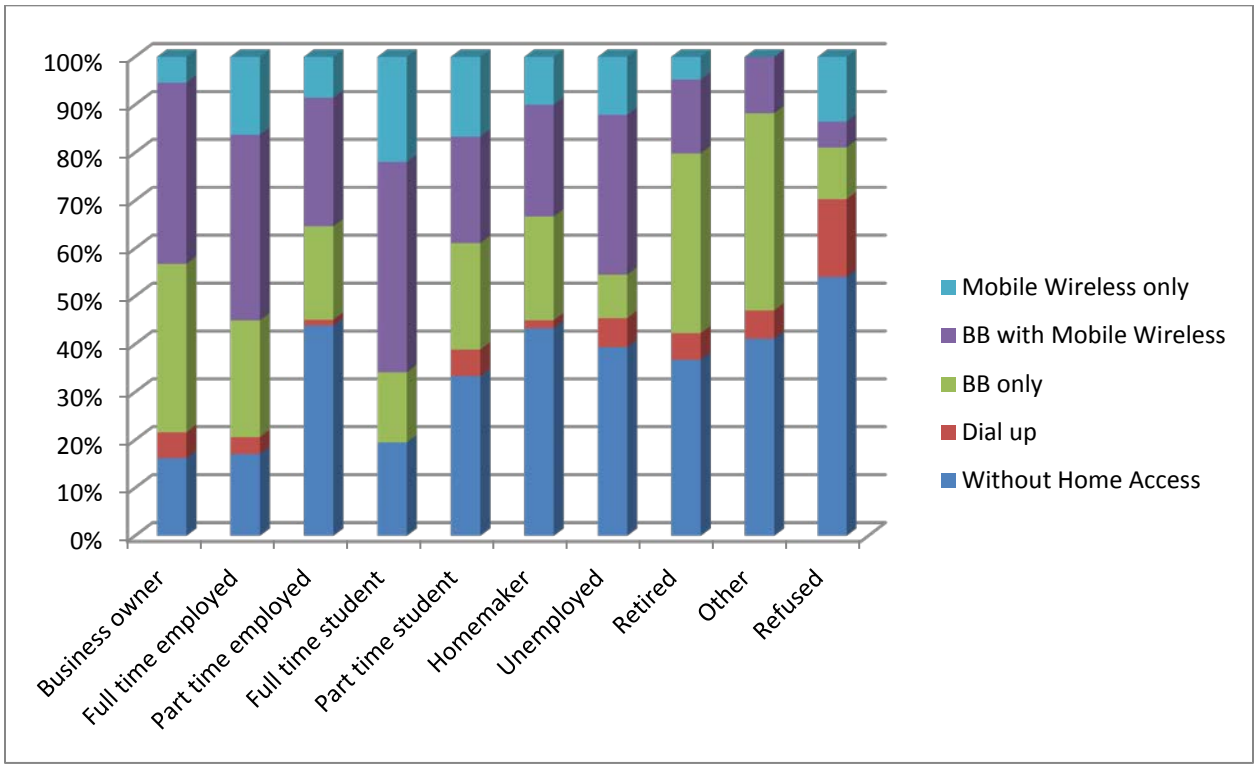
Figure 4. Home Internet Adoption Rate by Technology and Age



Source: UNM BBER Survey of Internet Adoption and Use in New Mexico, 2012.

Employment status also factors into internet access in the home. (See Figure 5.) The highest home internet subscription rate is among business owners (84%), full-time employees (83%), and full-time students (80%). Respondents who were least likely to subscribe were homemakers and part-time students at 59% and 58% respectively. About two-thirds of retired persons (65%) and of unemployed persons (63%) lived in households with internet access. In sum, those with higher education, higher income, younger in age and employed or studying full time are most likely to have internet access in the home.

Figure 5. Home Internet Adoption Rate by Technology and Employment Status

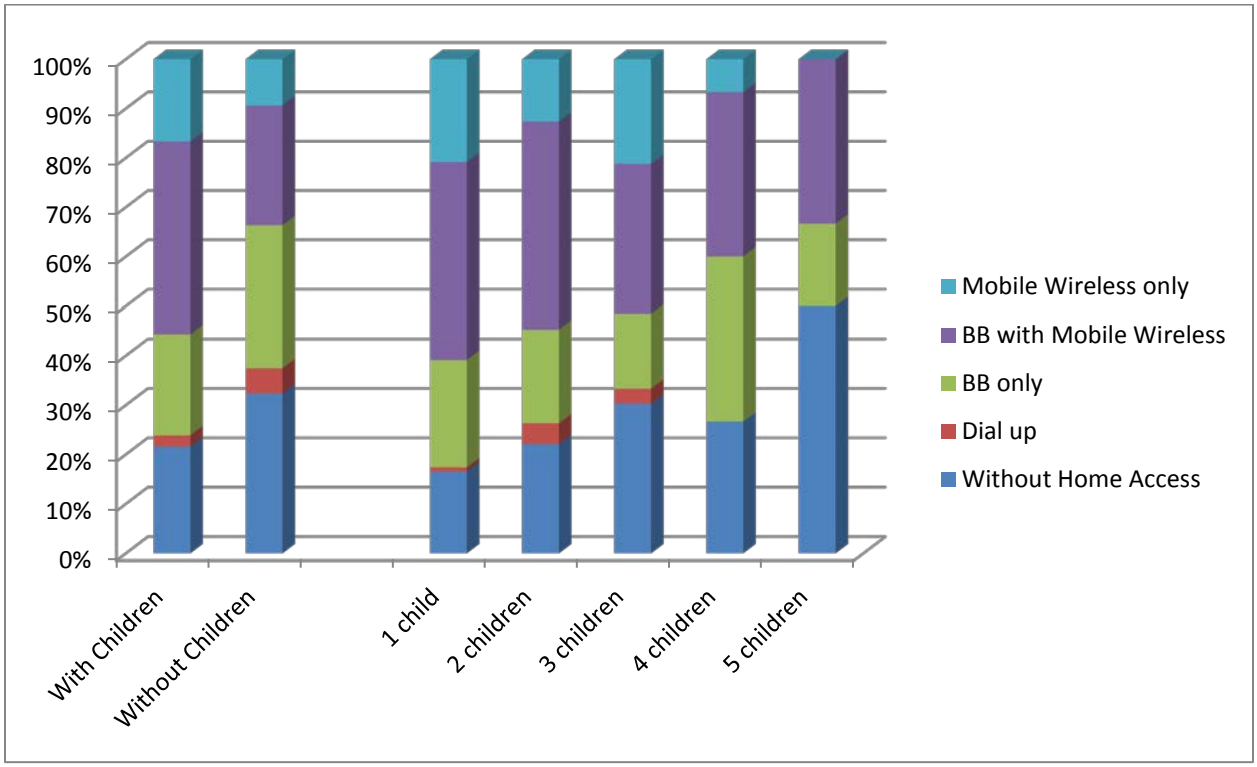


Source: UNM BBER Survey of Internet Adoption and Use in New Mexico, 2012.

Another factor in subscription to the internet is the presence of children in the household, as depicted in Figure 6. Of households with children, 79% have internet access compared to only 69% of households without children. However, this relationship is sensitive to both household income and the number of children in the household. The relationship is complex but illustrative. Fully 90% of households with children and an annual income of more than $35,000

have home internet. By comparison, only 70% of households with children and an annual income less than $35,000 have internet at home. Now consider the number of children in the home. 82% of households with one or two children have home internet compared to only 69% of households with three or more children.

Figure 6. Home Internet Adoption Rate by Technology and Children in the Household

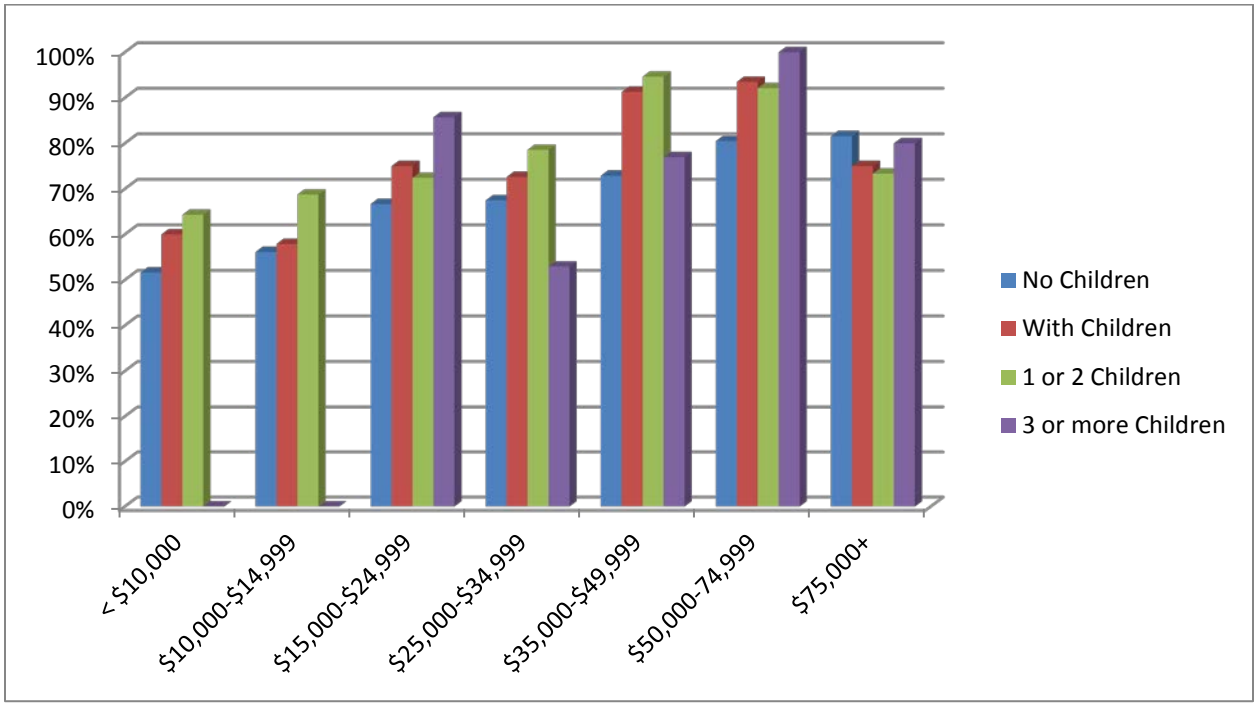


Source: UNM BBER Survey of Internet Adoption and Use in New Mexico, 2012.

In general, comparatively affluent households with children are among the demographic cross sections with the highest rates of home internet adoption. (See Figure 7.) In households with incomes greater than $35,000, 91% of households with one or two children have internet access; if there are three or more children the percentage with home internet falls only slightly, to 85% -- still higher than 76% internet subscription rate among households with the same income but no children. However, less affluent households face questions of affordability. The internet subscription rate among low-income households, with incomes below $35,000, and with one or two children, is 70%. However, the rate falls sharply, to 54%, in low-income

households with three or more children. In short, having children makes a household more likely to subscribe to home internet unless the economic stress of more children on limited household budgets raise concerns for affordability.

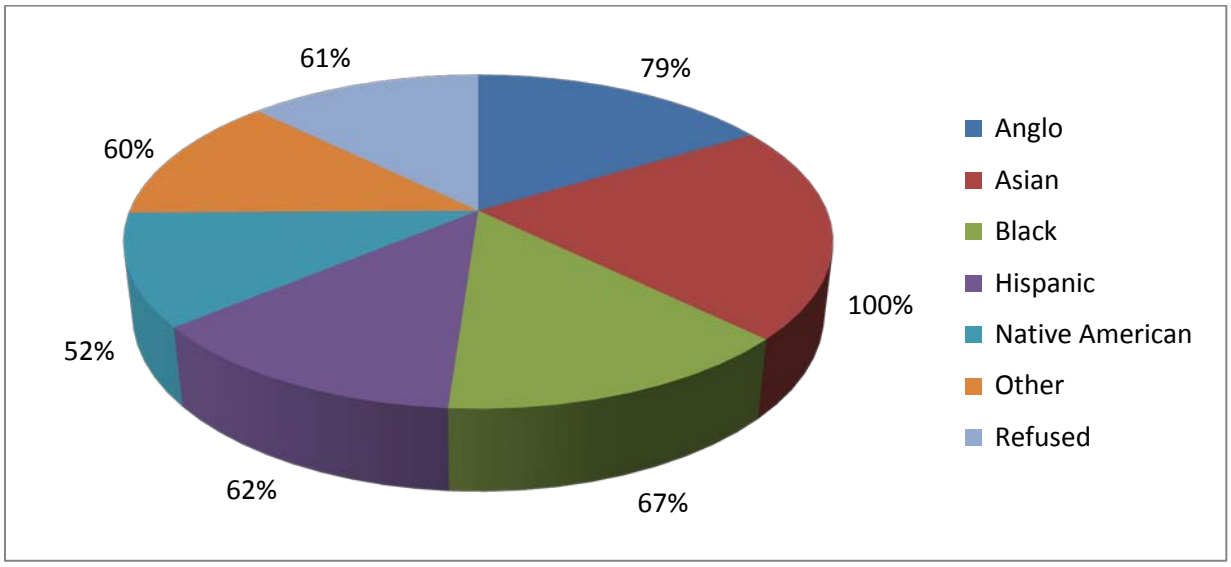
Figure 7. Home Internet Adoption Rate by Income and Number of Children in the Household



Source: UNM BBER Survey of Internet Adoption and Use in New Mexico, 2012.

As seen in Figure 8, internet access in the home also varied somewhat by ethnicity. Four of five (79%) households with a Caucasian survey participant have internet access in the home, compared to 62% of households with a Hispanic participant, 52% of households with a Native American participant, 67% of households with an African American participant, and 60% of households in which the participant identified their ethnicity as 'other.'

Figure 8. Home Internet Access by Race/Ethnicity



Source: UNM BBER Survey of Internet Adoption and Use in New Mexico, 2012.

Technology used to attain internet access varied significantly by ethnicity. Caucasian households in New Mexico tend to depend heavily on fixed broadband technology for home internet access. 42% of Caucasian households with access have fixed broadband only and another 41% have both fixed broadband and mobile wireless. Only 11% relied exclusively on mobile wireless, and the remaining 6% had dial up service only. Thus, 83% have broadband and 52% have mobile wireless alone or in combination with the other. In contrast, African American users are much more committed to mobile wireless for internet access. Only 4% of African American households with home internet access relied exclusively on fixed broadband; 71% had both fixed broadband and mobile wireless and 21% had exclusive access via mobile wireless. Thus, 92% of African American households with internet access have mobile wireless service. Hispanic households were in the middle of these extremes. One-third of households with internet access have only broadband, 40% have both broadband and mobile wireless, and 20% have mobile wireless alone. Native American households with internet access are least likely to have both fixed broadband and mobile wireless at only 26%; these households tend to either adopt fixed broadband only (41%) or, more commonly than any other ethnic demographic, mobile wireless only (26%). 8% depend on dial up service.

Demographic differences in home internet adoption are perhaps greatest between age groups. Persons between the ages 35 through 44 years old have the highest rates of home broadband adoption (80%). Adoption rates decline gradually among respondents who are older and younger – 76% of respondents 25-34 and 45-54 and 73% and 71% among cohorts 18-24 and 55-64, respectively, have adopted home internet. However, there is a sharp decline in adoption rates among older populations, especially among seniors. Of respondents 65 to 74 years old, the adoption rate is 63%; among those 75 years and older, the adoption rates falls to just 36%. This is the lowest rate of adoption of all demographic and socioeconomic categories (i.e. by income, employment status, education, household size and presence of children). The low rate of adoption between the oldest two cohorts cannot be explained by income. The median income in the 65-74 years old and the 75 years and over cohorts is the highest of the seven groups.

3.3 Geography of Internet Adoption

Urban residents are more likely to have internet access than those residing in rural areas or on tribal lands[3]. 77% of urban respondents are connected to the internet, versus 69% of rural respondents and 39% of tribal respondents. Regional patterns are consistent with this finding: Santa Fe (including Los Alamos) has the highest rate of internet connection at 87%. The Albuquerque Metro area follows at 79%. Other regions of the state have much lower internet access. The North Central and Northwest regions of the state are on the low end at 51% and 57% respectively. Aside from geographic location, population density is also a factor in accessing internet. Households located in more densely settled or urbanized environments are more likely to have access to the internet. For the 20% who live in the most densely settled areas (more than 2,831 persons per square mile), 85% have internet access. Of those living in the least dense environments (fewer than 7.5 persons per square mile), only 66% of households have internet access.

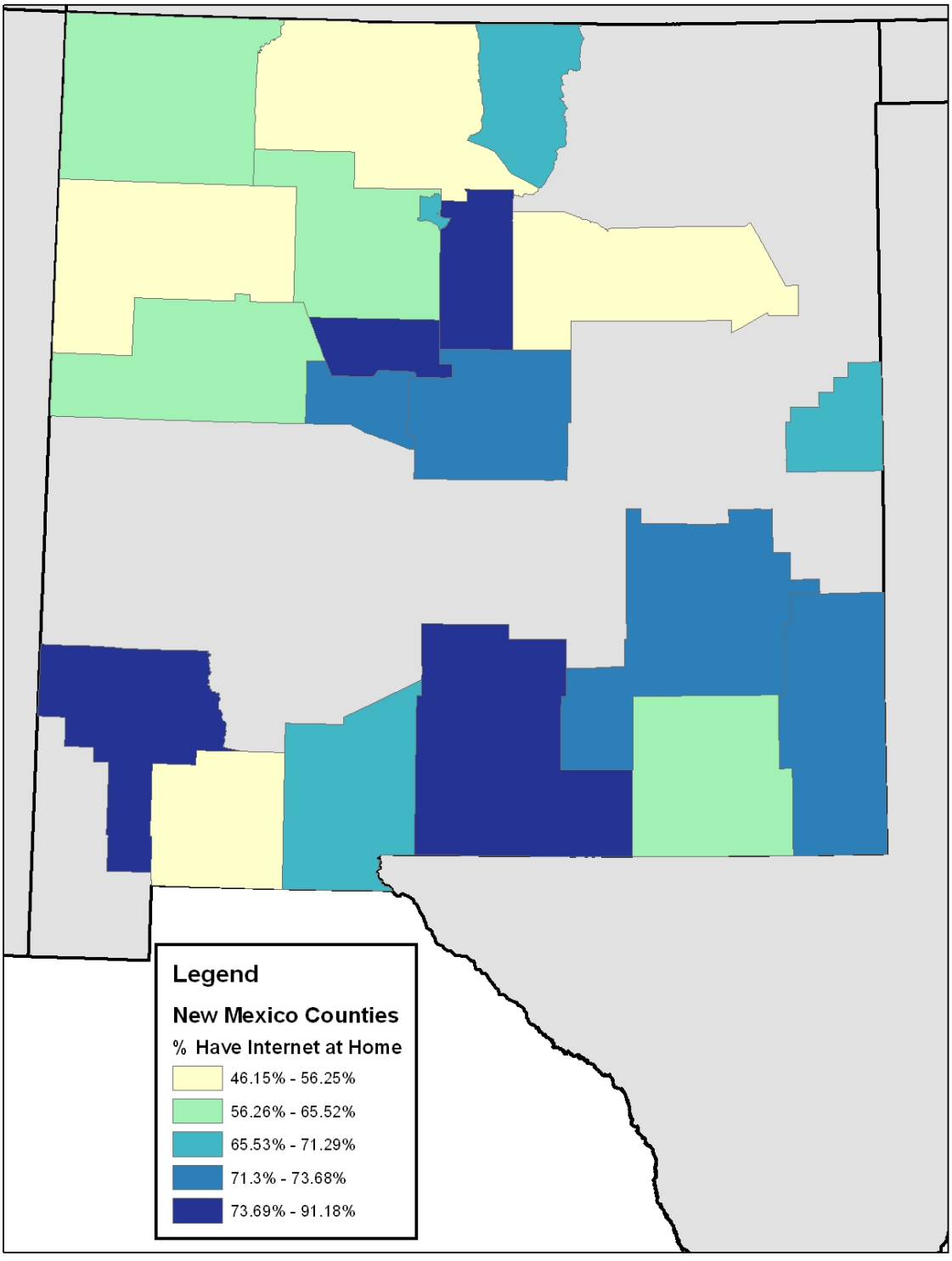
[3] Note that urban/rural/tribal area designation was identified by the respondents and does not represent an objective measure. Note also that tribal area designation does not necessarily indicate that the respondent is Native American. 43% of those who describe their area as 'tribal' area do not identify themselves as Native American.

These geographical patterns cannot be explained entirely by differences in household income. Among households with incomes greater than $35,000, subscription rates are comparable in urban and rural areas (81% in each), though much lower in tribal areas (56%). However, among lower income households (earning less than $35,000 per year) the differences in the rates of home internet adoption are much greater. Among lower income households, 74% in urban areas have home internet – a higher percentage than for the state population as a whole (72%), for rural areas (57%), and for tribal areas (just 34%). Taken together, the equal subscription rates found among higher income households in rural and urban areas may suggest that the broader difference in internet adoption in urban and rural areas has little to do with availability. However, data from tribal areas suggest a different conclusion. Internet adoption rates in tribal areas lag across all income groups, suggesting that availability may indeed be a significant constraint. This is confirmed by data reviewed in the next section.

Another, more direct indicator of geographical characteristics of the respondent's household is population.[4] These findings confirm the differences in internet adoption rates between self-identified geographical categories. Considered in quintiles, with households classified according to population density, the relationship is relatively strong. Of the 20% of households located in the most densely settled areas (more than 2,831 persons per square mile), 85% have internet access. Conversely, of those living in the least dense areas (fewer than 7.5 persons per square mile), only 65% of households had internet access. From the opposite perspective, the average density of households with home internet is 1,549 persons/square mile and the average density of households without internet is 1,122. The difference in the average settlement density between those with and without home internet is statistically significant (p=0.001); thus, households without internet (on average, are located in less densely settled areas.

[4] Geographical density is measured as the number of persons per square mile in the respondent's zip code. Values ranged from 0.50 persons per square mile for several households in Luna and Catron counties, to a zip code with 12,458 persons per square mile in Albuquerque.

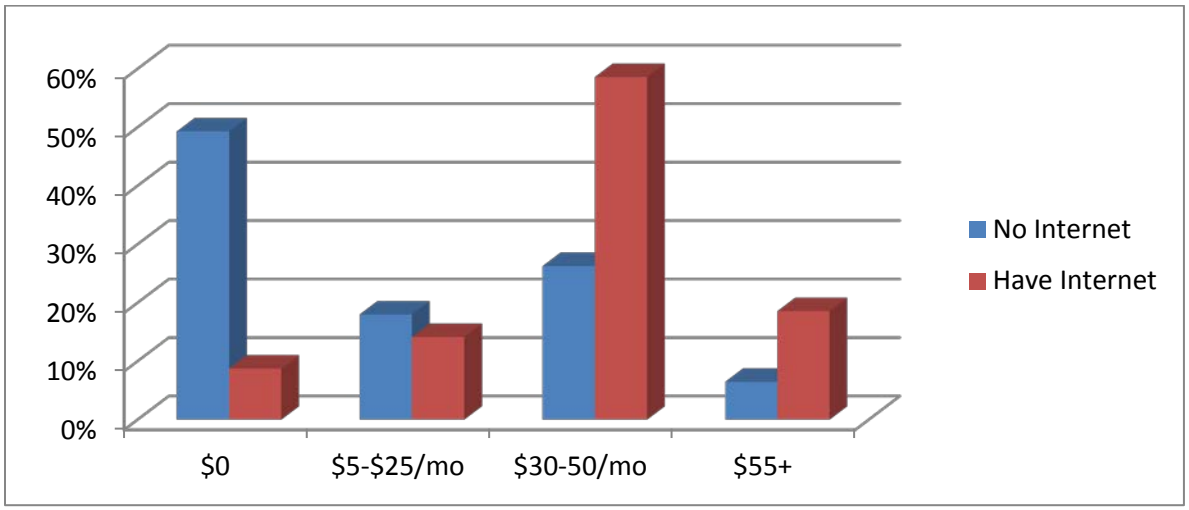
Map 1. Home internet adoption by county



3.4 Willingness to Pay for Home Broadband

A commonly used survey method to establish the value that an individual places on a good or service, such as a high-speed internet connection, is 'willingness to pay.'[5] In this survey, all participants were asked about their willingness to pay. On average, respondents are willing to pay $34.07 per month, with a median value of $31.54. Unsurprisingly, there were significant differences in the willingness to pay between those with and without home internet. (See Figure 9) Of those with home internet, the average willingness to pay is around $40.00 ($39.87) per month; the median is $36.18 per month, and the mode is $50.00 per month[6]. Of those without home internet, the average willingness to pay was $19 per month and the median is just $5 per month. Nearly half (49.3%) report that they would pay nothing for internet and only a fraction (6%) would pay more than $50.00 per month.

Figure 9. Willingness to Pay by Home Access to the Internet



Source: UNM BBER Survey of Internet Adoption and Use in New Mexico, 2012.

[5] To measure willingness to pay, survey participants were asked whether they would be willing to pay a randomly selected amount for high-speed internet; initial values were selected between $20 and $100 per month, in $10 increments. Based on their response, they were asked about higher or lower amounts, again in $10 increments. The query was continued until the participant offered a different answer. At that point, the participant was queried for a final value using $5 increments. This is a commonly used survey methodology to establish willingness to pay.

[6] Ironically, 9% of respondents with home internet say that they are unwilling to pay for the service.

Analysis of willingness to pay in relation to income yields an important finding – unwillingness to pay is not the same as inability to pay. In statistical terms, the relationship between the amount one is willing to pay and annual income is not significant (r=0.17).[7] Indeed, among households without home internet and an annual income greater than $35,000, fully 57% say that they are unwilling to pay even $5 per month for high-speed internet. By comparison, a smaller share (46%) of households without home internet and with incomes less than $35,000 is unwilling to pay. Thus, a statement that one is unwilling to pay for home internet is not necessarily indicative of an inability to pay. More likely, unwillingness to pay (or willingness to pay only very small amount) is suggestive of a low intrinsic value placed on high-speed internet by the respondent.

3.5 Why New Mexicans are without home internet access

In general terms, non-subscribers tend to be older (especially 65 years of age and older), have lower incomes (especially less than $15,000 annually), are neither a full time student or employed, describe their ethnicity as Native American, Hispanic, or 'other', and live in an area they describe as rural or tribal.

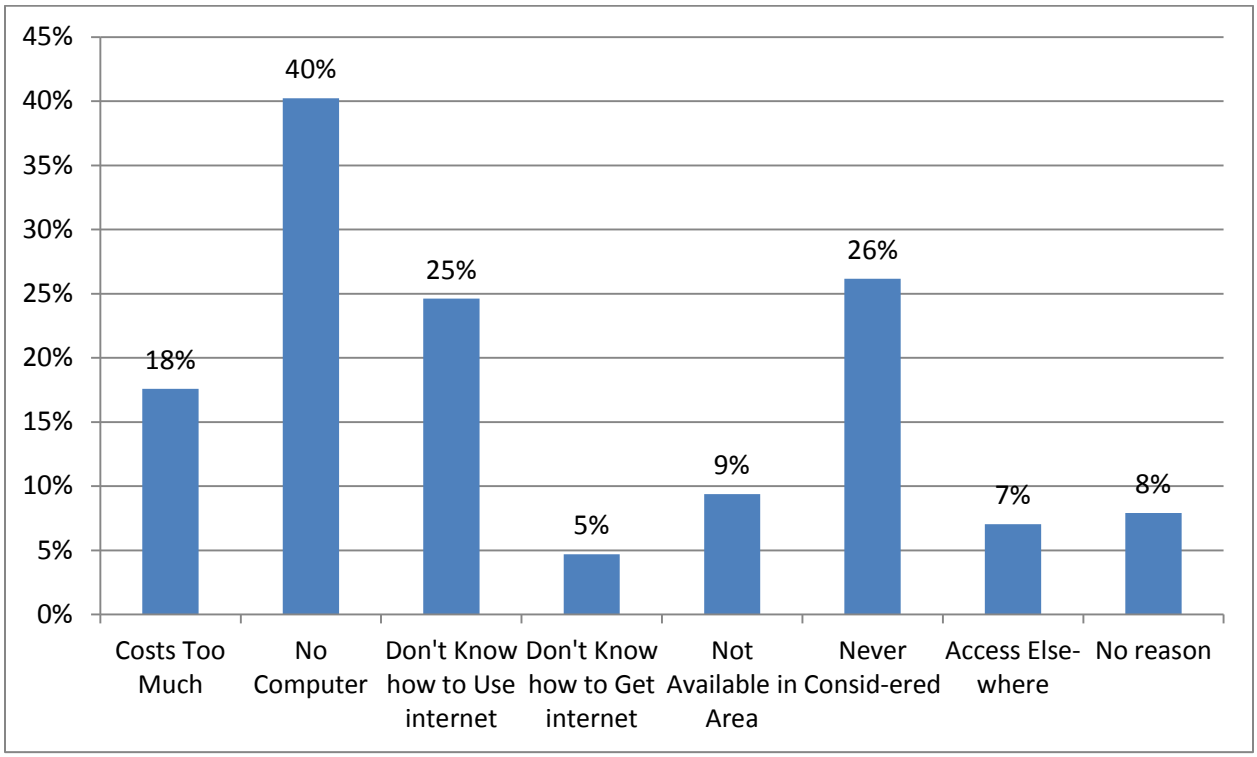
In BBER's survey of New Mexicans, respondents without home internet were asked to offer one or more of seven reasons to explain their decision. The reasons can generally be categorized as concerns for relevance and usability, price, and availability. The most commonly offered reasons concerned affordability. Fully 40% said that a reason that they had no internet was because they had no computer. Another 18% listed cost of service as a reason. Taken together, 54% offer either lack of computer and/or cost of service – both related to affordability – as a reason.[8] A second category concerns literacy and interest. One quarter of respondents said that they "don't know how to use it" and 26% said that they "never considered it". Another 7%

[7] The absence of any relationship between willingness to pay and income is confirmed by another result. As described above, the procedure to establish a participant's willingness to pay begins with a query of a randomly selected initial value. Analysis of the results indicates that the relationship between the final value and initial random value (r=0.22) was stronger than the relationship with annual income (r=0.17. This confirming that the willingness to pay with respect to income was indeed random.

[8] The Pew Internet & American Life Project also groups 'no computer' and 'too costly' as concerns for affordability.

offered that they 'have access elsewhere' as a reason for not having internet service at home. A third category, concerning access, was less often identified as a barrier by those without home internet. In all, only 9% explained that internet is "'not available in my area'[9] and only 5% explained that they 'don't know how to get internet'. In summary, constrained affordability, lack of digital literacy, and disinterest are identified by respondents as the principal barriers to home internet adoption. Access is less important. (See Figure 10)

Figure 10. Stated Reasons for Non-Adoption of Home Internet



Source: UNM BBER Survey of Internet Adoption and Use in New Mexico, 2012.

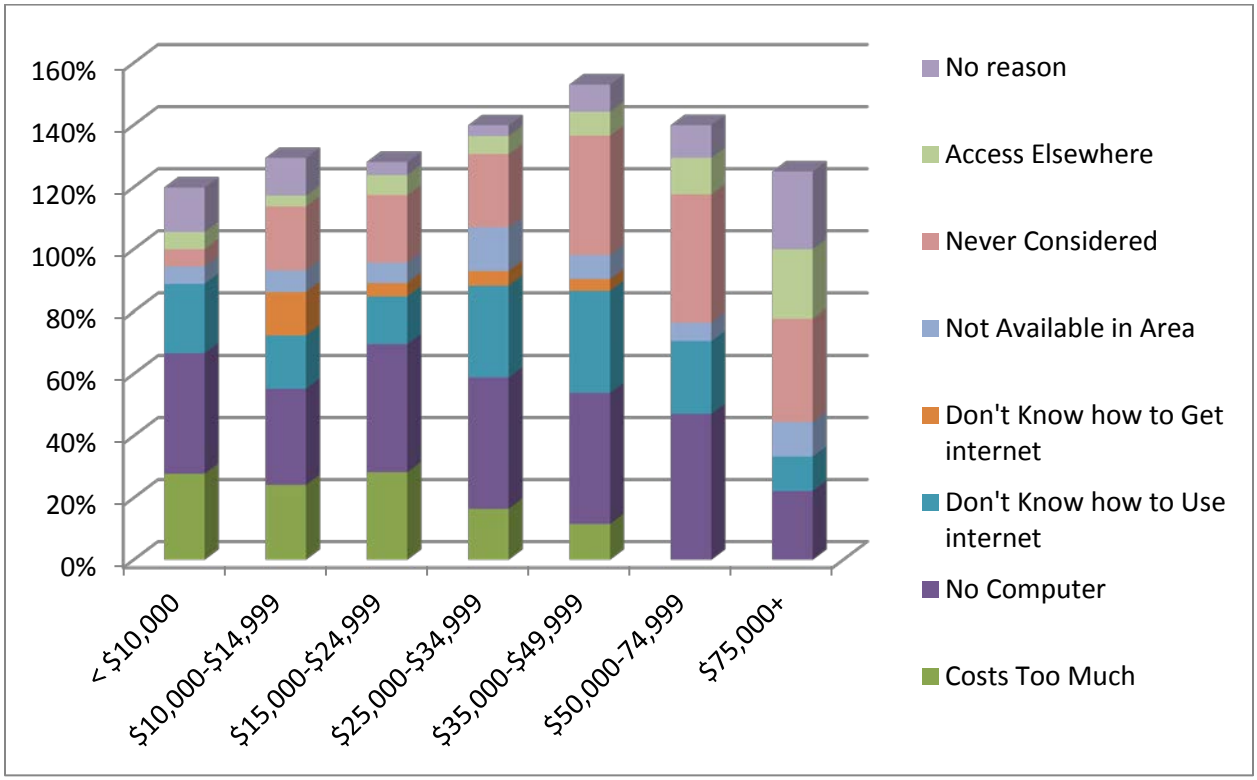
Income

As illustrated in Figure 11, the reasons for not having home internet access vary sharply according to income. Unsurprisingly, concerns for affordability were the reasons most

[9] This corresponds to national patterns. According to a recent survey by the Pew Internet & American Life Project, only 6 percent of adults in the US report that they do not subscribe to broadband because of a lack of availability (Smith, 2010).

commonly cited for lower and middle-income respondents. Among those with incomes less than or equal to $15,000, 34% explained that they had no computer and 26% offered the 'cost of service' as a reason for not having home internet service. In all, 57% of low-income respondents raised one or both of these issues of affordability.

Figure 11. Stated Reasons for Non-Adoption of Home Internet by Income



Source: UNM BBER Survey of Internet Adoption and Use in New Mexico, 2012.

Note: Survey participants were permitted more than one use, thus the row total may be greater than 100%.

Among middle-income respondents (with incomes between $15,000 and $50,000 per year), 42% offered 'no computer' as an explanation for not having home internet. This was the most common reason for this middle-income group and, interestingly, it was more frequently cited by this group than among the lower income group. Another 18% of the middle-income group said that the 'cost of service' was a reason. In all, 55% reported affordability concerns (lack of a computer or the cost of service) as a barrier. Lack of knowledge or interest was also a common

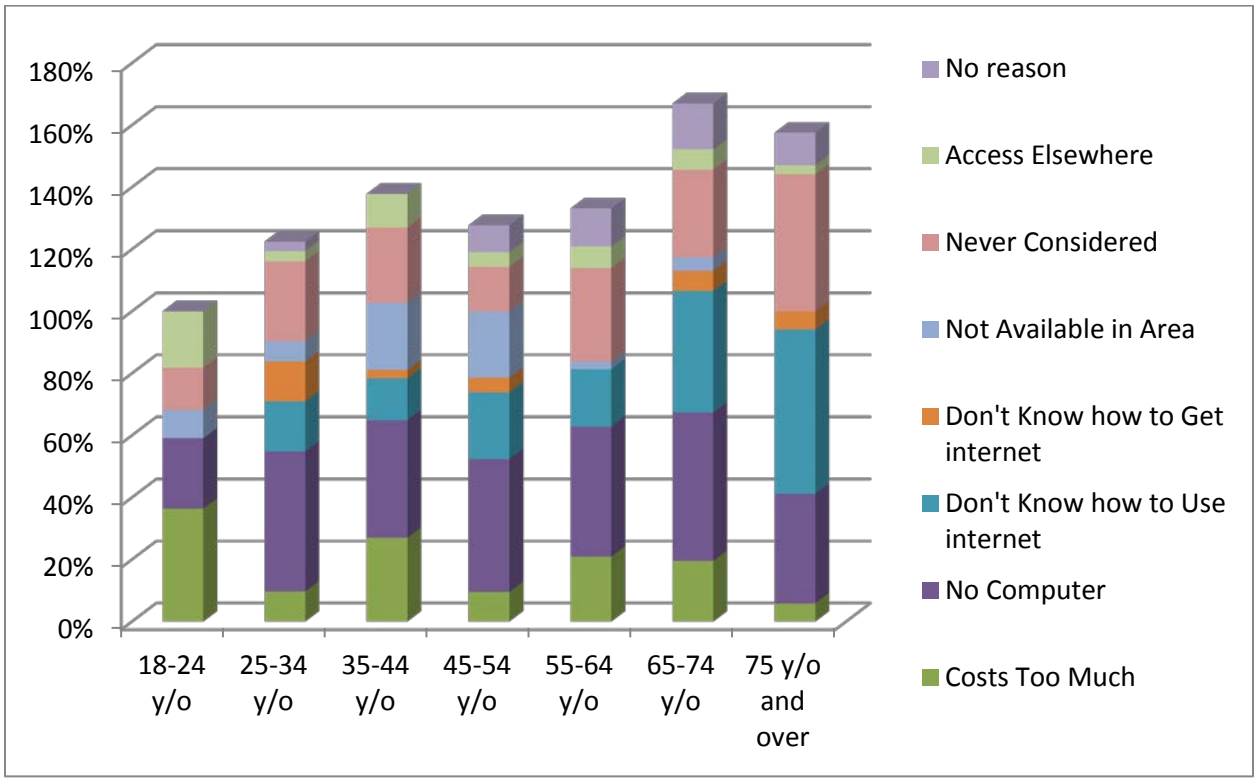
answer for middle-income respondents. More than one quarter (27%) said that they 'don't know how to use the internet' and another 27% said that they 'never considered it'.

Among higher income respondents, not a single respondent indicated that 'cost of service' was a barrier. Rather, disinterest was most commonly cited. Fully 38% of these individuals said that they had no computer. However, given their higher level of income and lack of concern for the cost of service, the absence of a home computer may be better understood as evidence of disinterest than concern for affordability. Further, an equal share (38%) said that they 'never considered' home internet – an even clearer sign of disinterest. Another 19% percent said that they 'didn't know how to use the internet'. Nearly one in five (19%) offered no reason.

Age

The reasons for not having home internet do not vary greatly between age groups – with one significant exception – seniors. For the youngest age cohorts (younger than 35 years) affordability is slightly more of a concern than for older respondents. Relatively few explain 'don't know how to use the internet' (9% vs. 45% for all without home internet). The subscription rate for this group is 76%. For the middle-aged cohorts, from 35-64 years, no single pattern stands out. The subscription rate for this group is also 76%, though it peaks at 80% for those 35-44 years old. For seniors 65 years and older, the situation is much different. To begin, the subscription rate falls to 65% for respondents 65-74 years and to 44% for those 75 years and older. Next, the reasons offered are significantly different. The direct cost of service is of little concern (14%). They do not believe that it is not available in their area (3%) nor do they say they 'don't know how to get it (6%). Rather, it is overwhelmingly a matter of interest and ability. Nearly half of seniors (45%) offered "don't know how to use the internet" as a reason for not subscribing, compared to 15% for younger adults. More than one third (35%) 'never considered it' (vs. 22% for other respondents), 43% have no computer (vs. 39%); and 15% declined to offer a reason (vs. 6%). (Refer to Figure 12.)

Figure 12. Stated Reasons for Non-Adoption of Home Internet by Age



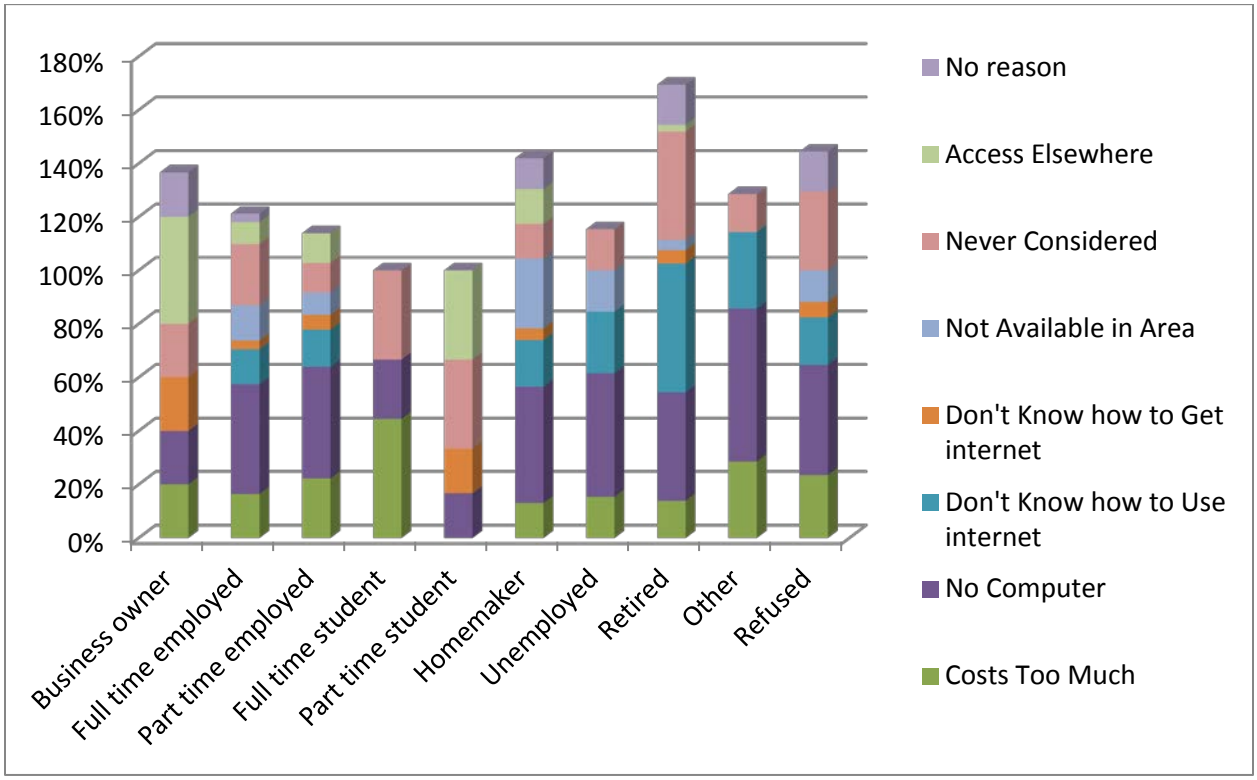
Source: UNM BBER Survey of Internet Adoption and Use in New Mexico, 2012.

Employment status

As depicted in Figure 13, a breakdown of reasons offered to explain not having home internet by employment offers few surprises and generally confirms patterns described above. Students, part time and full time, are often deterred by the cost of service (27% vs. 17% for others), though few are without computers (20% vs. 42%). No student without home internet lacked computer literacy and they were somewhat more likely to explain the absence of internet at home in terms of access elsewhere. Those employed full time or part time or business owners have a different pattern – few are concerned with the cost of service (19%) but many more have no computer (40%). Digital literacy is not much of problem for this population. Other respondents are unemployed, homemakers, retired or 'other/refused'. Retired persons (of course typically older than the broader population) commonly explained not having home internet by one form of disinterest or another – no computer (43%), 'don't know how to use the internet' (39%), and 'never considered it' (31%). Few have access elsewhere (4%) and cost

of service was a minimal concern (14%). The unemployed revealed interesting patterns. In general, measures of interest among those without home internet was strong – lack of digital literacy was no more common than the general population (23% vs. 25%); few have not considered it (15% vs. 28%), and the cost of service was not much of a barrier (15% vs. 18%). However, many are without home computers (46%).

Figure 13. Stated Reasons for Non-Adoption of Home Internet by Employment Status



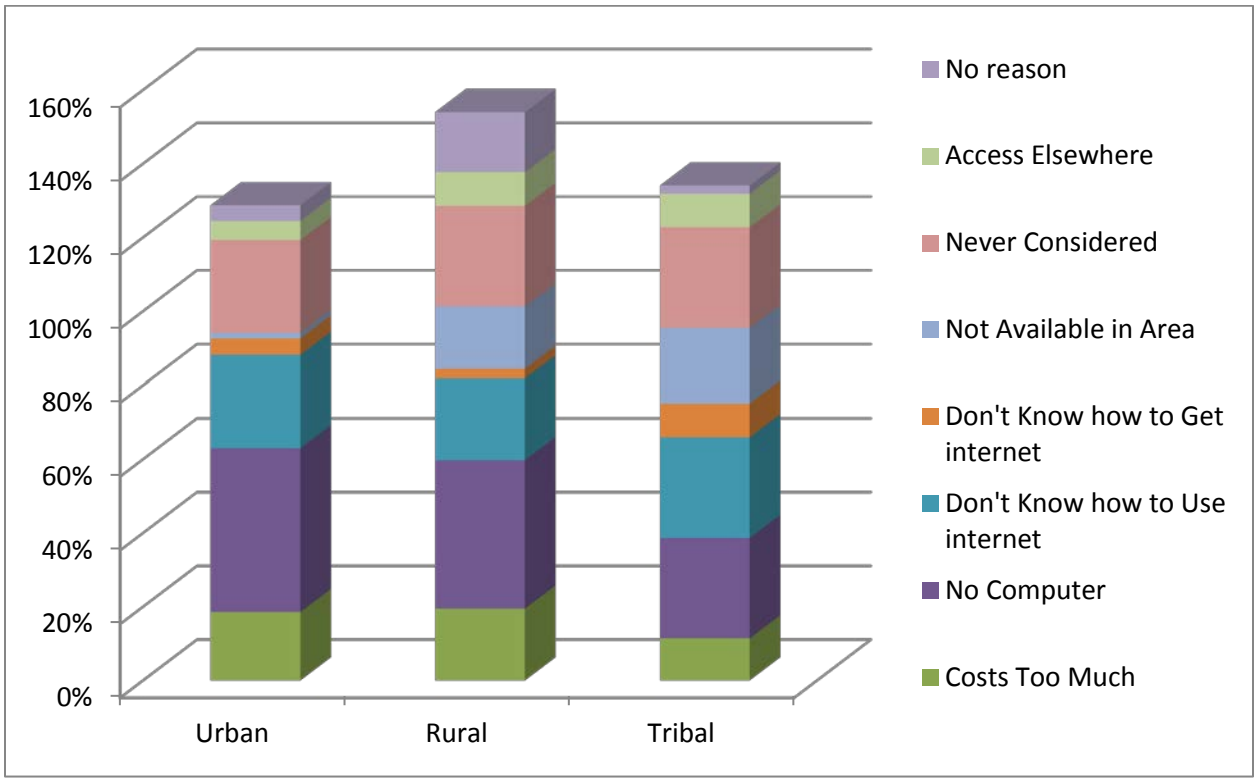
Source: UNM BBER Survey of Internet Adoption and Use in New Mexico, 2012.

Geography

The explanations for not subscribing to home internet offered by respondents confirm earlier assumptions about geography – it is a matter of availability. Among urban respondents, more than three quarters have home internet access (77%), and only 1% of those without access explain that it is not available in their area. Those in rural areas, where the subscription rate is 69%, 17% of respondents without access say that it is not available in their area. Cost is no more or less a concern than for the population as a whole. Finally, in tribal areas, where the

subscription rate is just 39%, 20% of those without access explain that it is not available in their area and another 9% say they don't know how to get it. Interestingly, respondents from tribal areas are very unlikely to cite concerns of affordability. Only 11% say that the cost of service is too high (vs. 19% for other respondents) and only 27% say they don't have a computer (vs. 43%). They are only slightly more likely than others to offer that they 'don't know how to use a computer' as an explanation (27% vs. 24%). (Refer to Figure 14.)

Figure 14. Stated Reasons for Non-Adoption of Home Internet by Geography



Source: UNM BBER Survey of Internet Adoption and Use in New Mexico, 2012.

3.6 Mobile Wireless Devices – complementary or substitutive of fixed broadband?

Access to the internet with mobile wireless devices, such as smartphones with data plans, is rapidly increasing in the US. In New Mexico, 41% of survey participants report having a mobile wireless internet access.

Adoption of smartphones follows very clear demographic patterns. First, smartphone adoption is much more common among younger adults. A majority (57%) of respondents younger than 35 years has internet access with a smartphone; 43% of respondents between the ages of 35 through 65 have smartphones; and only 19% of respondents over 65 years of age own a smartphone and have wireless internet access. Thus, younger adults are three times more likely to have smartphones than seniors. Given incomes are much higher among older adults, this trend is especially significant. Second, smartphone subscription is strongly associated with income. More than half (51%) of respondents with a household income of $50,000 or more have a mobile wireless internet access; 40% of respondents who make between $15,000 and $50,000 have mobile wireless internet access; only 30% of respondents who earn less than $15,000 have mobile wireless internet access.

The expanding adoption of mobile wireless internet access and the sharp demographic patterns associated with adoption raise an important question for broadband advocates and policymakers – do individuals consider these devices to be a substitute for fixed broadband access? The issue has been investigated on the national scale by John Horrigan,[10] until recently the lead researcher at the Pew Internet Project. In summary, his research concludes that smartphones are complementary rather than substitutive of fixed broadband internet access, indicating an attitude of interest and confidence. However, where cost is of concern and particularly among African American and Hispanic populations, mobile wireless access may serve as a substitute for fixed broadband.

This conclusion is largely confirmed in our survey of New Mexicans. For most, mobile wireless access is complementary to fixed broadband access. In New Mexico, if you have a smart phone you are more likely to have fixed broadband as well but you are unlikely to use a smartphone as a substitute for fixed broadband. Specifically, two thirds (66%) of those with mobile wireless internet access also have a fixed broadband connection in the home but only 29% of those

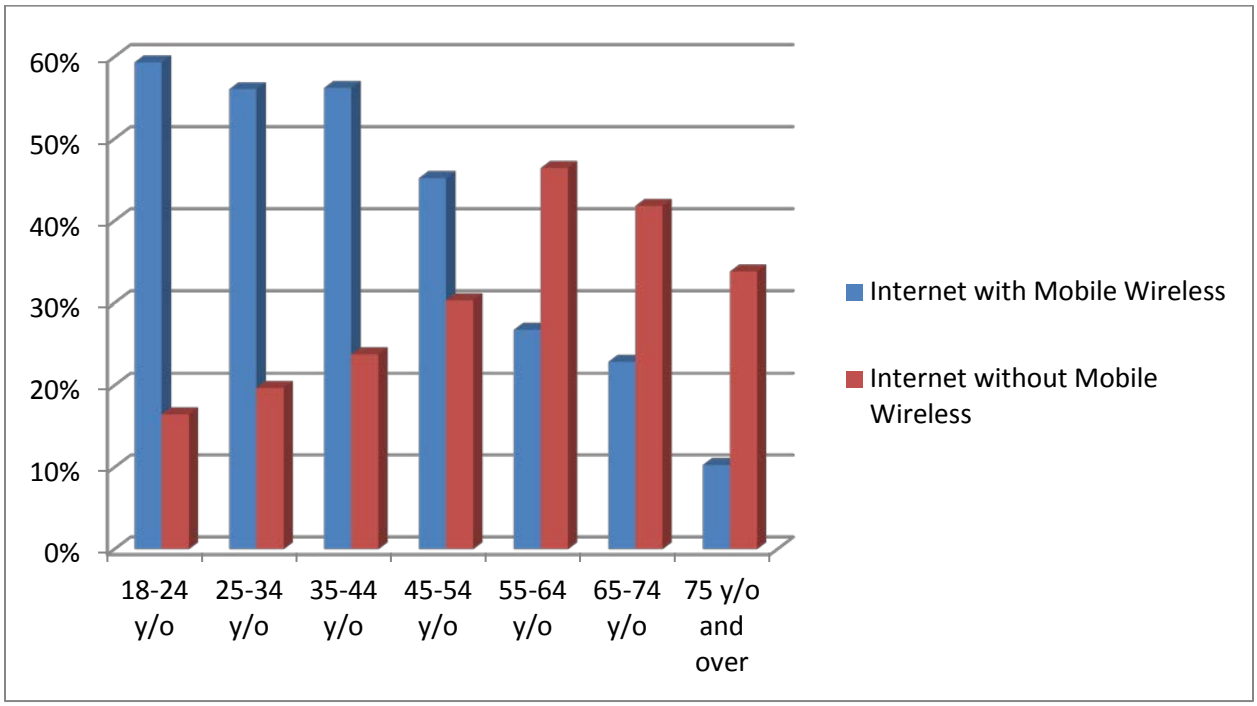
[10] John B. Horrigan, 2012. "Recent tech adoption trends and implications for the Digital Divide". http://ssm.com/abstract=2031755

without broadband have a smartphone. Simply stated, smartphones help to define rather than bridge the Digital Divide.

However, beyond this overarching pattern, there are important variations along socioeconomic and demographic lines. As a key example, mobile wireless service is much more likely to be a substitute for fixed broadband adoption among lower income households, where budgetary constraints are greatest. Of households with internet access and with annual incomes $50,000 and higher, 13% have mobile wireless only, 35% have broadband only, and 4% have dial up only. Far more (48%) have both broadband and mobile internet services. By contrast, among households with internet access and with incomes less than $15,000, the subscription rate for mobile wireless only doubles to 26%, dial up increases to 7%, fixed broadband only increases slightly to 37%, but subscription to both falls sharply to 28%. Thus, while the relationship of using both smartphone and broadband services is generally complementary, this relationship is much stronger among higher income households.

In terms of age, the relationship between smartphone and fixed internet subscription is more complex. In general, younger adults are far more committed to internet access than are older populations: 76% of those 35 years of age or younger have internet access compared to only 58% of those 65 years of age or older. However, it is the embrace of mobile services among the younger population that is most prominent. Among young adults under 35 years of age with internet access, 21% depend solely on broadband and 3% have dial-up service; however, 28% have mobile wireless only and fully 47% have both mobile and broadband access. The situation among seniors 65 years and over is sharply different. Of those with internet access, a large majority (57%) has fixed broadband only and 5% have dial up service, but only 6% depend exclusively on mobile wireless and 27% have both. Thus, though younger adults are much more likely to embrace any and all forms of internet access, if forced to choose they are still more likely to use smartphones as a substitute for fixed broadband than are older adults. (See Figure 15.)

Figure 15. Internet With and Without Mobile Wireless Devices by Age



Source: UNM BBER Survey of Internet Adoption and Use in New Mexico, 2012.

The complementary/substitutive relationship among internet technologies has no clear association with the level of educational attainment. To be sure, those with more education are more likely to have internet in general – 84% of those with either some college experience or higher college degrees have internet access compared to 56% of those with no more than a high school diploma. However, among those with internet access, the technology used for access is nearly identical. Even given the difference in earning power, respondents with home internet but no more than high school education are just as likely as those with a college education to be using both technologies.

Geographic parameters affect the technologies used to access the internet. As noted earlier, the most significant finding regarding geography is that only 39% of those on tribal lands have access to the internet compared to 69% of those in rural areas and 77% of those in urban areas. Additionally, households in tribal areas are far more reliant on mobile wireless technology than residents of urban and rural areas and, to an even greater degree, they are likely to see mobile

wireless technology as a substitute for fixed broadband. More than two thirds (68%) of households in tribal areas with internet access use wireless technology (compared to 55% in other areas) and 25% have mobile wireless only (compared to 16%). The reliance on wireless technology in tribal areas may be explained by both income constraints and limited fixed broadband access.

In summary, within almost every socioeconomic and demographic category, populations that are more likely to have any form of internet access are also more likely to have both fixed broadband and mobile wireless access. They are complementary. To the extent that mobile wireless is a substitute for fixed broadband, it is in the narrow circumstances where budgetary constraints (e.g. low-income households) or limited access (e.g. tribal areas) forces a choice.

3.7 Important Qualities in Internet

In the BBER study, participants were also asked to rate internet qualities (affordability, speed, security, and reliability) by importance. Qualities were rated on a scale of 1 to 5; 5 being of greater importance. The data reveal that security is considered the most important quality, and was rated a 5. Reliability followed with a score of 3.2. Affordability (score of 2.2) and speed (score of 1.1) were considered less important. These scores are fairly consistent across the board, and differences by socioeconomic characteristics were minimal. However, lower income households are relatively more likely to value affordability and speed; higher income groups place somewhat greater value on security and reliability.

3.8 Digital Literacy in New Mexico

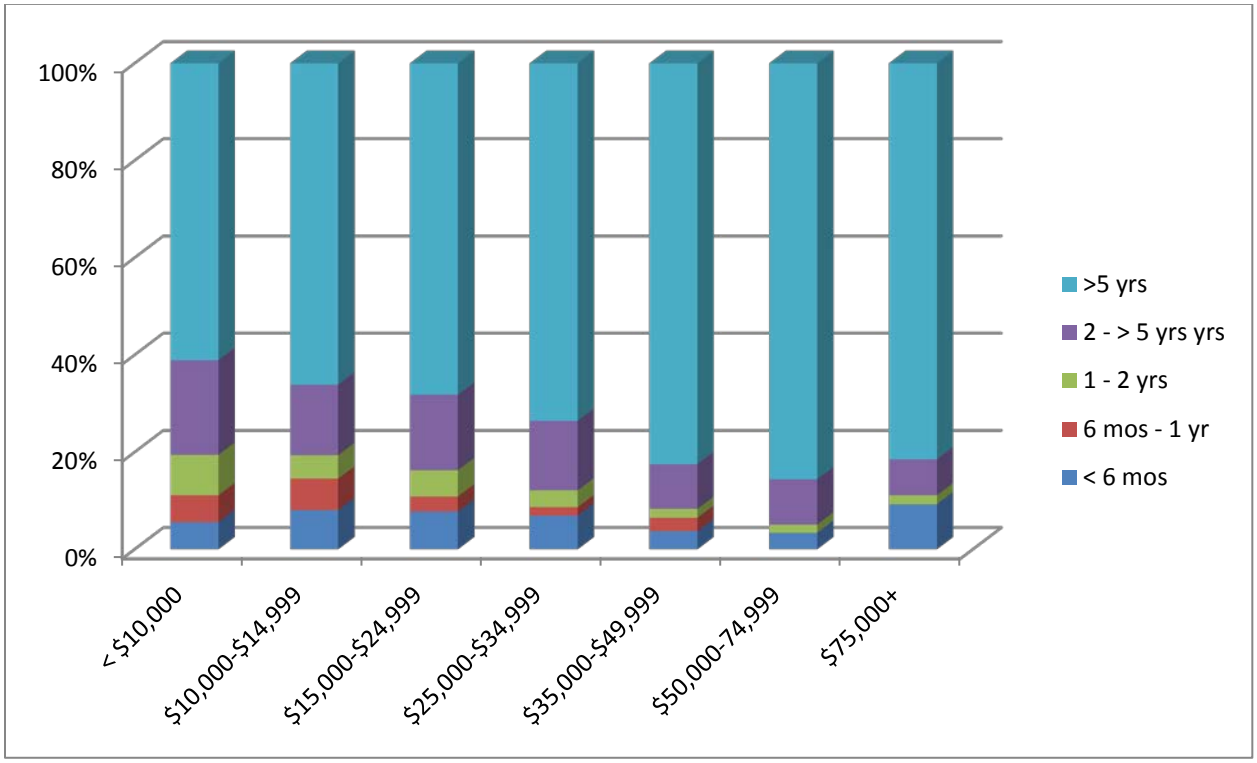
The survey allows for an analysis of four aspects of digital literacy: whether one knows how to use the internet; how long a person has used the internet; where and how someone learned to use the internet; and the resources that one utilizes to continue to learn to use the internet.

In total, 85% of all respondents reported having learned to use the internet. Only 2% of those with internet in their home do not know how to use it. On the other hand, 50% of respondents without internet in their home do not know how to use it. This finding is consistent with a

theme that runs throughout this study – home internet access is as much or more a matter of interest and ability then as affordability and access.

As depicted in Figure 16, household income helps to explain digital literacy. Those with higher incomes are more likely to have learned how to use the internet – 88% of respondents with household incomes greater than $50,000 know how to use the internet compared to only 68% of respondents with incomes less than $15,000. Of those who know how to use the internet and have access at home, 84% have used the internet for more than 5 years and 95% have used it for at least 2 years. Only 3% have learned how to use the internet in the past year. However, of those who know how to use the internet and do *not* have it at home, only 56% have used the internet for 2 years or more and 32% report that they learned to use it in just the past 6 months. The causality here is not clear but the message is – those with home internet access know how to use the internet and have had a long relationship with it; those without home access are much less likely to know how to use it and even if they do, they are newer to it.

Figure 16. Period of Internet Literacy by Income



Source: UNM BBER Survey of Internet Adoption and Use in New Mexico, 2012.

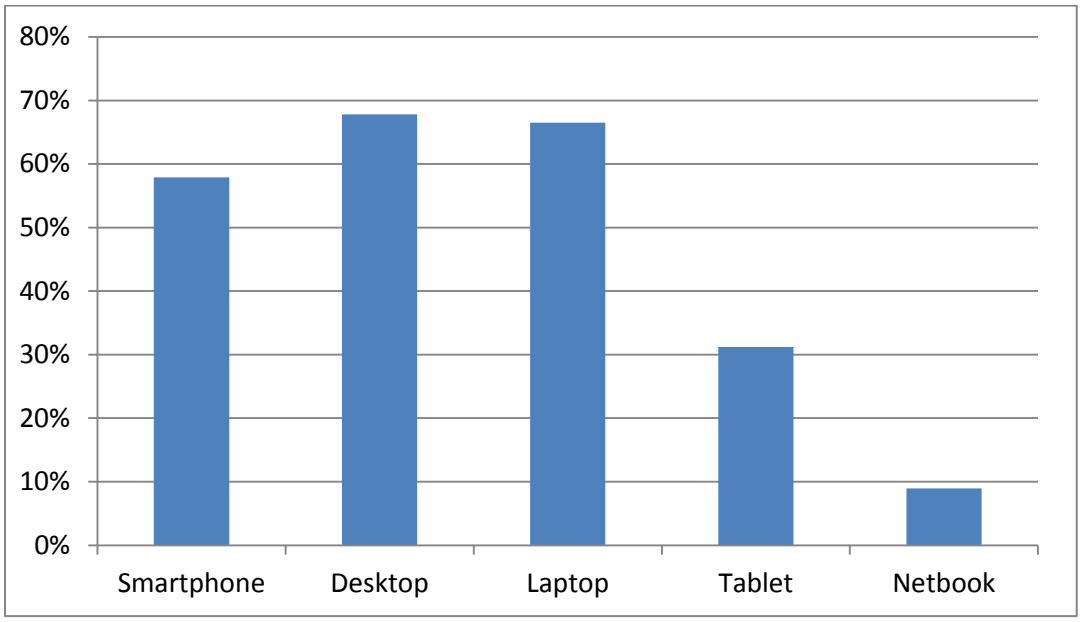
Of all who know how to use the internet, three quarters (75%) learned to use the internet on their own (e.g., internet searches), 21% learned in school, 20% learned with friends and/or family, 19% learned at work, and only 2% learned from an internet course[11]. However, where people learn how to use the internet varies by socioeconomic status. Lower income respondents were more likely to learn in school (30% with annual incomes less than $10,000 compared to 16% of participants with annual incomes of more than $50,000) while higher income respondents were more likely to learn at work (31% of higher income respondents compared to 13% of lower income respondents). Middle-income participants were more likely to learn how to use the internet from family and friends (22% compared to 15% in the other income groups). In terms of resources and strategies to continue to develop internet skills, "self-learning/internet searches" is across board the most common way respondents improve their internet skills at 79%. Friends/family is the second most common (32%). Training programs (6%), co-workers (4%) and librarians (2%) are less commonly cited. Interestingly, librarians are relatively more often cited as important resources by those with lower incomes and by Native Americans.

3.9 Technology and Access to Computers

People use various devices to access the internet – laptops, desktops, smartphones, netbooks, tablets, or a combination of several of these. As Figure 17 illustrates, participants in the survey of New Mexicans indicates that the desktop (66%) and laptop computers (65%) remain the commonly used devices, followed by smartphones with data plans (41%), tablets (30%) and netbooks (9%).

[11] Respondents could list more than one place or means of learning.

Figure 17. Household Internet Access by Type of Device



Source: UNM BBER Survey of Internet Adoption and Use in New Mexico, 2012.

Unsurprisingly, a greater variety and number of devices is available to higher income households. In these households, laptops are most commonly used to access the internet (75%), but desktop computers (72%) and tablets (43%) are also common. In lower income households, desktop computers are most common (61%), but laptop computers are also common (57%). Lower incomes are much less likely to have adopted tablet computers (27%). Interestingly, adoption of smartphones varies somewhat less in relation to household income. Smartphone ownership ranges from 62% for households with incomes greater than $50,000, to 57% for households with incomes between $15,000 and $50,000 to 54% for households with incomes below $15,000. Source: UNM BBER Survey of Internet Adoption and Use in New Mexico, 2012.

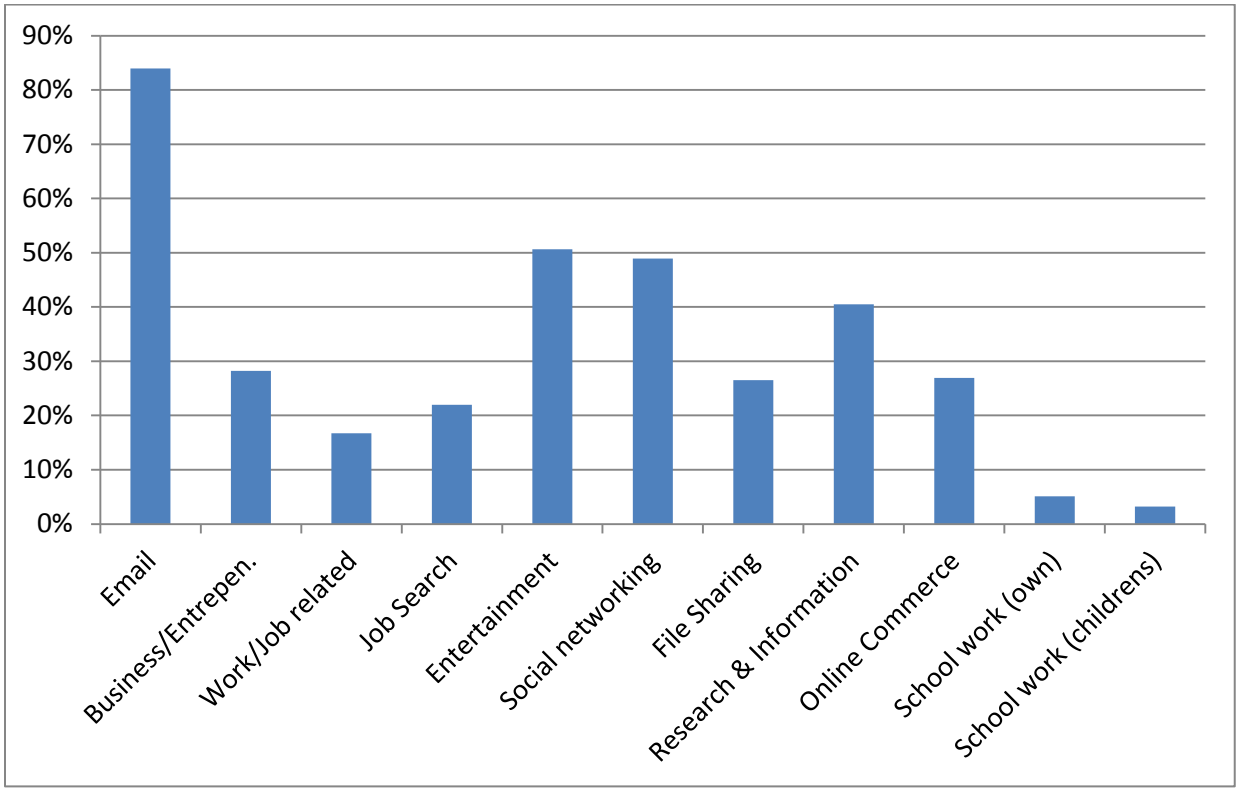
3.10 Uses of Internet in the Home

Survey participants with home internet were asked about 11 different uses for the internet at home – email, home business, job searchers, work related, one's own education, children's

education, information and research, online commerce, entertainment, social networking, and file sharing.[12]

As seen in Figure 18, email is overwhelmingly the most common use of home internet – 84% of participant reported using their home internet to access email. Entertainment (51%) and social networking (48%) are next most common, followed by research (40%) and online commerce (27%). Use for education (completing one's own schoolwork or supporting one's child) is least common at 5% and 3% respectively. However, it is important to note that the survey only questioned adults; the survey did not query use by children.

Figure 18. Use of Internet in the Home by Activity



Source: UNM BBER Survey of Internet Adoption and Use in New Mexico, 2012.

[12] Survey participants could list more than one use.

The use of the internet varies according to socioeconomic and demographic characteristics. Tribal households are least likely to have adopted home internet but, on average, those with home access cited the greatest number of uses (3.8). Compared to those in rural and urban areas, they are disproportionately likely to use the internet at home for job search (38%), information queries and research (54%), entertainment (54%) and education (10%). They are relatively unlikely to identify work-related uses (8%). Differences between rural and urban users are minimal. They are almost equally likely to use home internet for email, job searches, online commerce, and social networking. Urban users are slightly more likely to use the internet for self-employment (32%), perhaps reflecting differences in employment patterns. Rural users are slightly more likely to use the internet at home for entertainment.

Differences in use by employment status (including only those with home broadband access) are unsurprising. Students are much more likely to use home internet for education; unemployed and part time workers are most likely to conduct job searches; business owners and full time workers emphasize work-related activities; homemakers are most likely to engage in online commerce and social networking; and homemakers and the unemployed are most likely to use home internet for entertainment. Retired persons report the fewest uses, including very limited use for social networking.

Higher income groups report a higher number of uses than lower income groups. Respondents with a household income less than $50,000 annually mention an average of four different uses for the internet; respondents who earn $15,000 to $50,000 annually had an average of 3.3 different uses and those who earn less than $15,000 annually had an average of 2.5 different uses. Higher income respondents are more likely to identify a use in virtually every category. These respondents are more likely to use home internet for work-related activities, entertainment and social networking, research and, especially, online commerce. The single exception, though the total number of respondents is low, is that the lowest income group is most likely to use home internet for educational purposes.

There is a relationship between the technology used to access the internet and the types of use. As one might expect, those with both broadband and mobile wireless access use the internet for the greatest range of uses (an average of 4.4 use categories), followed by broadband only (and average 3.2 use categories), mobile wireless (an average of 2.6 use categories) and dial up (and average of 1.9 use categories).

Those with both broadband and mobile wireless are far more likely than those with broadband or mobile wireless alone to use the internet for any given purpose. This, again, attests to the key issue of interest and ability – those most engaged in the internet have both technologies and use them for the greatest number of uses. Those with both technologies almost twice as likely to use the internet for commerce (41%) as those with only broadband (22%) or mobile wireless (15%). They are also more likely to engage in file sharing (39% vs. 20% for broadband and 19% for mobile wireless), entertainment (64% compared to 43% for broadband and 36% for mobile wireless) and social networking (62% compared to 40% for broadband only and 55% for mobile wireless only). The category with the least difference across technologies is email; even 73% of those with dial up report using the internet for this purpose.

An interesting exception to this pattern regards the frequency of use. Those with only mobile wireless service access the internet most frequently; 34% report using the internet hourly and another 52% report using it daily. Of those with both mobile wireless and broadband access, 19% report hourly use and another 67% report daily use. Of those with broadband only, 12% access the internet hourly and another 71% access the internet daily. Unsurprisingly, those with only dial-up services access the internet less frequently, though a majority still report that they check-in at least daily (63%).

3.11 Internet Use Outside of the Home

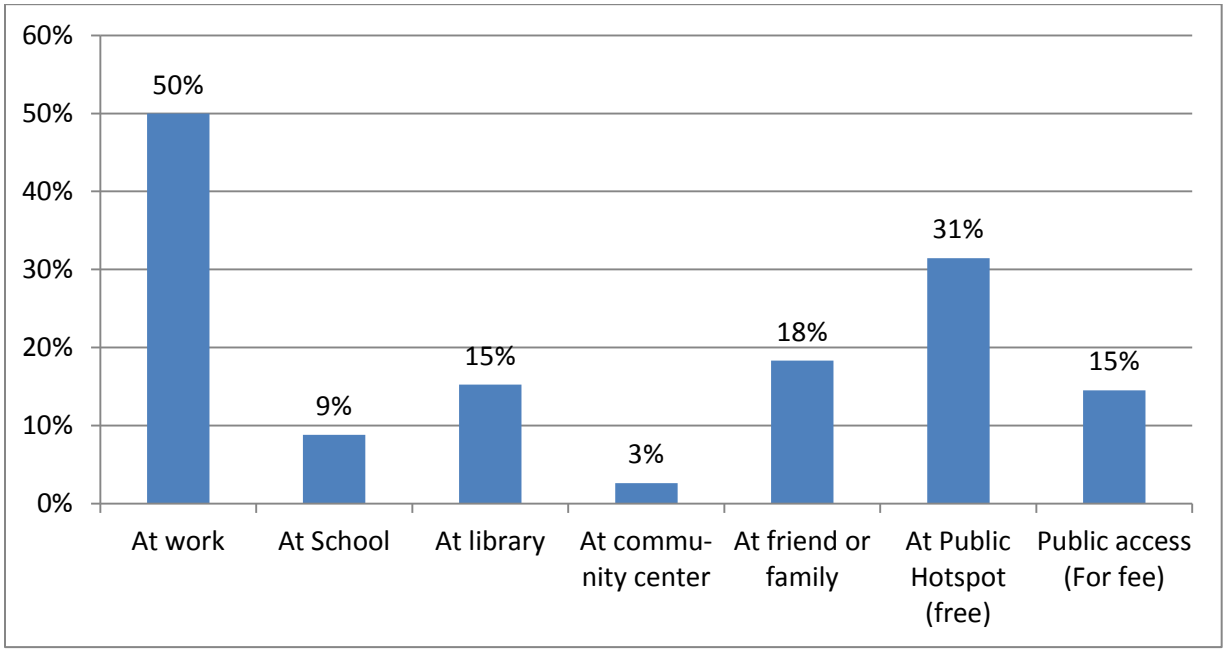
The Census Bureau's Current Population Survey found that 39% of New Mexicans use the internet outside the home, roughly equal to the national average and close to the median

among states. As reported earlier, New Mexico ranked 50th of the states plus DC in the rate of home internet access. Optimistically, one may conclude that the relatively greater intensity of use outside the home partially offsets the lower rates of use at home.

Our New Mexico survey offers mixed results on these matters. On the positive side, this survey shows a similar share of adults using the internet outside the home as the national survey. In this survey, 42% of all participants reported accessing the internet outside the home. On the down side, results do not indicate that users outside the home are other than those who have internet access in the home. Rather, these results again underline the deep divide between those who are internet capable and those who are not. Of those with internet in the home, nearly half (49%) also access the internet outside the home; of those without home internet access less than a quarter (24%) access the web outside the home.

For those New Mexicans who do access the internet outside the home, the workplace is by far the most common location. Half of those who access the internet away from home do so from work. The second most common location is at free internet hotspots, such as internet cafes. These provide internet use for 31% of those who access it outside of the home. Other locations are cited less frequently are friends' and family's homes (18%), libraries (15%), and sites charging fees (15%). Only 9% of respondents report going online from school and only 3% cite using community centers (Figure 19).

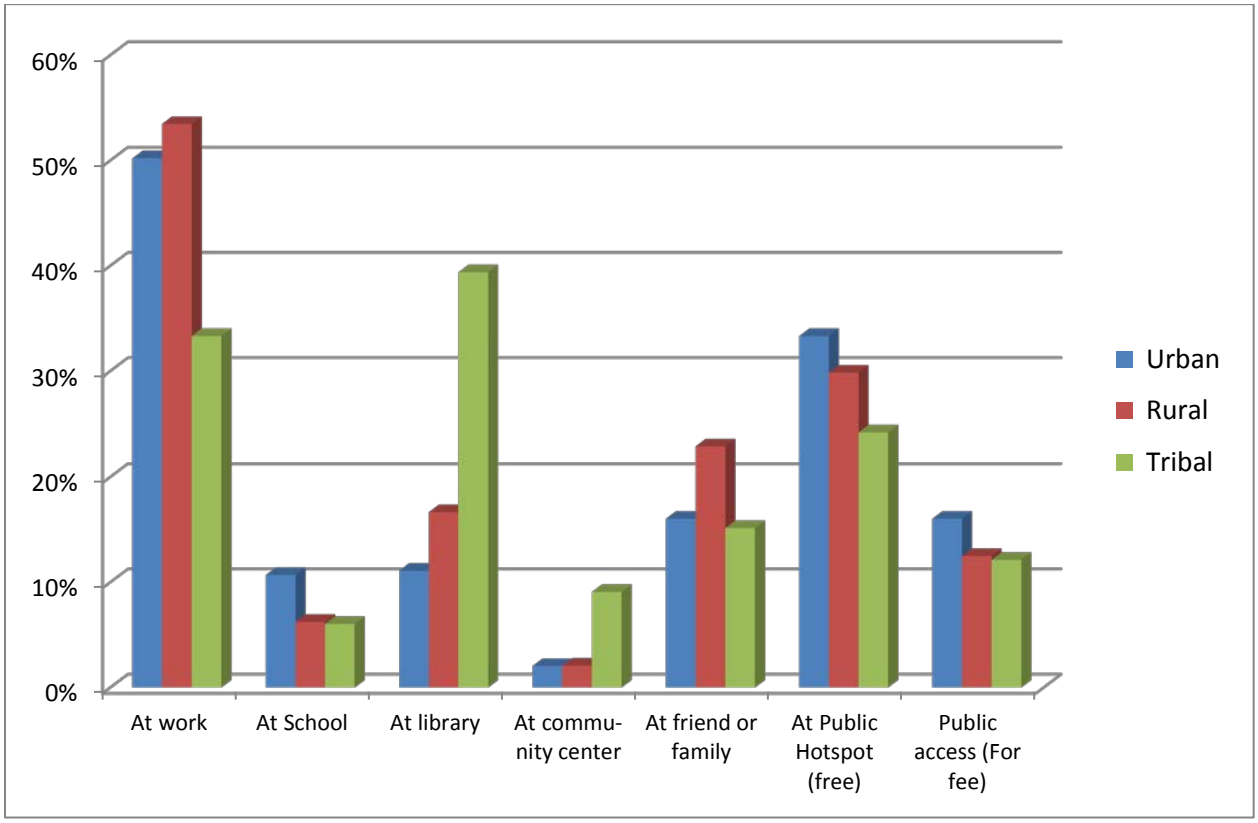
Figure 19. Internet Use Outside of the Home



Source: UNM BBER Survey of Internet Adoption and Use in New Mexico, 2012.

Rural and tribal residents are more likely to access the internet outside the home than urban residents. Almost half (48%) of rural residents and 45% of tribal residents access the internet from outside of their residences. Fewer (39%) urban residents use the internet outside the home. Rural residents most commonly access the internet from work (53%) and at the homes of family and friends (23%). Residents of tribal lands make good use of the internet at libraries (39%) – three times the rate of other New Mexicans. Residents of tribal lands also access the internet at community centers; 9% of residents of tribal lands report internet usage at community centers, which is four times higher than the rate of others in the state (2%). This may reflect the lack of availability of access in locations such as workplaces, homes of family and friends, and so on. Urban residents – the least likely to access the internet from outside of the home – are the most likely to access the internet at work and at free hotspots.

Figure 20. Internet Use Outside of the Home by Geography



Source: UNM BBER Survey of Internet Adoption and Use in New Mexico, 2012.

As noted above, only 24% of those without internet at home go online outside of the home. Although small in number, this is an important group, as they reveal the behavior of those who are effectively finding ways to compensate for their limited access to the internet. For this population, libraries serve as a key resource: 39% report using the internet at a library. The library is especially important to tribal populations without home internet. 56% of this small group report using the internet at the library. Work is second most important, with only 25% of this population using work as a source. No other location (including schools or internet hotspots) is used by more than 13%.

Students are by far most likely to access the internet outside of the home (67%) and school is of course the common site for their access (34% of students use the internet at school). They also

commonly use free internet hotspots (19%). 40% of unemployed persons access the internet outside the home and most commonly at libraries (14%) and homes of family and friends (14%). Retired persons are most unlikely to access the internet outside of their home (13%).

3.12 Summary of survey analysis

Analysis of the survey of 1,000 New Mexicans regarding home broadband adoption and internet use both confirms national patterns and brings to light conditions specific the state. Four principal findings can be drawn from this analysis.

New Mexico lags behind the nation in broadband subscription and internet adoption.

New Mexico lags well behind the rest of the country in terms of broadband subscription and internet use. According to the Census Bureau's 2011 Current Population Survey (CPS) of internet use, 72% of US households have home access to the internet; 69% have high-speed broadband access. According to a sample from the same study, 60% of households in New Mexico have home access; 57% have broadband access.

UNM-BBER survey of New Mexicans in December 2012 yields remarkably similar results. According to the New Mexico study, 55% of New Mexican households have a high-speed broadband connection. BBER's estimate for total internet access is a higher than the CPS (72%) but the difference can be explained almost entirely by the inclusion of mobile wireless devices that are coupled with data plans. A reported 11% of New Mexican households use such devices exclusively to access the internet.

Socioeconomic and demographic characteristics of the Digital Divide are stable and consistent.

As documented in numerous surveys and studies, including annual surveys of internet use home broadband adoption by the Census Bureau and the Pew Internet & American Life

surveys, the digital divide falls along clear and stable socioeconomic and demographic lines. The divisions are well known and these same lines describe the digital landscape in New Mexico as well. In New Mexico and throughout the U.S., households with higher incomes, higher levels of educational attainment and individuals either working or studying full time are more likely to have home internet access, including a broadband connection. Young and early middle age adults are much more likely to have home internet access than older persons. Similarly are households with children, so long as they have an adequate income. Households residing in more urbanized areas are also more likely to subscribe to high-speed internet service.

The Digital Divide runs deeper than economics and demographics.

This is a growing consensus among researchers that internet adoption requires more than access and ability to pay. This is strongly confirmed in this survey of New Mexicans. About two thirds of the state's adult population are online and engaged while the other third almost completely disengaged from the digital world. To some degree the lines of engagement follow socioeconomic and demographic patterns (such as differences between young adults and seniors), but the deeper and more persistent issue regards the perceived value of internet access. For many not online, the internet has little perceived value and is irrelevant to their lives.

Households on tribal lands face a unique situation.

While there are differences in rates of broadband subscription and internet adoption urban and rural areas, both in terms of the demographics of the population and the quality of internet access, these differences are minor compared to the barriers that limited availability impose on tribal communities. Holding constant socioeconomic characteristics, residents of tribal areas are by every measure included in this survey as interested in internet adoption as other populations in the state. In addition, residents of tribal are more ready than other communities to seek out substitutive solutions to home internet access, such as use of public access centers and alternative technologies. In tribal areas, the challenge of access is uniquely binding.

4. Regression Analyses

4.1 Methodologies

Logit regression models were used to analyze determinants of household high-speed internet subscription, and to determine how survey respondents use their household internet connections. Specifically, four logistic regression models were estimated:[13]

- Household subscription to high speed internet
- Use of household internet for work purposes
- Use of household internet for research or commerce purposes
- Use of household internet for entertainment or social networking purposes

All 1000 survey responses were used in the Logit model that assesses household subscription to high-speed internet. The Logit models that determine internet use for work, research or commerce, and entertainment or social networking were estimated by using a subset of the survey data – containing only those respondents who have internet in their home. Dependent and independent variable definitions and reference categories are provided in Figure 21.[14]

BBER used STATA 11.1 to perform the logistic regressions. We allowed STATA to choose the default reference categories for our analysis. The use of a reference category allows us to determine the magnitude of statistical significance from a person with one characteristic to a person with a different characteristic, such as race, income, education, and so on. In most cases, the reference category is the most common occurrence. For example, for all of the following models "Caucasian" was the reference race category. In other cases, the reference category was chosen in the process of creating the most descriptive model.

[13] A logistic model is one in which the dependent variable is binary and takes a value of either 1 or 0.

[14] All explanatory variables included in our model are categorical variables, thereby necessitating knowledge of the reference category to aid in interpretation.

The use of a reference category allows us to compare probabilities of occurrences with those of a prototypical respondent with the characteristics of the reference category.

Figure 21. Variable definitions and reference categories

Variable	Definition	Reference category*
Dependent variable		
BBsub	=1 if respondent's household has high speed internet access, =0 otherwise	
WorkUse	=1 if respondent uses household internet for purposes of business/entrepreneurship/self-employment activities, employment search, or work- or job-related uses, =0 otherwise	
ResearchUse	=1 if respondent uses household internet for purposes of information or research or online commerce, =0 otherwise	
EntertainmentUse	=1 if respondent uses household internet for purposes of entertainment, family/friends/social networking, or file-sharing websites, =0 otherwise	
Independent variables		
Rurality	Whether the respondent perceives the area (s)he lives in to be urban, rural, or tribal	urban
PopDens	Population density (100s of people/square mile)	
Income	Annual household income	< $10,000
Education	Highest education level attained by respondent	no high school
Age	Respondent's age	18-24
Ethnicity	Respondent's racial or ethnic background	White/Caucasian
Male	=1 if respondent is male, =0 if female	female
ChildUnder18	=1 if household contains children under the age of 18, =0 otherwise	no children <18 yrs of age
NumberChildren	Number of children under the age of 18 living in the respondent's home	zero
OutsideHome	=1 if respondent uses internet outside their home, =0 otherwise	no use of internet outside home
Device[a]	"Best" device owned by respondent (desktop/laptop, netbook/tablet, or smartphone)	desktop/laptop
Tech[b]	"Best" technology available in respondent's home (dialup, high speed, smartphone, don't know)	dialup

* Reference categories are listed for independent variables only. [a] For our purposes the first best device is assumed to be a desktop or laptop, second best is assumed to be a netbook or tablet, and third best is assumed to be a smartphone. [b] For our purposes the first best technology is assumed to be highspeed internet, smartphone is second best, and third best is dialup.

4.2 Subscription Model

Household subscription to high-speed internet (BBsub) is modeled as a function of various socioeconomic variables. The existing literature suggests that income, education, age, race/ethnicity, and population density and/or rurality may be important explanatory variables (see Rappoport et al., 2000; Whitacre and Mills, 2010; Lee et al. 2011; and Stanton 2004). We therefore include in our econometric model variables that capture these characteristics. Because our preliminary bivariate analysis suggested that the presence of children under the age of 18 may be an important explanatory variable, we also include in our analysis a variable that captures the number of children under the age of 18 residing in the respondent's household. Finally, because access to the internet outside the home may serve as either a complement or a substitute to home internet access, we also include an OUTSIDEHOME explanatory variable that captures whether the survey respondent uses the internet outside their home.

This analysis utilizes Logit econometric modeling. A Logit model is a statistical method designed to estimate the effects of a given variable on the dependent variable (e.g. broadband subscription rates, use rates) holding constant other variables included in the model. It is important to understand that Logit modeling analysis of the effect an independent variable is estimated in relation to a "reference" or default value. For the purposes of this discussion the "reference" respondent is a White/Caucasian respondent who is between the ages of 18 and 24, has no high school education, has an annual household income of less than $10,000, does not use the internet outside their home, and lives in an urban area and in a household with no children under the age of 18. The reference or default categories were selected by the Logit modeling software for their statistical value. The categories are listed in Figure 21.

The results of the Logit models are expressed in terms of estimated average marginal effects (AMEs), statistical significance, and 95 percent confidence intervals. The results are summarized in Table 1. The variables and their associated value categories under consideration are defined in the first column. The AME is listed in the second column. AME is a statistical measure of the

effects of a specific independent variable on the dependent variable relative to a "reference category". For instance, an AME of -.088 for rural residence in relation to the reference category (urban) indicates that, all other factors being equal (e.g. income, education, and so on), a resident of a rural area is 8.8% less likely to subscribe to home broadband. Statistical significance is noted in the third column of the table; only those variables with noted significance (a *) have a statistically significant effect on subscription to high-speed internet. For example, the marginal effect of -0.088 for RURAL is statistically significant at the 5 percent level. This indicates that we are 95 percent certain that the marginal effect of RURAL is negative (and not equal to zero), and that the probability of high-speed internet subscription among respondents living in rural areas is 0.088 (or 8.8%) less than that among respondents living in urban areas.

As depicted in Table 1, results indicate that the marginal effects of rurality, income, education, age, ethnicity, the number of children under the age of 18, and whether the respondent uses internet outside the home are all statistically significant. More specifically, relative to a "default respondent," the probability of subscription to high-speed internet is lower for respondents who live in rural and tribal areas, are at least 75 years of age, are Hispanic/Latino or Native American, and/or use the internet outside their home. Alternately, respondents are more likely to have high speed internet in their home if they have a higher income, are more highly educated, are between the ages of 35 and 54, classify their race or ethnicity as "other" as opposed to White (and vice versa), and/or have between 2 and 4 children under the age of 18 residing in their household. These results are discussed in more detail below.

Table 1. High speed internet subscription: marginal effects

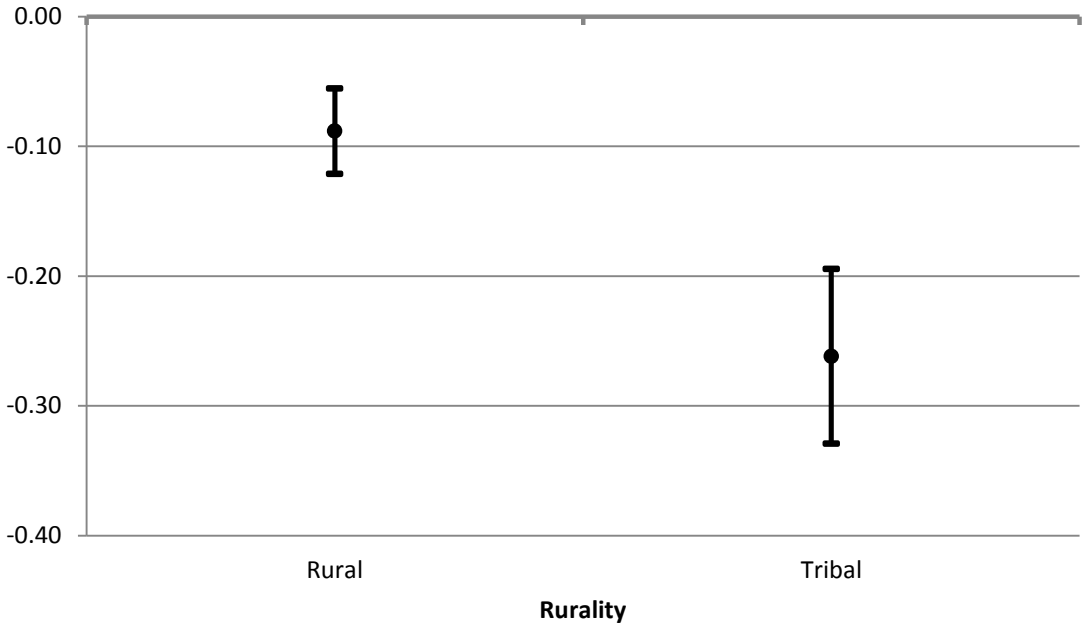
Variable	Marginal Effect	Statistical Significance	[95% Conf.	Interval]
Rurality				
Rural	-0.088	***	-0.121	-0.055
Tribal	-0.262	***	-0.329	-0.195
Income				
$10,000 but less than $15,000	0.116	***	0.052	0.181
$15,000 but less than $25,000	0.223	***	0.165	0.281
$25,000 but less than $35,000	0.162	***	0.107	0.218
$35,000 but less than $50,000	0.223	***	0.168	0.279
$50,000 but less than $75,000	0.307	***	0.250	0.364
$75,000 or more	0.143	***	0.075	0.212
Education				
Some High School	0.079		-0.026	0.184
Completed High School	0.049		-0.046	0.144
Some College	0.162	***	0.066	0.258
Completed College	0.313	***	0.216	0.410
Post-Graduate Courses or Degree	0.336	***	0.227	0.445
Age				
25-34	-0.053		-0.117	0.011
35-44	0.080	**	0.019	0.141
45-54	0.063	*	0.000	0.126
55-64	-0.046		-0.110	0.018
65-74	-0.016		-0.084	0.052
75 and over	-0.244	***	-0.321	-0.167
Ethnicity				
Black/African American	-0.031		-0.096	0.033
Hispanic/Latino	-0.114	***	-0.149	-0.079
Asian/Asian-American	.			
Native American	-0.064	*	-0.133	0.006
Other	0.091	*	-0.013	0.195
NumberChildren				
1	-0.027		-0.077	0.023
2	0.066	***	0.017	0.114
3	0.088	***	0.021	0.154
4	0.238	***	0.169	0.306
5 or more	-0.062		-0.238	0.115
OutsideHome	-0.052	***	-0.083	-0.021

*** denotes statistical significance at the 1 percent level, ** denotes significance at the 5 percent level, and * denotes significance at the 10 percent level.

Rurality

Not surprisingly, respondents who live in rural or tribal areas are less likely to have high-speed internet access in their home than are respondents living in urban areas. This may in part reflect the lower likelihood of the availability of high-speed internet services in such areas. Results indicate that relative to respondents living in urban areas, those living in rural or tribal areas are approximately 9 (26) percent less likely to have broadband.[15] The lack of overlap between the 95% confidence intervals for rural and tribal areas suggests a statistically significant difference between the marginal effects of rural and tribal areas.

Figure 22. Broadband subscription: marginal effect of rurality (relative to urban areas)



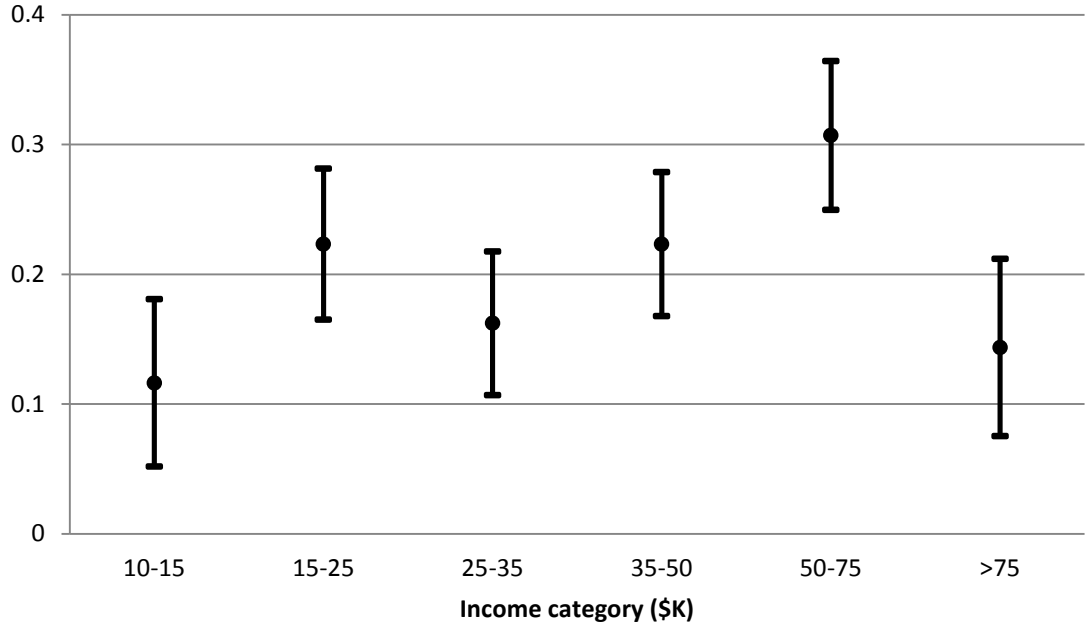
[15] We use the terms "broadband" and "high speed internet" interchangeably.

Annual Household Income

Marginal effects for annual household income are positive and statistically significant at all levels of income, indicating that higher household incomes are associated with an increased probability of broadband subscription. This means that adoption rates are statistically significantly greater for all income categories compared to the reference income of <$10,000. Estimated marginal effects are smallest for those with annual household incomes between $10,000 and $15,000, and largest for those with household incomes between $50,000 and $75,000.

However, as depicted in Figure 23, overlaps between 95% confidence intervals are common and, in such cases, we can infer that there is no significant difference between the marginal effects for the various income categories. For example, the estimated marginal effect associated with incomes between $10,000 and $15,000 is not statistically different from the estimated marginal effects for the following income ranges: $15,000-25,000, $25,000-35,000, $35,000-50,000, and over $75,000.

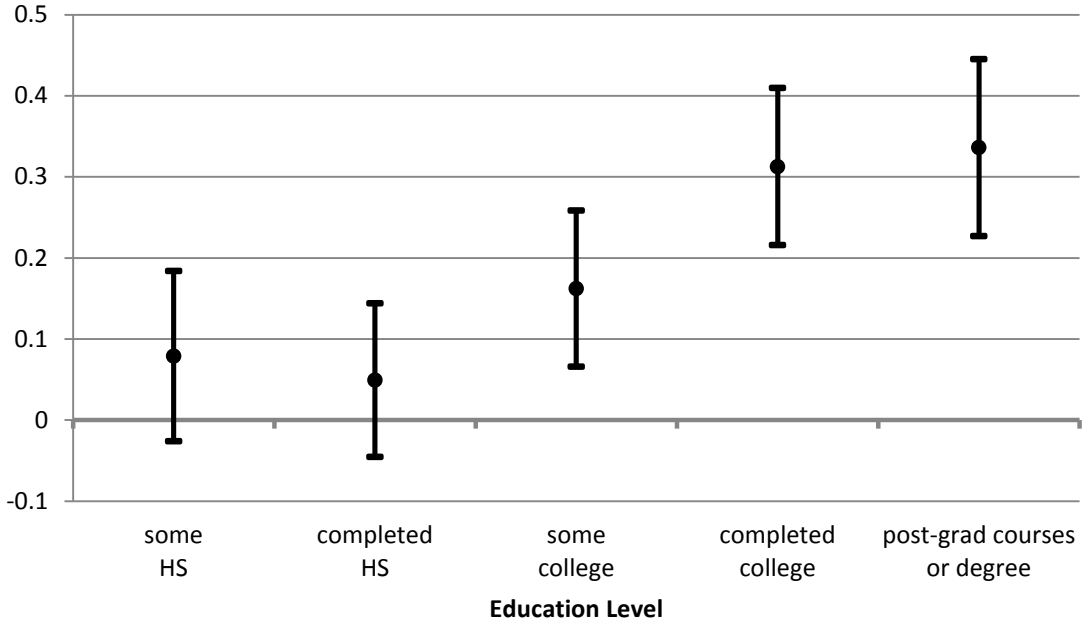
Figure 23. Broadband subscription: marginal effect of annual household income (relative to <$10,000)



Education

Education is positively correlated with the probability of broadband subscription. However, regression results indicate that the marginal effect of education on the probability of broadband subscription is statistically insignificant unless at least some college education has been acquired; i.e., the rate of subscription among respondents with either some high school education or a high school diploma is not significantly different from that among respondents with no high school education (see Figure 24). In addition, although marginal effect point estimates increase with education level, the 95 percent confidence intervals indicate there are no significantly significant differences between the marginal effects for obtaining some college education, completing college, or acquiring some post-graduate education. This indicates that having completed college is a significant mile marker increasing the probability of an individual to have broadband at home.

Figure 24. Broadband subscription: marginal effect of education (relative to no high school education)

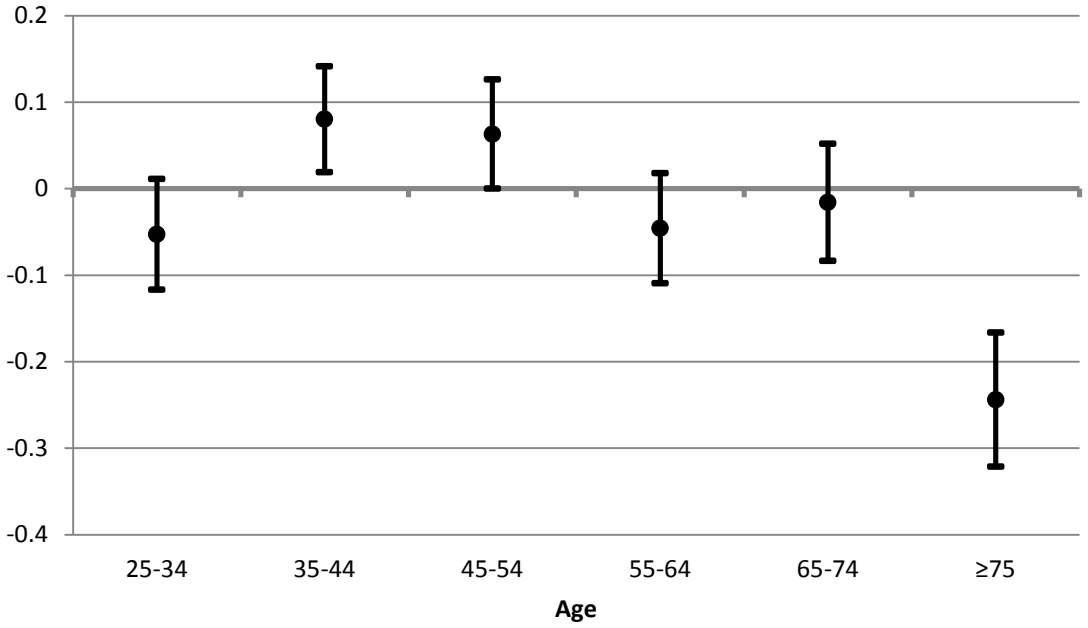


Age

The effect of age on broadband subscription varies, although in several cases the marginal effect is not significantly different from zero (**! Reference source not found.**). Two age categories (ages 35-44 and 45-54) have an expected probability of broadband subscription that exceeds that of respondents between ages 18 and 24. The probability of broadband subscription is 8 percent higher among respondents between the ages of 35 & 44 and 6 percent higher among respondents between the ages of 45 & 54. In contrast, respondents age 75 or older have an expected probability of broadband subscription that is nearly 25 percent *lower* than that of respondents age 18-24.

These results coincide with peak wage earning ages, indicating that most people of all ages have a clear preference for broadband adoption with the exception of the population of individuals over the age of 75.

Figure 25. Broadband subscription: marginal effect of age (relative to ages 18-24)



Race/Ethnicity

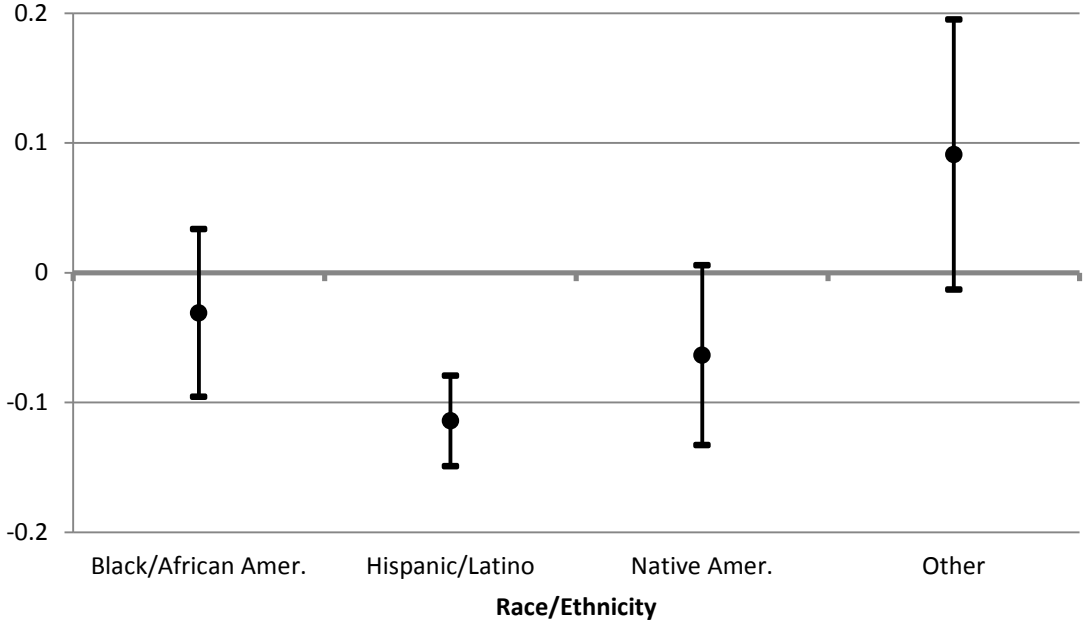
Relative to White/Caucasian respondents, Hispanic/Latino and Native American respondents are less likely to have broadband access at home.[16] Specifically, Hispanic/Latino respondents are 11 percent less likely to have broadband, while Native Americans are 6 percent less likely to have broadband (Figure 26 below). However, the marginal effects for Hispanic and Native American respondents are not statistically different, as their 95% confidence intervals overlap. In addition, respondents who classify their race/ethnicity as "other" are more likely to subscribe to broadband than are White/Caucasian respondents (and vice versa).[17]

This lack of statistical significance indicates that no group is notable for its demand for broadband. It is difficult to tease out the nuanced difference that makes Caucasians more statistically more likely to have broadband than people who identify their race to be "Other" (and Vice Versa). In our econometric analysis race does not appear to be a significant variable determining broadband subscription.

[16] No estimate is provided for Asian/Asian American. Because all 4 respondents of Asian/Asian American race/ethnicity have high speed internet in their home, it is not possible to calculate a marginal effect.

[17] Note that although the 95% confidence intervals depicted in Table 1 suggest that the probability of high speed internet subscription is not significantly different from zero for either Native American or "other" respondents, these probabilities *are* statically different from zero at the 90% confidence level.

Figure 26. Broadband subscription: marginal effect of race (relative to White/Caucasian)

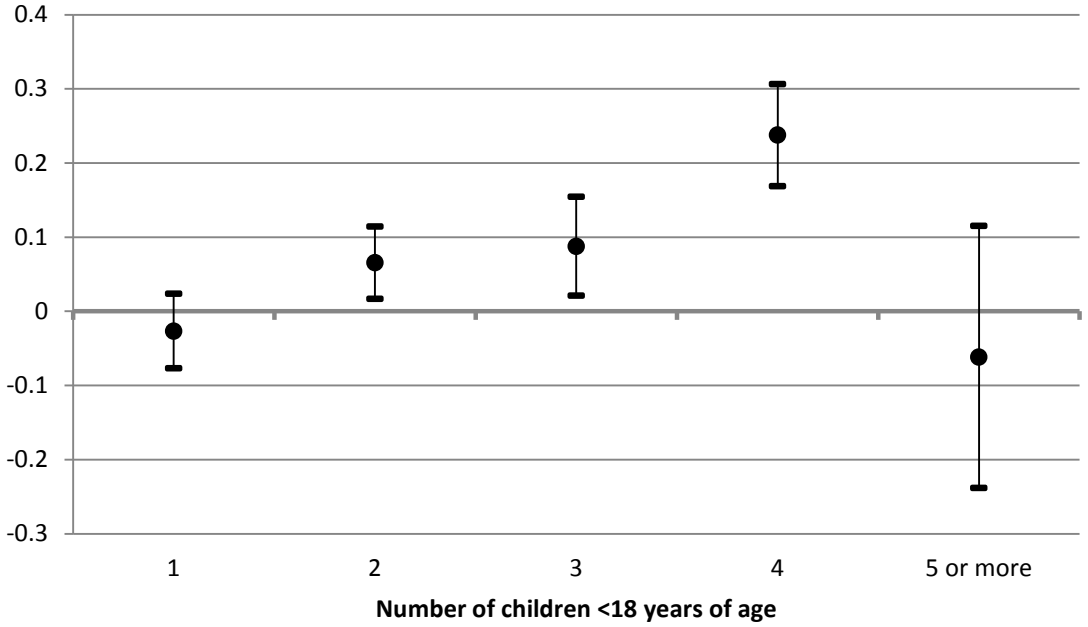


Number of Children Less Than 18 Years of Age

The presence in a household of children under the age of 18 generally increases the probability that the household will have broadband access. Whether or not the presence of children has a statistically significant impact on broadband subscription depends upon the number of children the effect is insignificant for households with only one child (as compared to a household with all else equal and no children) and also for households with 5 or more children. This is shown in Figure 27. The estimated increase in the probability of subscription varies between 7 percent for households containing 2 children and 24 percent for households containing 4 children. However, the 95 percent confidence intervals indicate no statistical difference between the marginal effects of 2 and 3 children.

We did not ask the respondent to provide us with the ages of the children in the household. Therefore, this variable is capturing the combined effects of both the economic constraints of larger household size and the demand for broadband likely resulting from the presence of school age children at home.

Figure 27. Broadband subscription: marginal effect of number of children <18 years of age (relative to none)



Internet Use Outside the Home

Respondents who use the internet outside their home are 5 percent less likely to have high-speed internet access at home (relative to those who do not use the internet outside their home). This effect indicates that access to the internet outside the home acts as a substitute to home internet access and is statistically significant at the 1 percent level.

4.3 Work Use Model

The use of home internet connections for work purposes (WorkUse) is modeled as a function of the following technology and socioeconomic variables: Device (having an internet device at home), Tech (type of technology used to access the internet at home: broadband, dial-up, smartphone or don't know), Age, Male, ChildUnder18, Education, Ethnicity, PopDens (population density), and Income (see Table 2 for variable definitions). Estimated average marginal effects, statistical significance, and 95 percent confidence intervals are provided in Table 2. Characteristic of Logit modeling, average marginal effects are to be interpreted relative

to a “default respondent”. For this model the default respondent is a White/Caucasian male respondent who has dialup internet in their home, uses a laptop or desktop, is between the ages of 18 and 24, has no high school education, has an annual household income of less than $10,000, and lives in a household with no children under the age of 18. Statistical significance is noted in the third column of Table 2; only those variables with noted significance have a statistically significant effect on use of home internet for work purposes.

As depicted in Table 2 below, results indicate that the marginal effects of device, technology, annual household income, age, gender, education, and ethnicity are statistically significant. More specifically, relative to a “default respondent”, the probability of using home internet for work purposes is lower for respondents in almost all age categories except ages 35-44 and/or for Hispanics/Latinos and Native Americans. Respondents are more likely to use their home internet for work purposes (relative to a default respondent) if they have a netbook or tablet, have high speed internet access, are more highly educated, classify their race or ethnicity as “other”, and/or have higher annual household incomes. These results are discussed in more detail below.

Table 2. Use of home internet for work purposes: marginal effects

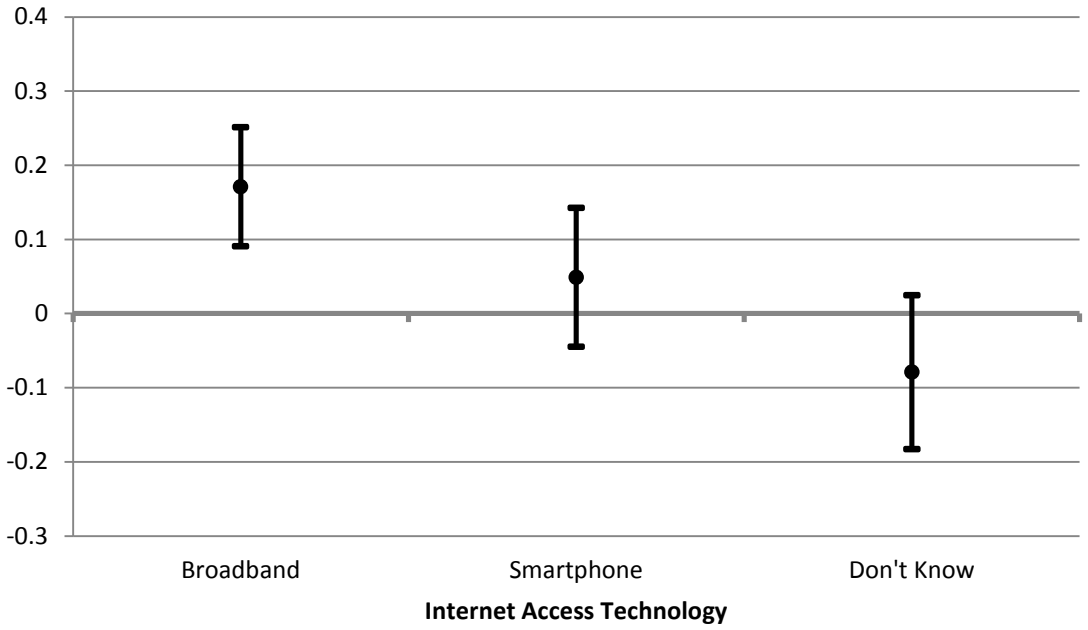
Variable	Marginal Effect	Statistical Significance	[95% Conf. Interval]	
Device				
Netbook or Tablet	0.123	**	0.016	0.231
Smartphone	.			
Tech				
Broadband	0.171	***	0.091	0.251
Smartphone	0.049		-0.045	0.143
Don't Know	-0.079		-0.183	0.025
Age				
25-34	-0.070	*	-0.142	0.001
35-44	0.020		-0.049	0.089
45-54	-0.072	**	-0.141	-0.003
55-64	-0.185	***	-0.254	-0.116
65-74	-0.183	***	-0.260	-0.106
75 and over	-0.469	***	-0.557	-0.382
Male	0.112	***	0.077	0.146
ChildUnder18	-0.017		-0.057	0.023
Education				
Some High School	0.407	***	0.285	0.529
Completed High School	0.331	***	0.230	0.433
Some College	0.302	***	0.202	0.402
Completed College	0.364	***	0.264	0.464
Post-Graduate Courses or Degree	0.480	***	0.364	0.596
Ethnicity				
Black/African American	-0.032		-0.130	0.066
Hispanic/Latino	-0.061	**	-0.110	-0.012
Asian/Asian-American	-0.084		-0.269	0.100
Native American	-0.082	**	-0.158	-0.006
Other	0.221	***	0.088	0.354
Population Density	0.000		0.000	0.001
Income				
$10,000 but less than $15,000	0.037		-0.054	0.128
$15,000 but less than $25,000	0.072	*	-0.011	0.155
$25,000 but less than $35,000	0.129	***	0.048	0.209
$35,000 but less than $50,000	0.113	***	0.035	0.191
$50,000 but less than $75,000	0.169	***	0.087	0.250
$75,000 or more	0.194	***	0.105	0.283

*** denotes statistical significance at the 1 percent level, ** denotes significance at the 5 percent level, and * denotes significance at the 10 percent level.

Internet Access Technology

As depicted Figure 28, respondents with high-speed internet (broadband) in their home are 17 percent more likely to use their internet for work purposes than are respondents with dialup. In contrast, there are not statistically significant differences between respondents with dialup and those who either are not sure of what technology they use to access the internet or whose only access to the internet is through their smartphone.

Figure 28. Work use: marginal effect of internet access technology (relative to dialup)

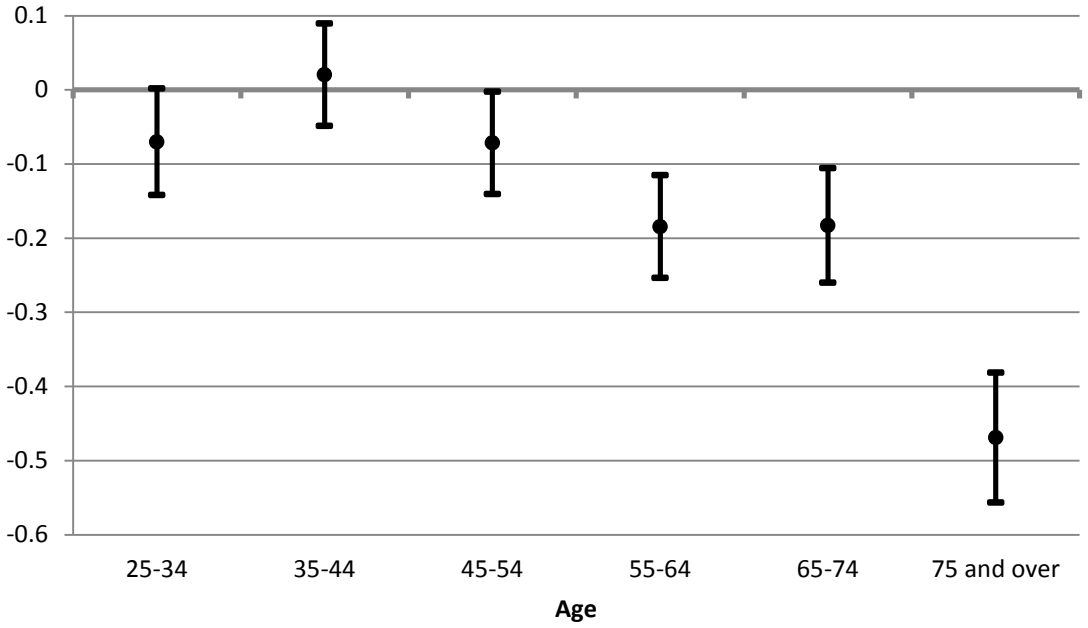


Age

Average marginal effect point estimates are in general a decreasing function of age. Although only significant at the 90% confidence level (and therefore not reflected in Figure 28 above) respondents between the ages of 25 & 34 are 7 percent less likely to use their home internet connections for work purposes than are respondents between the ages of 18 & 24. The probability of work use is also lower for most other age categories; the average marginal effect of age is increasingly negative and significant for all age categories over the age of 45. Note,

however, that with the exception of the marginal effect for those over the age of 75, there is not a statistically significant difference between the 95 percent confidence intervals associated with the average marginal effects.

Figure 29. Work use: marginal effect of age (relative to age 18-24)



Gender

Men are 11 percent more likely to use home internet for work purposes, with a 95 percent confidence interval of 8 percent to 15 percent.

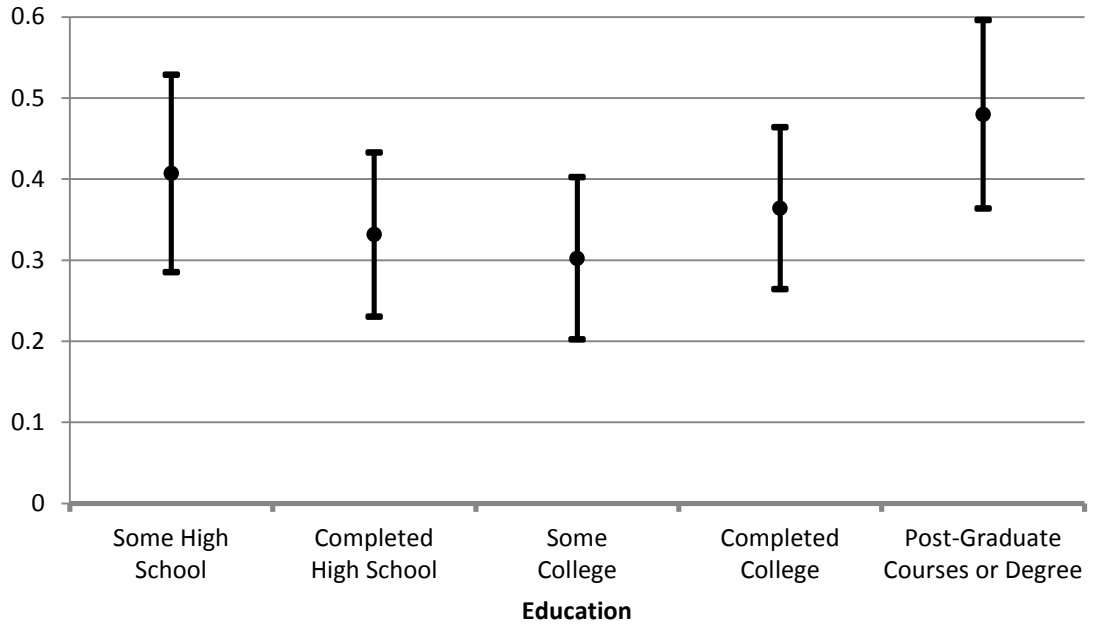
Children Under 18 Years of Age

The presence of children under the age of 18 does not have a statistically significant effect on whether a respondent uses their home internet connection for work purposes (see Table 29).

Education

Compared with respondents who have no high school education, those who have attained higher levels of education are more likely to use their home internet for work purposes. Although the relationship between education and the probability of using home internet for work purposes appears to have a parabolic shape (Figure 30 below), the 95 percent confidence intervals overlap for all education levels indicating that the marginal effects are not statistically different.

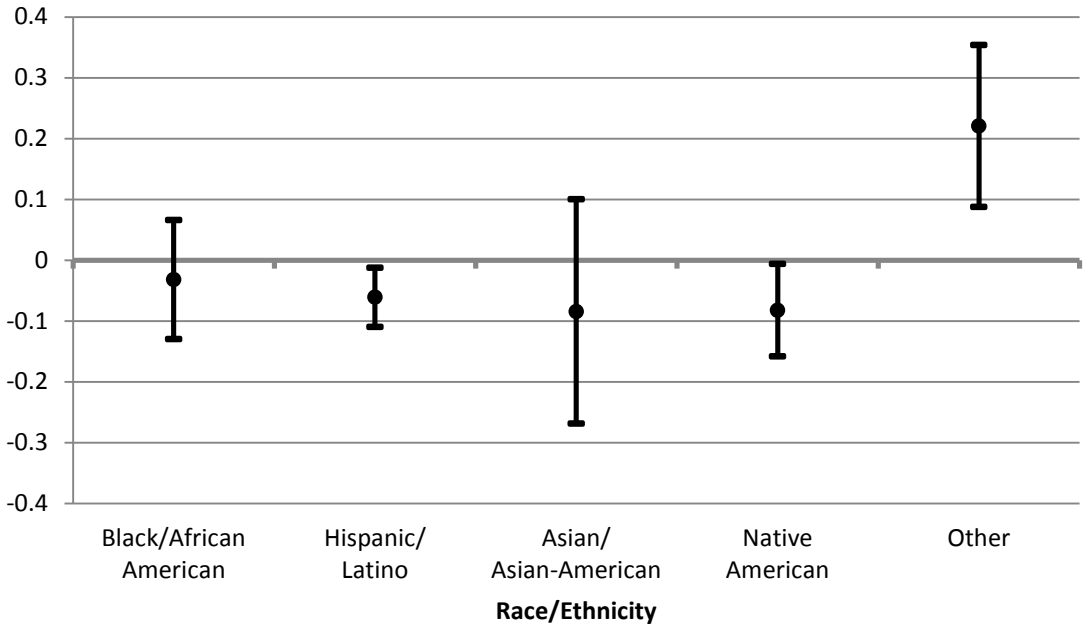
Figure 30. Work use: marginal effect of education (relative to no high school education)



Race/Ethnicity

Hispanic/Latino and Native American respondents are respectively 6 and 8 percent less likely to use their home internet connections for work purposes (relative to White/Caucasian respondents). However, the 95 percent confidence intervals suggest no statistically significant difference between the probability of work use for Hispanics/Latinos and Native Americans. In contrast, respondents who classify their race/ethnicity as "other" are 22 percent more likely than Caucasians to use their home internet for work (and vice versa).

Figure 31. Work use: marginal effects of race/ethnicity (relative to White/Caucasian)



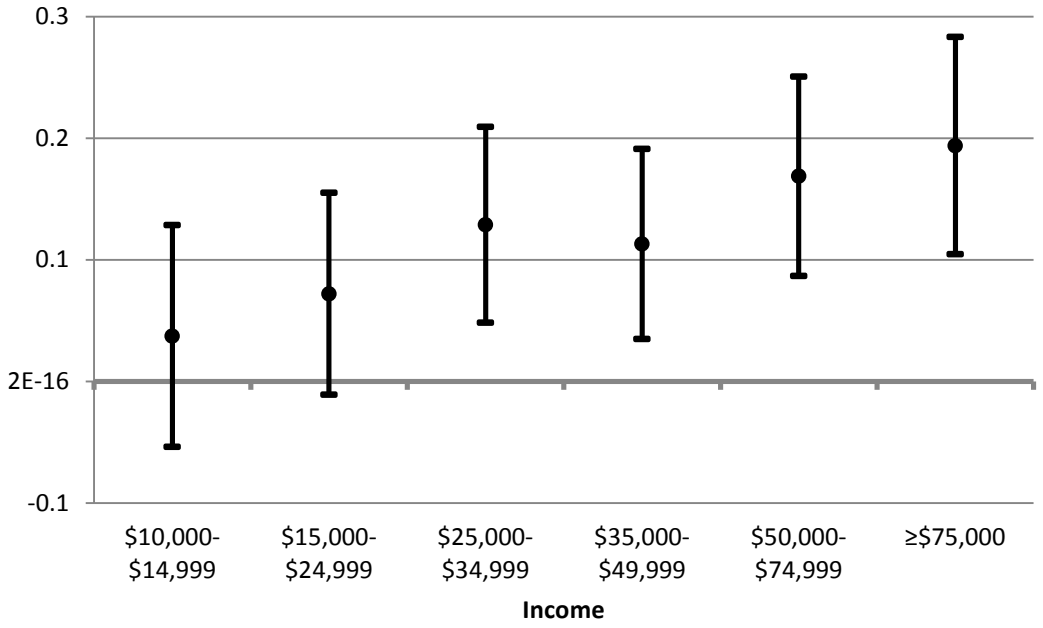
Population Density

Population density has no statistically significant effect on the probability of using home internet for work purposes – the estimated marginal effect is zero (see Figure 31 above).

Annual Household Income

As annual household income increases, the probability of using one's home internet connection for work also increases, although the probability for respondents with an annual household income of less than $10,000 does not differ significantly from that for respondents with higher incomes until annual household income reaches at least $25,000. The marginal effects' point estimates are generally increasing as income increases, but overlap between the 95 percent confidence intervals suggests there is no statistically significant difference between the marginal effects.

Figure 32. Work use: marginal effect of annual household income (relative to <$10,000)



4.4 Research/Commerce Use Model

The use of home internet connections for research or commerce purposes (ResearchUse) is modeled as a function of the same technology and socioeconomic variables as used in the work use model: Device, Tech, Age, Male, ChildUnder18, Education, Ethnicity, PopDens, and Income. Estimated average marginal effects, statistical significance, and 95 percent confidence intervals are provided in Table 3. Average marginal effects should be interpreted relative to a "default

respondent", for this model: a White/Caucasian male respondent who has dialup internet in their home, uses a laptop or desktop, is between the ages of 18 and 24, has no high school education, has an annual household income of less than $10,000, and lives in a household with no children under the age of 18. Statistical significance is noted in the third column of Table 3; only those variables with noted significance have a statistically significant effect on use of home internet for research or commerce purposes.

Results indicate that the marginal effects of technology, age, gender, education, race/ethnicity, and annual household income are all statistically significant. More specifically, relative to a "default respondent" the probability of using home internet for research or commerce purposes is lower for respondents between the ages of 25 and 34, males, Hispanics/Latinos and/or those who classify their race/ethnicity as "other". Respondents are more likely to use their home internet for research or commerce purposes (relative to a default respondent) if they have high speed internet access or access the internet through their smartphone, are more highly educated, and/or have higher annual household incomes. These results are discussed in more detail below.

Table 3. Use of home internet for research purposes: marginal effects

Variable	Marginal Effect	Statistical Significance	[95% Conf.	Interval]
Device				
Netbook or Tablet	-0.040		-0.164	0.084
Smartphone	.			
Tech				
Broadband	0.307	***	0.220	0.394
Smartphone	0.131	**	0.029	0.234
Don't Know	0.003		-0.103	0.108
Age				
25-34	-0.092	**	-0.172	-0.012
35-44	0.027		-0.046	0.100
45-54	-0.002		-0.078	0.074
55-64	0.001		-0.077	0.079
65-74	-0.019		-0.102	0.063
75 and over	-0.095		-0.229	0.039
Male	-0.062	***	-0.099	-0.024
Child Under 18	-0.028		-0.072	0.016
Education				
Some High School	0.113		-0.041	0.266
Completed High School	0.282	***	0.154	0.411
Some College	0.256	***	0.129	0.384
Completed College	0.216	***	0.089	0.344
Post-Graduate Courses or Degree	0.282	***	0.140	0.424
Ethnicity				
Black/African American	0.014		-0.078	0.105
Hispanic/Latino	-0.125	***	-0.172	-0.078
Asian/Asian-American	-0.088		-0.275	0.099
Native American	0.043		-0.030	0.117
Other	-0.358	***	-0.486	-0.231
Population Density	0.000		-0.001	0.001
Income				
$10,000 but less than $15,000	0.057		-0.034	0.148
$15,000 but less than $25,000	0.097	**	0.011	0.183
$25,000 but less than $35,000	0.091	**	0.009	0.173
$35,000 but less than $50,000	0.170	***	0.090	0.250
$50,000 but less than $75,000	0.178	***	0.094	0.261
$75,000 or more	0.150	***	0.056	0.245

*** denotes statistical significance at the 1 percent level, ** denotes significance at the 5 percent level, and * denotes significance at the 10 percent level.

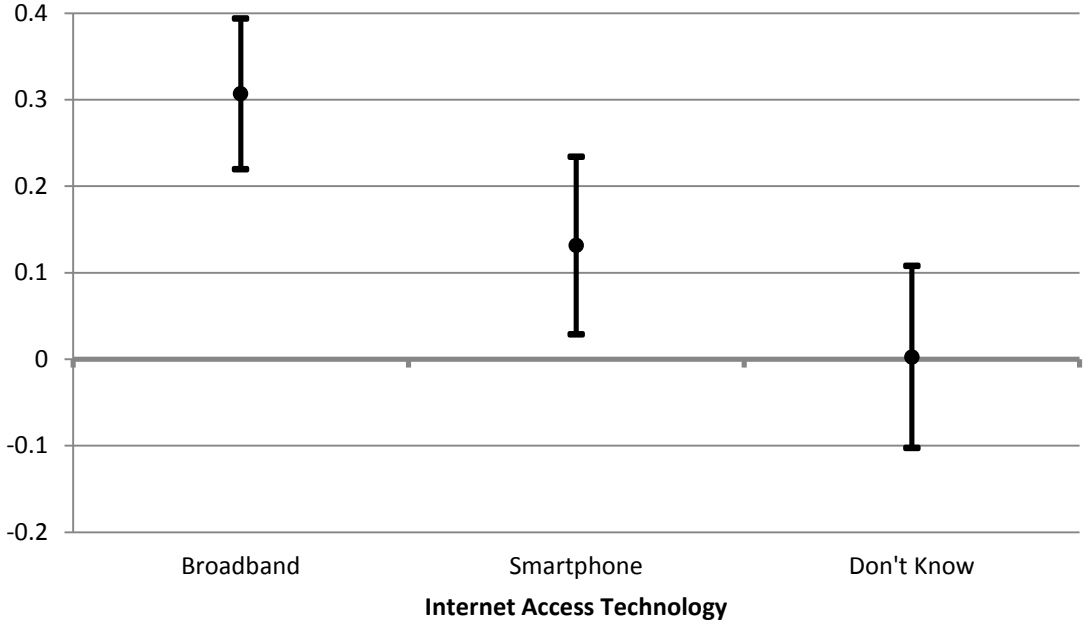
Internet Access Device

The devices used by respondents to access the internet (i.e., laptop, desktop, netbook, tablet, or smartphone) do not have a statistically significant effect on the probability of using one's home internet connection to conduct research or commerce. Because all 19 respondents who have only a smartphone (and no other device with which to access the internet) do not use their smartphone for research or commerce purposes, it is not possible to estimate a marginal effect for smartphones.

Internet Access Technology

In contrast to the insignificant DEVICE variable, the technology (TECH) used to access the internet (dialup, broadband, or smartphone) does have a significant effect on whether respondents use home internet for research/commerce purposes. Specifically, relative to respondents with a dialup internet connection, those with high-speed internet access are 31 percent more likely to conduct research or commerce. Similarly, respondents whose only home access to the internet is through their smartphone have a 13 percent greater likelihood of using the internet to conduct research or commerce than do those with dialup internet. These results are unsurprising, as one would expect that the bandwidth of dial up technologies would be inadequate to support these uses.

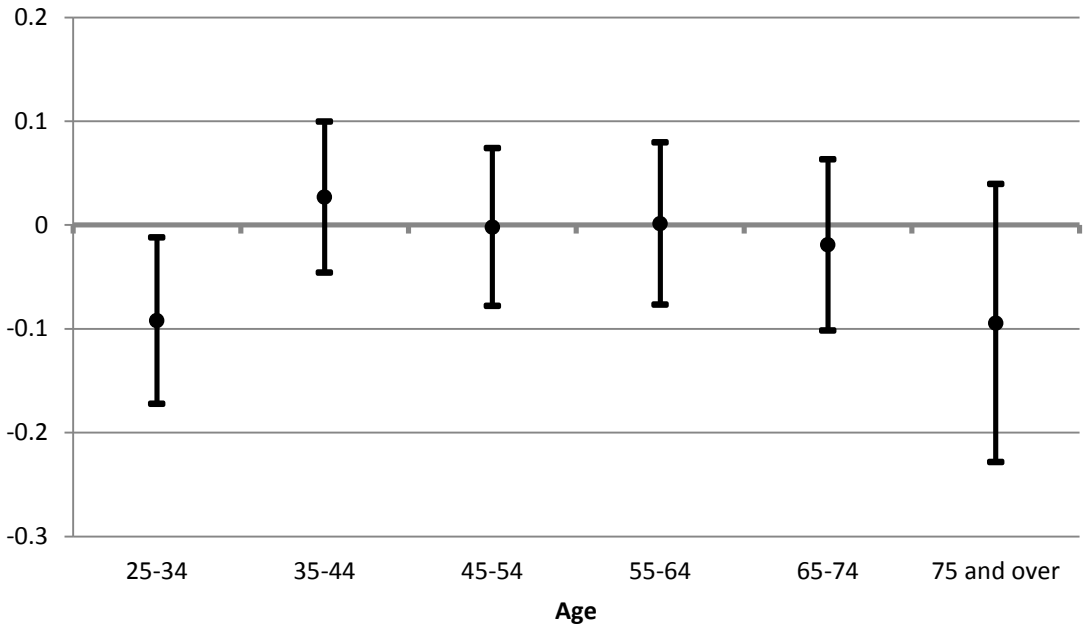
Figure 33. Research use: marginal effect of internet access technology (relative to dialup)



Age

As depicted in Table 3 and Figure 34 , respondents between the ages of 25 and 34 are nearly 10 percent less likely to use home internet for research and/or commerce purposes than are respondents between the ages of 18 and 24. No other age category has a probability of using home internet for conducting research or commerce that is significantly different than that for respondents between ages 18 and 24.

Figure 34. Research use: marginal effect of age (relative to ages 18-24)



Gender

Results indicate that men are 6 percent less likely to conduct research or commerce online than women, and that this relationship holds at the 99 percent confidence level.

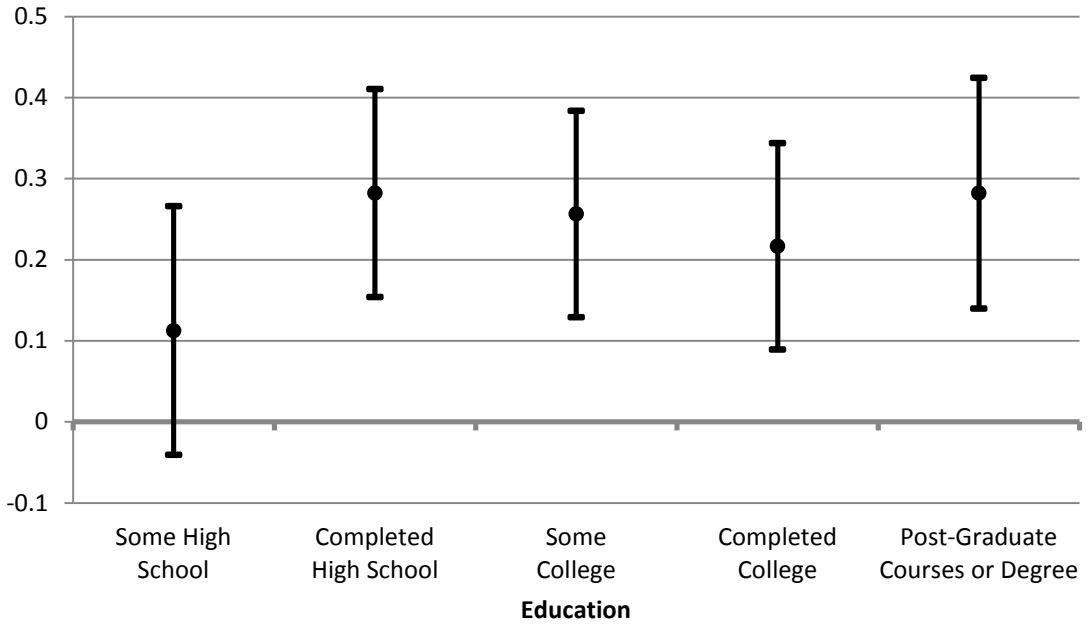
Children Under 18 Years of Age

The presence of children under the age of 18 has no statistically significant effect on the probability of using home internet connections for research or commerce purposes (see Figure 34 above).

Education

As depicted in Figure 35 below, respondents who have at a minimum acquired the equivalent of a high school diploma have a higher probability of using home internet for research or commerce purposes than do respondents with no high school education. The 95 percent confidence intervals in Figure 35 below illustrate that there is no statistically significant difference between the increased probabilities associated with a high school diploma, some college, completion of college, and post-graduate courses or degree.

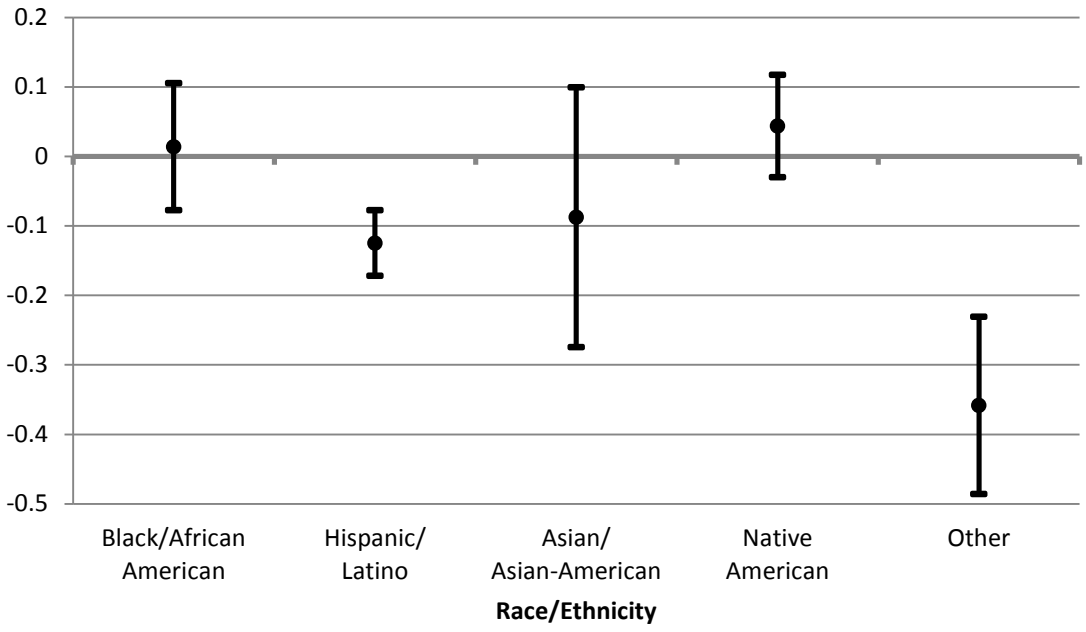
Figure 35. Research use: marginal effect of education (relative to no high school education)



Race/Ethnicity

Results indicate that Hispanics/Latinos are 13 percent less likely to conduct research or commerce using their home internet (relative to White/Caucasian respondents). Similarly, respondents who classify their race/ethnicity as "other" are 36 percent less likely to use home internet connections for research or commerce purposes (see Figure 36 below). Probabilities of research or commerce use for other races/ethnicities do not significantly differ from those for Whites/Caucasians.

Figure 36. Research use: marginal effects of race/ethnicity (relative to White/Caucasian)



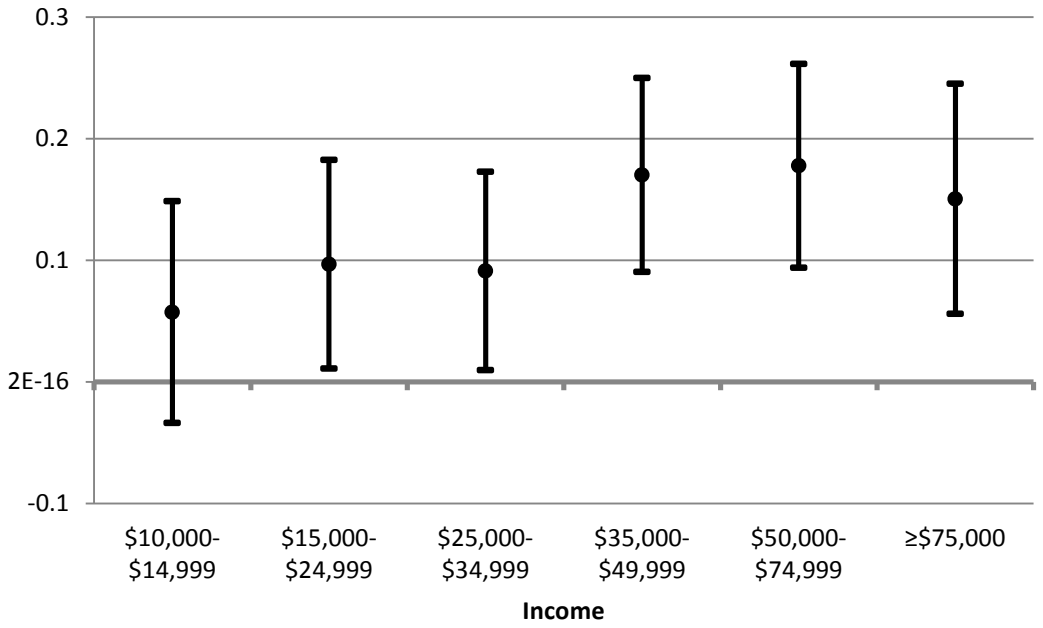
Population Density

Population density does not have a statistically significant effect on the probability of using home internet for research and/or commerce purposes. As detailed in Figure 36 above, the marginal effect of population density is not only statistically insignificant but is also estimated to be zero.

Annual Household Income

The probability of using household internet connections for research or commerce purposes has a positive relationship with annual household income. However, higher incomes are associated with increased probabilities of such use only when annual household income reaches at least $15,000. Additionally, the 95 percent confidence intervals overlap for all income categories that exceed $14,999, indicating no significant differences between the associated marginal effects (Figure 37 below).

Figure 37. Research use: marginal effect of income (relative to <$10,000)



Entertainment Use

The use of home internet connections for entertainment or social networking purposes (EntertainmentUse) is modeled as a function of a set of technology and socioeconomic variables very similar to that used in the WorkUse and ResearchUse models: Rurality, Device, Tech, Age, Male, ChildUnder18, Education, Ethnicity, and Income (seeTable 4 below) for variable definitions). Estimated average marginal effects, statistical significance, and 95 percent confidence intervals are provided in Table 4 below. Average marginal effects should be

interpreted relative to a “default respondent”, for this model: a White/Caucasian male respondent living in an urban area who has dialup internet in their home, uses a laptop or desktop, is between the ages of 18 and 24, has no high school education, has an annual household income of less than $10,000, and lives in a household with no children under the age of 18. Statistical significance is noted in the third column of Table 4 below; only those variables with noted significance have a statistically significant effect on use of home internet for entertainment purposes.

As depicted in Table 4 below, results indicate that the marginal effects of rurality, device, technology, age, children under the age of 18, education, race/ethnicity, and annual household income are all statistically significant. Relative to a “default respondent” the probability of using home internet for entertainment or social networking purposes is lower for respondents who are at least 35 years of age, are Asian/Asian-American, and who do not have a desktop or laptop but do have either a netbook or tablet. Respondents are more likely to use their home internet for entertainment or social networking purposes (relative to a default respondent) if they live in a rural area, have an internet access technology other than dialup internet access, live in a household with children under the age of 18, have at least some high school education, are Native American, or have annual household incomes of at least $75,000. Results are discussed in more detail below.

Table 4. Use of home internet for entertainment purposes: marginal effects

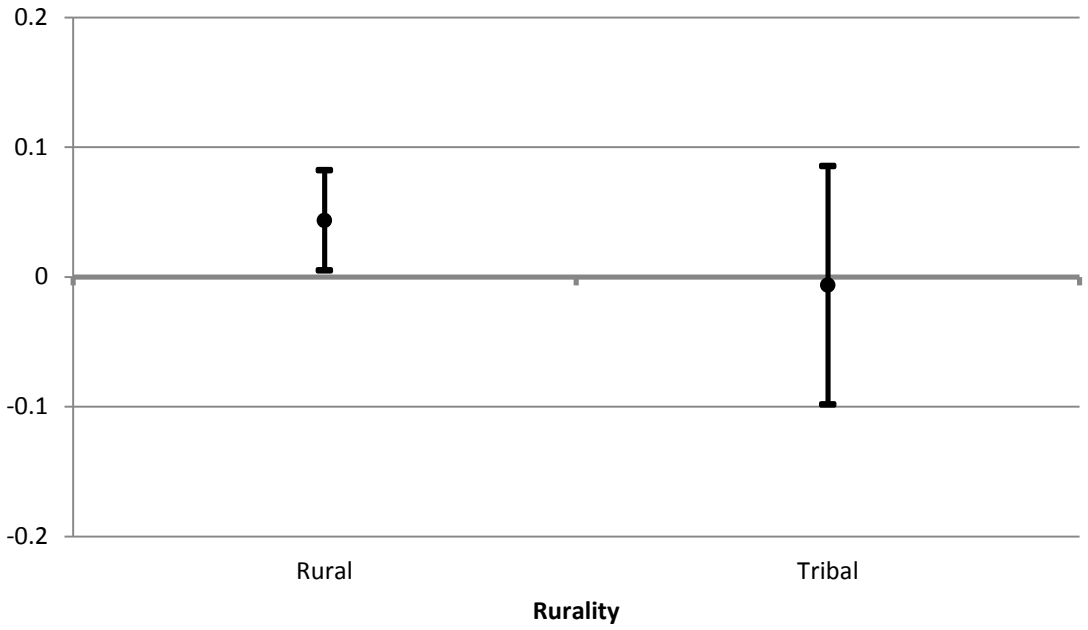
Variable	Marginal Effect	Statistical Significance	[95% Conf.	Interval]
Rurality				
Rural	0.043	**	0.005	0.082
Tribal	-0.007		-0.098	0.085
Device				
Netbook or Tablet	-0.172	***	-0.295	-0.049
Smartphone	.			
Tech				
Broadband	0.340	***	0.257	0.423
Smartphone	0.265	***	0.167	0.362
Don't Know	0.187	***	0.075	0.298
Age				
25-34	-0.042		-0.099	0.015
35-44	-0.090	***	-0.150	-0.029
45-54	-0.199	***	-0.262	-0.137
55-64	-0.122	***	-0.181	-0.064
65-74	-0.144	***	-0.207	-0.081
75 and over	-0.394	***	-0.502	-0.286
Male	-0.011		-0.045	0.024
Child Under 18	0.068	***	0.026	0.111
Education				
Some High School	0.282	***	0.125	0.439
Completed High School	0.410	***	0.278	0.542
Some College	0.381	***	0.249	0.513
Completed College	0.398	***	0.266	0.529
Post-Graduate Courses or Degree	0.376	***	0.233	0.519
Ethnicity				
Black/African American	0.031		-0.049	0.112
Hispanic/Latino	-0.001		-0.046	0.044
Asian/Asian-American	-0.273	**	-0.489	-0.057
Native American	0.058	*	-0.005	0.121
Other	0.050		-0.104	0.205
Income				
$10,000 but less than $15,000	-0.061		-0.151	0.030
$15,000 but less than $25,000	0.040		-0.041	0.121
$25,000 but less than $35,000	0.037		-0.041	0.115
$35,000 but less than $50,000	-0.003		-0.080	0.073
$50,000 but less than $75,000	0.063		-0.016	0.142
$75,000 or more	0.083	*	-0.004	0.170

*** denotes statistical significance at the 1 percent level, ** denotes significance at the 5 percent level, and * denotes significance at the 10 percent level.

Rurality

The use of home internet for entertainment or social networking purposes is somewhat more common among respondents living in rural areas than among those living in urban areas (Figure 38 below). Specifically, respondents who live in rural areas are 4 percent more likely to use their internet for entertainment or social networking. The probabilities of such uses for urban- and tribal-area respondents do not differ significantly.

Figure 38. Entertainment use: marginal effect of rurality (relative to urban areas)



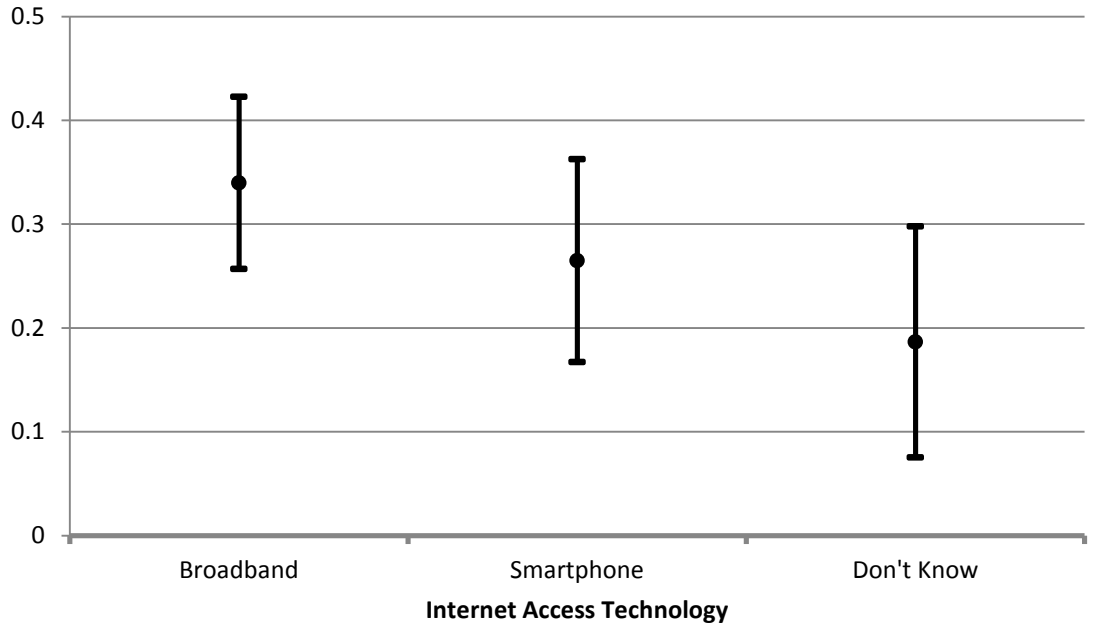
Internet Access Device

As noted in Figure 39 below, respondents who do not own either a laptop or desktop, but who do own either a netbook or tablet, are 17 percent less likely to use their home internet for entertainment or social networking purposes (relative to respondents who do own a laptop or desktop). Because all 19 respondents who have only a smartphone (and no other device with which to access the internet) do not use their smartphone for either entertainment or social networking purposes, it is not possible to estimate a marginal effect for smartphones.

Internet Access Technology

Relative to respondents with dialup internet, all other respondents (regardless of internet access technology) have an increased likelihood of using home internet for entertainment or social networking purposes. The increased probability is greatest for those with broadband/high-speed internet; such respondents are 34 percent more likely to use internet for entertainment or social networking, whereas those with smartphone access only are 27 percent more likely (see Figure 39 below).

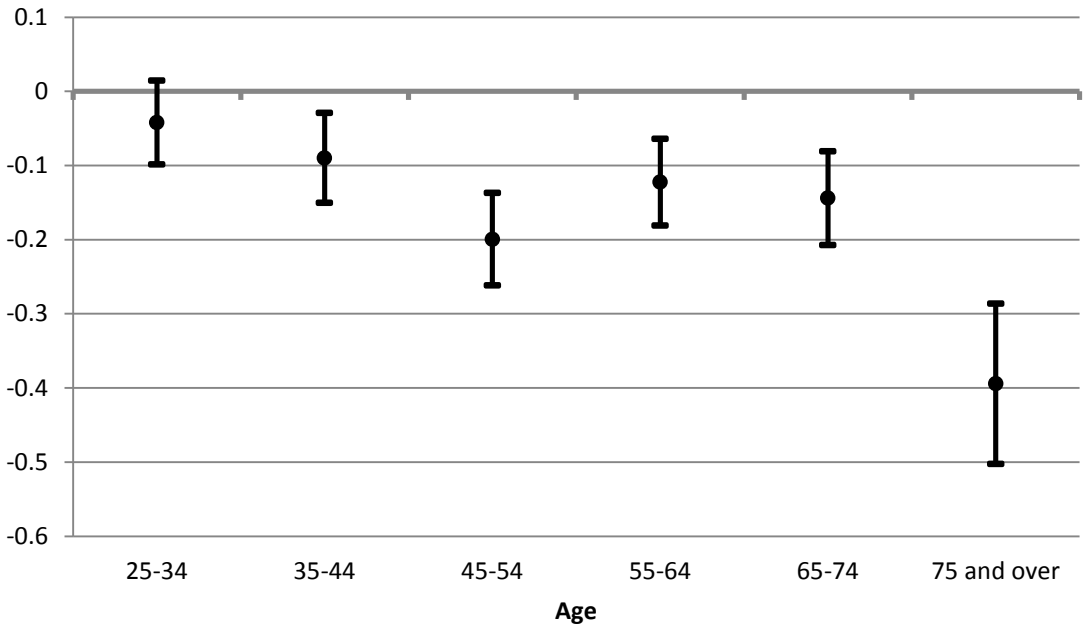
Figure 39. Entertainment use: marginal effect of internet access technology (relative to dialup)



Age

Respondents who are at least 35 years of age are less likely to use internet for entertainment or social networking purposes than are respondents who are between the ages of 18 and 24. The decrease in probability varies, but in general seems to increase as age increases, and is most notable for respondents over the age of 74. The probabilities of entertainment or social networking uses are 9, 20, 12, and 14 percent lower for respondents between the ages of 35-44, 45-54, 55-64, and 65-74, respectively. However, the 95 percent confidence intervals depicted in Figure 40 below indicate no significant differences between these values. In contrast, respondents age 75 and over are nearly 40 percent less likely to use internet for entertainment or social networking purposes – a marginal effect that is notably different from that of other age categories.

Figure 40. Entertainment use: marginal effect of age (relative to ages 18-24)



Gender

Gender does not have a statistically significant effect on the probability of using home internet for entertainment or social networking purposes.

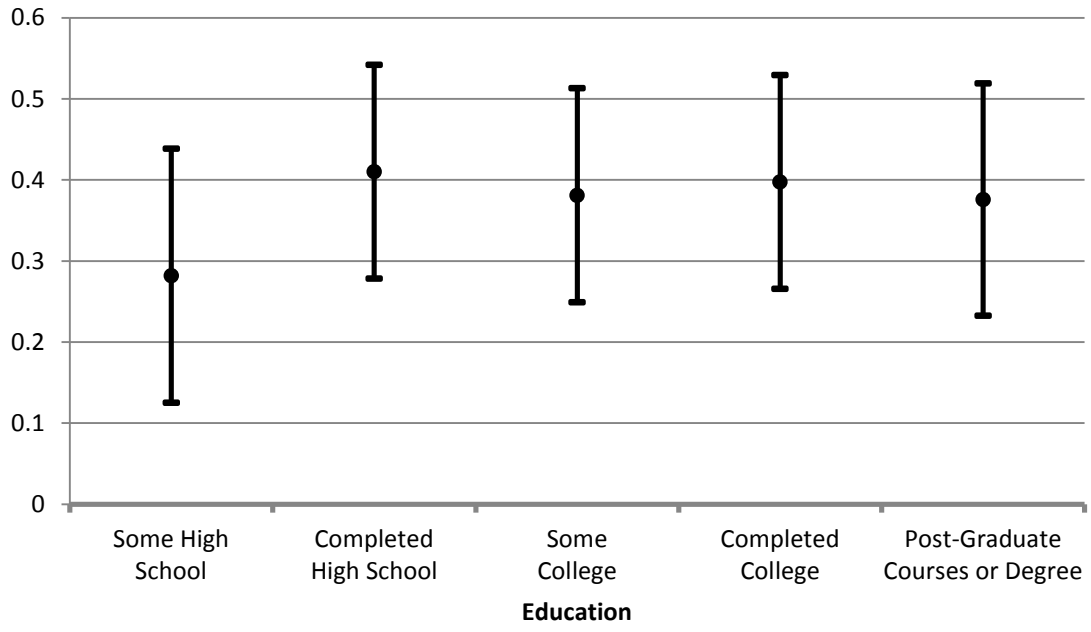
Children Under 18 Years of Age

Not surprisingly, the presence in the household of children under the age of 18 increases the probability of using internet for entertainment or social networking purposes by 7 percent (see Figure 40 above).

Education

Relative to respondents with no high school education, more highly educated respondents are consistently more likely to use internet for entertainment or social networking purposes – the estimated average marginal effects for all education categories are consistently positive and consistently between approximately 30 and 40 percent. Differences between the various marginal effects, however, are statistically significant.

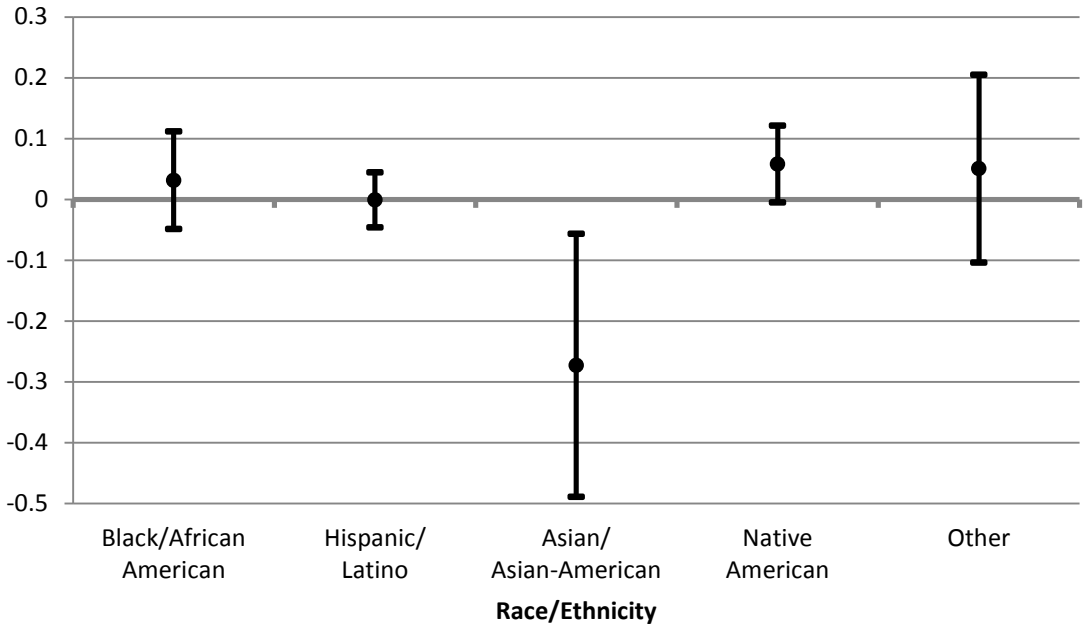
Figure 41. Entertainment use: marginal effect of education (relative to no high school education)



Race/Ethnicity

Asian/Asian-American respondents are 27 percent less likely to use home internet for entertainment or social networking purposes (relative to White/Caucasian respondents). In contrast, Native American respondents are 6 percent more likely to use internet for entertainment or social networking. Differences between other races/ethnicities and White/Caucasian respondents are not significant.

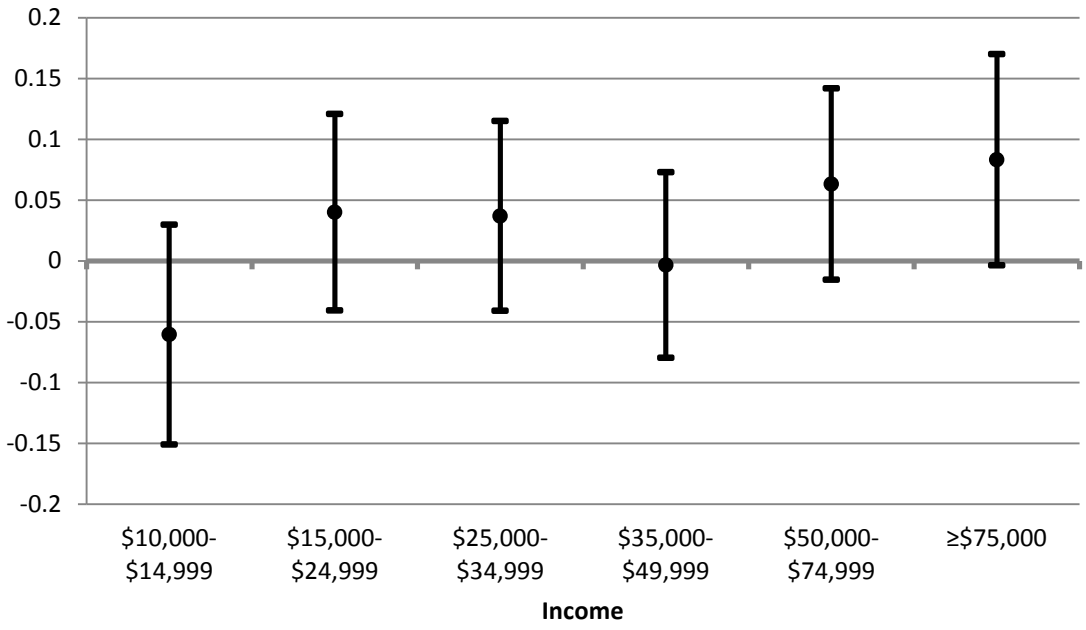
Figure 42. Entertainment use: marginal effect of race/ethnicity (relative to White/Caucasian)



Annual Household Income

In general the probability of using household internet for entertainment or social networking purposes does not vary with annual household income. The one exception occurs for respondents with annual household incomes in excess of $74,999 – such respondents exhibit an 8 percent increase in the probability of entertainment or social networking use. Although at the 90 percent confidence level this is a significant relationship (see Figure 43 below), as depicted in Table 4, the 95 percent confidence interval includes 0 and thus at the 95 percent confidence level we cannot say that respondents with incomes ≥$75,000 have a higher probability of entertainment or social networking use.

Figure 43. Entertainment use: marginal effect of annual household income (relative to <$10,000)



5. Policies to Promote Broadband Adoption and Internet Use

In general terms, policies to promote internet access in the US involve supply-side initiatives to increase availability, typically with investments in broadband infrastructure in underserved areas, and demand-side programs to encourage adoption and use by institutions such as schools and libraries and by individuals and households.

5.1 Infrastructure programs to increase broadband availability

To date, federal programs, which are the principal source of funding, have emphasized supply-side programs to provide broadband infrastructure (Hauge & Prieger, 2010). The American Recovery and Reinvestment Act of 2009 (ARRA) provided $7.2 billion in funding, including $4.7 billion to the "Broadband Technology Opportunities Program (BTOP), administered by the Commerce Department's National Telecommunications and Information Administration (NTIA), and $2.5 billion to the Broadband Initiatives Program (BIP), administered by the USDA's Rural Utilities Service (RUS). Of the total, more than 80% of the funds were allocated to nearly 250 infrastructure projects (DoA & DoC, 2009).

With the conclusion of the ARRA funding, the federal government will continue to support broadband infrastructure with funding from RUS and the Federal Communications Commission's (FCC) newly restructured Connect America Fund (CAF)[18]. The focus of both programs is improving infrastructure in rural areas, as exemplified by several key initiatives. The Rural Broadband Access and Loan Guarantee Program offers loans and loan guarantees to fund construction costs, infrastructure improvement, and needed equipment in eligible rural areas (Kuchno, 2013). Another RUS program, the Community Connect Program, is a grant program for local and tribal governments that focuses on expansion of infrastructure for rural and/or

[18] Connect America Fund draws together the FCC's Universal Service Fund and the Intercarrier Compensation program.

completely un-served areas (USDA, 2013). The USF High Cost Program subsidies are targeted to upgrade existing telephone networks in rural or un-served areas so that they are capable of delivering internet services.

The federal government's commitment to broadband infrastructure development is also evident in most state broadband programs[19]. In 2008, California established the California Advanced Services Fund (CASF), with an initial endowment of $100 million, to finance broadband network construction in un-served and underserved areas. In 2011 the CASF was extended through 2018, and with a small assessment on telephone and VoIP services, and the endowment was increased to $225 million.

The State of Maine became engaged in broadband infrastructure development in 2005, with the establishment of the Broadband Access Infrastructure Board (BAIB). The goal was to provide broadband access to 95-98% of the state's communities by 2010. Initiatives included incentives and funding for broadband infrastructure, changes right of way regulations, and funding of technology demonstration projects. The program led to the establishment of the ConnectME Authority, with statutory authority to collect fees (up to 0.25% of total revenues) from communication providers in the state. Additionally, Maine utilized a $25 Million BTOP grant for establishing a public-private partnership, called the Three Ring Binder, to support the development of middle mile fiber optic networks.

Massachusetts, a leader in internet adoption, has taken a holistic approach by placing broadband programming under the Massachusetts Technology Collaborative (MTC), the state's economic development agency. In 2008 Massachusetts created the Massachusetts Broadband

[19] Information for state level programming that is included in this report is drawn largely from a 2012 publication by John B. Horrigan and Ellen Satterwhite, of TechNet. See http://www.technet.org/wp-content/uploads/2012/12/TechNet_StateBroadband3a.pdf

Institute (MBI) with access to $40 million of state bond funds to develop infrastructure assets like conduits, fiber-optics, and wireless towers. MBI has used state funds to leverage funding from BTOP and the private sector to continue investments in infrastructure projects.

Missouri has taken a similar approach by linking the development of broadband infrastructure to broader initiatives around economic development. Recognizing the significant divide between urban and rural internet adoption, the state established the Rural High-Speed Internet Access Task Force with the purpose of applying federal stimulus to build out middle mile networks. Significantly, Missouri has broadened its efforts with the creation of MoBroadbandNow, which engages a public-private partnership to address concerns for affordability and other demand-side barriers to adoption.

5.2 Need for Demand-side Policies

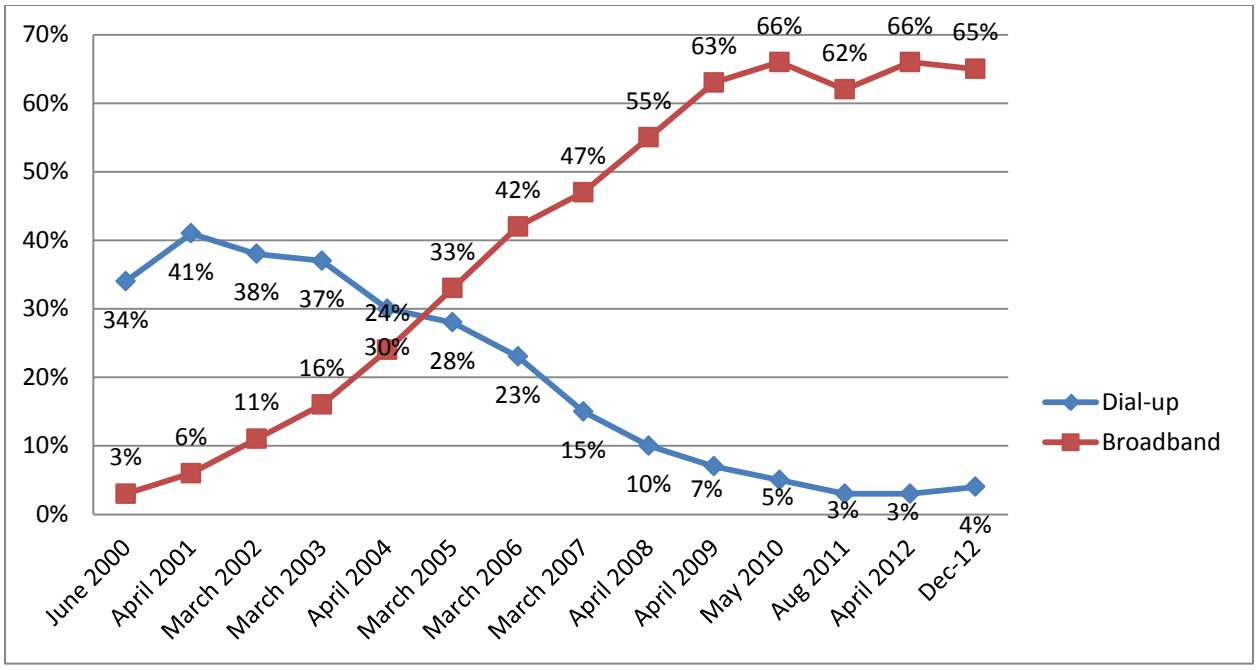
While to date federal and state programs have emphasized the development of broadband infrastructure, there is a growing recognition that policy to universalize internet access must also address demand-side constraints (Hauge & Prieger, 2010). There is mounting evidence to support to this view. According to the 2010 Pew Internet & American Life Project's annual survey of internet adoption and use, only 6% of adult Americans who do not use the internet offer "don't have access" as a reason for not doing so (Smith, 2010)[20]. Instead, respondents much more frequently raise questions of relevance (not interested, too busy, don't need/want – 48%); price (too expensive, don't have a computer – 21%); and usability (difficult/frustrating, too old, don't know how – 18%). As described above, UNM-BBER's survey of New Mexicans showed similar patterns, with only 9% of respondents without home internet identifying lack of availability as a reason.

In addition to the survey, there is further evidence that broadband policy must balance demand-side initiatives with the build out of infrastructure. Despite the significant investments to extend broadband access, data from the Pew Internet & American Life Project indicates that

[20] Aaron Smith, (2010). *Home Broadband 2010*. Pew Internet & American Life Project. http://www.pewinternet.org/~/media//Files/Reports/2010/Home%20broadband%202010.pdf

internet adoption by American adults has begun to level off. In four surveys conducted between May 2010 and December 2012, the percentage of Americans adopting broadband and dial up internet access has remained flat or even fallen, from 71% to 69%.

Figure 44. Broadband and Dial-up Adoption by American Adults, 2000-2012.



Source: Pew Internet & American Life Project. http://www.pewinternet.org/Static-Pages/Trend-Data-(Adults)/Home-Broadband-Adoption.aspx

5.3 Demand-side Policies to Promote Broadband Adoption

Demand-side barriers to household adoption can be organized in four general categories[21]

- Affordability (cost of service)
- Lack of computer ownership
- Concerns for usability (don't know how to use it, too difficult or frustrating, too old, worried about spam/spyware and other threats to privacy)

[21] Horrigan, 2009; Hauge and Prieger, 2010.

- Lack of interest or perceived value (don't want or need it, too busy/waste of time).

Internet policies are typically structured to address one or more of these barriers. For what may be practical/administrative or political reasons, specific programs are structured according to the needs of the target population. These include: low-income groups, unemployed, students and parents, elderly, minority or non-English speaking groups, and small businesses and business owners. The funding and administration of programs are variously publicly run, partnerships that utilize public and/or private funding and are run by private non-profit organizations. The following illustrates the breadth of such programming.

Programs to make internet service more affordable

Over recent years fewer and fewer survey respondents report affordability as the principal barrier to home broadband adoption, though it is of course much more of a factor for those with limited incomes. The New Mexico data confirms this. Eighteen percent of those without home internet service identified cost of serve as a barrier, though among those with household incomes below $25,000 the rate was 27%. However, direct subsidies to make broadband more affordable are all but non-existent in the U.S. Hauge & Prieger (2010) report: "we are not aware of any states that offer general subsidies for broadband Internet service, and there are currently no such subsidies at the federal level either." Programs that do help to ease the affordability constraint typically involve public-private partnerships and incentives for providers to offer more affordable access. One example is the Connect2Compete, a national nonprofit organization that provides families with internet at a rate of $9.95 a month, low cost computers, and free digital literacy training (Connect2Compete, 2013).The program is time limited, providing support for two years in expectation that households recognize the value and find ways to gain permanent access. Another program focused on low-income families is the NYC Connected Learning program which offers low cost broadband adoption, low cost broadband educational software, and training for both schools and families. The reduced broadband costs are also limited and last only for one year (BTOP, Accessed 2013).

Another approach is demand aggregation, which usually involves the pooling of potential customers within another otherwise un-service. In the first instance, demand aggregate results in the development of infrastructure, but in the longer term the strategy works as a cross-subsidy whereby the participation of those who are less costly to service (e.g. nearer the middle mile or in more density settled areas) effectively hold down the prices to those more costly to service (Hauge & Prieger, 2010).

Programs to support computer ownership

Lacking a computer limits the ability for individuals to adopt internet in the home; access is either precluded or restricted to mobile wireless devices or is not feasible at all (Hauge & Prieger, 2010). Participants in the New Mexico survey were twice as likely to identify lack of a computer as a barrier to internet adoption as the cost of service. Interestingly lack of a computer does not necessarily relate directly to a lower income: 47% of respondents with annual incomes between $50,000 and $74,999 listed a lack of a computer as a reason for not adopting home internet compared to 39% of respondents with annual incomes less than $10,000.

Clearly, the identification of lack of a computer as a barrier to adoption can be complex. To be sure, purchasing a computer is a cost that is burdensome on many households. However, as discussed above, absence of a computer can also conceal an underlying disinterest in the digital world. Thus, lacking a computer is a barrier that takes shape differently for two different populations: those that cannot afford the cost of a computer and those who do not value the cost of a computer. As such, supporting computer ownership should be directed toward each of these aforementioned populations in different ways.

For those who cannot afford a computer, offering low cost computers is a means of eliminating lack of ownership as a barrier to broadband adoption. For example, the Digital Impact Group (previously the Wireless Digital Inclusion Project) focused on free computer distribution for low-income and/or minority groups and argued that computer access was central to successful internet adoption (Hauge & Prieger 2010). Similarly, California's ZeroDivide program provides

computers as a part of its digital inclusion program (Hauge & Prieger 2010). On the other hand, for those who do not own a computer because they don't see a need to, policy that focusses attention toward promoting the value and the benefits in participating in the digital world may be a more appropriate approach to increasing computer ownership and home broadband adoption and will be discussed below.

Programs that Address Internet Usability

One aspect of the Digital Divide, and a barrier to home adoption, is a lack of digital literacy (the ability to use digital technology and to create, locate, and evaluate digital information). An absence of internet proficiency is sustained for several different reasons and varies by population. For the most part, digital literacy programs target specific groups to which digital literacy is a greater barrier: elderly, low income, unemployed, uneducated, minority, immigrant, and rural populations (Hauge & Prieger, 2010). Programs also target populations in which improved digital literacy is a great asset (i.e., small business owners and students). While seemingly few in number, digital literacy programs also address the needs of tribal populations; however, infrastructure is still a significant barrier to home broadband adoption for these groups.

National and New Mexico data reveal a dramatic age gap in internet use. According to the Census Bureau's 2011 Current Population Census of internet use, just 55% of seniors over the age of 65 live in a household with home internet access, compared to 79% of persons 18-64 years of age. In New Mexico, our 2012 survey shows that 58% of seniors have access to the internet at home, while 76% of adults 18-64 years of age have access. Indeed, the adoption rate falls sharply to just 39% for those 75 years and older.

There are several examples of BTOP funded initiatives focused on closing the age gap in internet use. These programs often provide computer lab access and digital literacy training for older populations. These programs are often located in larger metropolitan areas, such as New York City, Chicago, and San Francisco. In New York City, the Department of Aging has improved and expanded computer labs at 23 senior centers across the city. New York City's Older Adults

Technology Service (OATS), provides training and is technical support hub for 250 senior service agencies across New York City. Similarly, Connected Living Inc. in Northern Illinois has established computer labs and digital literacy training in 23 affordable housing communities for seniors and people with disabilities. Those who complete 12 training lessons and pass skills assessment receive a free laptop to use while residing in the housing community. In San Francisco, BTOP funds have been allocated to the city's Department of Aging and Adult Services and have provided 53 computer labs in facilities easily accessible to seniors such as senior centers, adult day care centers, and other public buildings.

A challenge to the promotion of digital literacy among the elderly is that this population sees little disadvantage to their digital isolation, even on matters where one may expect the need to be greatest. According to the Pew Internet Project, only 19% of seniors see lack of access to be a disadvantage in getting health information, compared to nearly 40% among younger adults (Smith, 2010). Similarly, only 18% of seniors recognize a limitation to digital isolation in using government services, compared to 34%. Perhaps just as importantly, even among seniors with home access in New Mexico, only a quarter use the internet for social networking, half the rate of other adults in the state. For many seniors isolation can be debilitating as increasingly others in our society turn to the internet in order to remain connected. Taken together, the challenges of getting seniors online are as much matters of interest and relevance as access and affordability.

Digital literacy programs are also targeted at other populations in need of developing skills related to computer and internet use. A digital literacy program that focuses efforts on low-income, under-served minority groups, and adults over age 55 is the Missouri MoBroadbandNow project. This program provides digital literacy training and internet access at state and community colleges. In addition, the program tailors digital literacy training to provide job skills needed for careers that require computer use (Bates et al. 2012).

Targeting digital literacy toward immigrant and non-English speaking populations is also a step in diminishing the Digital Divide. Funded by a BTOP grant, the Idaho Commission for Libraries and the Idaho Office for Refugees have sought to teach digital literacy skills through a "train the trainer program"; in just three months, the training reached 914 refugees in Boise and Twin Falls (American Library Association, 2012). Another example, the Franklin Learning Center (FLC) in Minneapolis, aids immigrants (primarily from Somalia) in digital literacy training to prepare them for a range of skills including taking the GED, applying for jobs, and/or accessing unemployment benefits. In Minnesota's Hennepin County, librarians are training Hmong immigrants from China, Laos, Thailand, and Vietnam in digital literacy skills (American Library Association, 2012). Project FINE focusses on technology education for immigrants and refugees in the Winona Minnesota region and offers internet resources for non-English speakers including internet tutorials, tips to internet security, and an index of hotspots and computer services available in the area (Project FINE, 2011).

Rural residents are also targeted by digital literacy programs. An example of a program that addresses rural needs is the e-Vermont Community Broadband Project. The project targets rural communities and provides digital literacy training for students and teachers (Bates et al. 2012). In addition, the Eastern Sierra Connect Regional Broadband Consortium plans to connect rural California communities to broadband through helping communities to understand the need of broadband and providing internet-use oriented workshops for residents and businesses in the more rural counties: Mono, Inyo, and Eastern Kern Counties (ESCRBC, 2013). Again, emphasizing rural populations, TechTECS is a company out of North Dakota that trains teams of trainers in preparation of going out into the rural community and providing digital literacy training. TechTECS incorporates having a local "go-to" trainer for community digital literacy needs (TechTECS, 2013)

There are also several program focused on improving digital literacy among businesses owners and students. An example of an initiative focused toward businesses is the Connect Michigan program. Connect Michigan (a non-profit organization) strives to develop digital literacy among

small businesses and inform them of the benefits of online commerce (Connect Michigan, 2013). The Connect Arkansas program (a non-profit organization) received $3.7 million in BTOP funding and targets students and entrepreneurs (Bates et al. 2012). The program trains students and already established businesses to be internet entrepreneurs and to participate in online commerce through digital literacy training programs. Training focuses on using email, developing websites, cloud computing, engaging in e-commerce, and using social media (Bates et al. 2012). In addition, the Auburn University's Economic & Community Development Institute (ECDI) is working in conjunction with the Alabama Cooperative Extension System, and the Alabama Department of Economic and Community Affairs to offer free website training to small Hispanic businesses in both Spanish and English (Sumners, 2013)

Policy efforts focused on increasing broadband subscription in tribal areas are often focused on supply-side solutions (i.e., infrastructure). While policy emphasis has been largely targeted to address infrastructure needs, there are a few digital literacy initiatives focused on increasing broadband adoption by Native Americans. For example, the Saint Regis Mohawk Tribe in upstate New York is providing members of its community opportunities to participate in a digital economy through digital literacy training classes and public computer centers. The tribe has a goal to train all 2,700 members in digital literacy (Wilhelm, 2011).

Programs that Address Lack of Interest or Perceived Value

The Digital Divide is defined not only by differences in availability (e.g. urban/rural divide) and affordability (a function of both the cost of service and household income), but by differences in the values that individuals place on high-speed internet access. The New Mexico survey clearly illustrates this divide, in the reasons that respondents offer for not having internet (26% say they 'never considered it') and in the expressed unwillingness of many without internet to pay anything at all (including many in better-off households). The pattern is also evidence in national survey, for example the Pew Internet & American Life 2010 broadband in which nearly half (48%) without home internet access explained their choice in that they do not find the internet to be relevant to their lives (Smith, 2010).

Policy aimed at addressing a lack of interest or perceived value can stem from one of two premises: that that value of adopting internet must be made greater in order for the consumer to adopt broadband or that the consumer does not have enough information to realize what the value or benefits of broadband are (Hauge & Prieger, 2010). Policies stemming from the latter premise are more likely, yet programs meant to explicitly promote the awareness of the value of high-speed internet access are rare. One positive example is the California Emerging Technology Fund's Get Connected! Program, which provides materials and strategies to promote the benefits of the internet. Another example, the Colorado Broadband Data and Development Program provides $500,000 to engage in planning and outreach activities with local groups to promote broadband adoption and enhance broadband market information.

Awareness and promotion programs focus on specific populations such as low income, elderly, minority, unemployed groups. Missouri's Pathways to Broadband Access and Technology Education Project works with the state's community colleges to administer outreach programs to "low income, unemployed adults over age 55, and underserved minority groups" MDHE, 2013). LinkWISCONSIN utilizes the state's library network to expand awareness of the benefits of broadband among those who are not currently using internet services (LinkWISCONSIN, Accessed 2013). Pennsylvania, which ties its broadband programming to broader economic initiatives through its administration by the state's Department of Community Economic Development, perhaps has been most forceful in supporting awareness and outreach efforts. Pennsylvania's Broadband Outreach & Aggregate Fund (BOAF) taps rate fees on internet providers to fund "outreach programs leading to the increased awareness, demand and procurement of broadband services".

6. Recommendations to Promote Home Broadband Subscription and Internet Use in New Mexico

The recommendations outlined here seek to match policy initiatives implemented in other parts of the U.S. (as briefly described above) with conditions specific to New Mexico as documented in the results of the statewide survey. The goals of the recommendations is to promote internet access, increase home broadband subscription rates and, ultimately, promote effective use of the internet for the social and economic development of the state and its residents.

1. Improve broadband infrastructure in tribal areas

While the results of the survey indicate that in most parts of the state lack of interest is a greater barrier to home internet adoption than lack of access, the opposite is true in tribal areas. Overall, the rate of home internet adoption in tribal areas is barely one of half that in other parts of the state (38% vs. 75%). The comparison in terms of broadband adoption is even more unfavorable (26% vs. 57%). To explain not having home internet, persons in tribal areas are more than three times as likely as those in other areas of the state to explain non-adoption as 'not available in the my area' (20% vs. 6%).

However, there is evidence that the latent interest in internet access is just as strong in tribal areas as in other areas. For example, in non-tribal areas only 22% of persons in households without internet in the home access the web outside the home; yet a much larger share (36%) of persons without home internet in tribal areas access the internet outside the home. Similarly, nearly half of persons in residing in tribal areas (48%) access the internet at libraries and community centers, while only 14% of persons in non-tribal areas access the internet at these locations. Investments in infrastructure should focus on areas where its absence is the greatest barrier and where the latent demand is the greatest. In New Mexico, these are tribal areas.

2. Develop public outreach and awareness programs to educate the public about the growing importance of digital access in our society

The data in this study and from national studies indicate that a large share of those without a broadband subscription in home fail to see value in internet access. An interesting finding in this study is that there is virtually no relationship between one's income and the likelihood that they assign no value to high-speed internet access. Indeed, fully 57% of persons with annual incomes greater than $35,000 who do not have home internet access say that they would be unwilling to pay even $5/month for broadband. By comparison, 45% of persons with incomes below $35,000 per year and no home internet say that they would be unwilling to pay. Thus, being unwilling to pay for home internet is less indicative of an inability to pay than it is suggestive of a low intrinsic value placed on high-speed internet by the respondent.

The first step to generating interest in broadband subscription among these individuals is demonstrating a more fundamental value in internet access. For these individuals developing an interest must come even before digital literacy training. Few bother to learn that which is seen to be of little interest or relevance.

Outreach and awareness programs have been largely overlooked in the US. Until recently, interest was assumed rather than cultivated. But programs are needed to reach out to populations who feel either incapable or disinterested in the internet by demonstrating the value of internet access in relation to specific needs, such as economic opportunity and improved health. Examples may include connecting the internet to information regarding health for the elderly; distance learning for students in rural areas; and job search and career development for the unemployed.

3. Promote the provision of computers or other internet-accessible devices to low-income households.

The lack of a computer was the most commonly cited reason for not having home access to the internet. The variable can be ambiguous, as it interpreted as either an economic constraint or an expression of a lack of internet in the digital world. Among higher-income we can assume that the lack of a computer in the home is an expression of no interest – as is an unwillingness to pay for service. But for lower-income families, the cost of a computer is more likely to be a barrier, especially given the high up-front cost.

The New Mexico survey data indicates that digital literacy ('know how to use the internet') declines with income, from 88% for those with incomes greater than $50,000 to just 68% for those with incomes less than $15,000. While literacy programs are important to support internet access for low-income households, the broader goal of promoting regular use and greater competency should begin with making access to a computer part of everyday life. With a computer in place, low-income will be better motivated to seek out cost effective internet access.

4. Support internet access among low-income households with children as educational necessity

Analysis of New Mexico survey yielded interesting insights with respect to households with children. In general, households with children are more likely to subscribe to home internet services. Holding constant income, the presence of children in the household increases the likelihood of home internet access by nearly 8%. But as the number of children in the household increases the associated burden on low-income families seems to result in the displacement of home internet service.

Increasingly, educational success is tied to internet access. "Advances in information and communications technology means that education is no longer confined to the classroom. Those students with limited or no access in their formative elementary school years are falling

behind. The earlier every student in America is connected to high speed Internet, the brighter our country's future will be."[22]

The value of home internet access for students is widely recognized and there are number of initiatives, including several public-private partnerships that seek to the meet the challenge. Connect2Compete national nonprofit organization provides families with internet low cost computers, free digital literacy training and internet access at a low monthly rate. Many such programs link children's success with digital literacy of their parents, recognizing that it is important both that parents see value in their child's work and be able to support that work. A good example is Computers for Youth Foundation (CFY), a national nonprofit organization that teaches families (children and parents) digital literacy and provides education software and bilingual support. CYI also provides computers for low-income children.[23]

5. Promote digital literacy among the elderly

Perhaps more than any other population, the elderly are on the other side of the Digital Divide. According to the New Mexico survey, only 54% of seniors over 65 years of age have access to home internet (compared to 74% of the rest of the population). The intensity of their internet use, the level of digital literacy and their access to the internet outside home also lag. And the limited internet access among seniors cuts across income categories. For instance, the home subscription for seniors with annual household incomes greater than $50,000 is only 60%, compared to 69% among persons less than 35 years of age in households with annual incomes under $25,000. The problem is not necessarily one of affordability, but interest and ability.

The value of promoting digital literacy among the elderly is widely recognized. "Broadband-enabled technologies are providing seniors with an interactive lifeline to the world, empowering them to live more robust, healthful, and independent lives."[24]

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[22] http://www.speedmatters.org/benefits/
[23] http://cfy.org/what-we-do/the-cfy-digital-learning-program/
[24] http://www.nyls.edu/user_files/1/3/4/30/83/BroadbandandSeniors.pdf

More and more programs are being developed that focus on the specific needs and interests of seniors, tying internet access to areas such as remaining connected to loved ones, managing healthcare, participating in the community dialog. One common strategy is to find them where they are. Programs are being established in senior centers, nursing homes, hospitals and libraries. Examples include Older Adults Technology Service (OATS) in New York City, Connected Living in Illinois and programs administered jointly by the Departments of Technology and Aging and Adult Services in San Francisco.

In New Mexico, a particular focus should be on the elderly population in rural areas, where isolation can be a danger. In this case, promotion of digital literacy among the elderly should be linked to broader programs for public health and safety.

7. Tables

7.1 Home Internet Adoption and Technology

Table 5. Home Internet Adoption Rates by Income and Internet Technology

	N	Without Home Access	Dial up	BB only	BB with Mobile Wireless	Mobile Wireless	With BB	With Mobile Wireless
< $10,000	41	51%	2%	15%	12%	20%	27%	32%
$10,000-$14,999	70	47%	6%	21%	16%	10%	37%	26%
$15,000-$24,999	148	32%	9%	24%	25%	9%	49%	34%
$25,000-$34,999	266	33%	3%	25%	26%	12%	52%	38%
$35,000-$49,999	238	24%	3%	31%	31%	11%	62%	42%
$50,000-$74,999	128	15%	3%	34%	38%	9%	73%	48%
$75,000+	56	21%	4%	18%	43%	14%	61%	57%
Total	**947**	**29%**	**4%**	**27%**	**28%**	**11%**	**55%**	**40%**

Source: UNM BBER Survey of Internet Adoption and Use in New Mexico, 2012.

Table 6. Home Internet Adoption Rates by Age and Internet Technology

	N	Without Home Access	Dial up	BB only	BB with Mobile Wireless	Mobile Wireless	With BB	With Mobile Wireless
18-24 y/o	83	27%	1%	13%	42%	17%	55%	59%
25-34 y/o	125	26%	3%	18%	30%	23%	48%	54%
35-44 y/o	181	20%	4%	21%	40%	14%	61%	54%
45-54 y/o	179	26%	3%	28%	33%	11%	61%	44%
55-64 y/o	171	29%	6%	37%	20%	8%	57%	27%
65-74 y/o	146	37%	6%	35%	18%	3%	53%	22%
75 y/o and over	62	61%	5%	24%	6%	3%	31%	10%
Total	**947**	**29%**	**4%**	**27%**	**28%**	**11%**	**55%**	**40%**

Source: UNM BBER Survey of Internet Adoption and Use in New Mexico, 2012.

Table 7. Home Internet Adoption Rates by Employment Status and Internet Technology

	N	Without Home Access	Dial up	BB only	BB with Mobile Wireless	Mobile Wireless	With BB	With Mobile Wireless
Business owner	37	16%	5%	35%	38%	5%	73%	43%
Full time employed	369	17%	4%	24%	39%	16%	63%	55%
Part time employed	82	44%	1%	20%	27%	9%	46%	35%
Full time student	41	20%	0%	15%	44%	22%	59%	66%
Part time student	18	33%	6%	22%	22%	17%	44%	39%
Homemaker	60	43%	2%	22%	23%	10%	45%	33%
Unemployed	33	39%	6%	9%	33%	12%	42%	45%
Retired	253	37%	6%	38%	15%	5%	53%	20%
Other	17	41%	6%	41%	12%	0%	53%	12%
Refused	37	54%	16%	11%	5%	14%	16%	19%
Total	**947**	**29%**	**4%**	**27%**	**28%**	**11%**	**55%**	**40%**

Source: UNM BBER Survey of Internet Adoption and Use in New Mexico, 2012.

Table 8. Home Internet Adoption Rates by Education Level and Internet Technology

	N	Without Home Access	Dial up	BB only	BB with Mobile Wireless	Mobile Wireless	With BB	With Mobile Wireless
< No High School	20	60%	0%	15%	15%	10%	30%	25%
Some High School	58	59%	2%	19%	12%	9%	31%	21%
High School diploma	258	45%	3%	21%	22%	9%	43%	32%
Some college	258	22%	6%	22%	32%	18%	54%	50%
College	268	12%	4%	37%	38%	9%	75%	46%
Post grad	52	12%	4%	42%	29%	13%	71%	42%
Refused	33	64%	9%	15%	9%	3%	24%	12%
Total	**947**	**29%**	**4%**	**27%**	**28%**	**11%**	**55%**	**40%**

Source: UNM BBER Survey of Internet Adoption and Use in New Mexico, 2012.

Table 9. Home Internet Adoption Rates by Ethnicity and Internet Technology

	N	Without Home Access	Dial up	BB only	BB with Mobile Wireless	Mobile Wireless	With BB	With Mobile Wireless
Caucasian	526	21%	4%	33%	32%	9%	65%	41%
Asian	4	0%	0%	100%	0%	0%	100%	0%
African American	36	33%	3%	3%	47%	14%	50%	61%
Hispanic	232	38%	5%	20%	25%	13%	44%	37%
Native American	75	48%	4%	21%	13%	13%	35%	27%
Other	10	40%	0%	20%	40%	0%	60%	40%
Refused	64	39%	5%	13%	17%	27%	30%	44%
Total	**947**	**29%**	**4%**	**27%**	**28%**	**11%**	**55%**	**40%**

Source: UNM BBER Survey of Internet Adoption and Use in New Mexico, 2012.

Table 10. Home Internet Adoption Rates by Number of Children and Internet Technology

	N	Without Home Access	Dial up	BB only	BB with Mobile Wireless	Mobile Wireless	With BB	With Mobile Wireless
With Children	264	22%	2%	20%	39%	17%	59%	56%
Without Children	683	32%	5%	29%	24%	9%	53%	34%
1 child	115	17%	1%	22%	40%	21%	62%	61%
2 children	95	22%	4%	19%	42%	13%	61%	55%
3 children	33	30%	3%	15%	30%	21%	45%	52%
4 children	15	27%	0%	33%	33%	7%	67%	40%
5 children	6	50%	0%	17%	33%	0%	50%	33%
Total	**264**	**22%**	**2%**	**20%**	**39%**	**17%**	**59%**	**56%**

Source: UNM BBER Survey of Internet Adoption and Use in New Mexico, 2012.

Table 11. Home Internet Adoption Rates by Location and Internet Technology

	N	Without Home Access	Dial up	BB only	BB with Mobile Wireless	Mobile Wireless	With BB	With Mobile Wireless
Urban	585	24%	4%	29%	32%	11%	61%	43%
Rural	289	32%	5%	26%	25%	13%	50%	38%
Tribal	73	62%	3%	10%	16%	10%	26%	26%
Total	**362**	**38%**	**4%**	**22%**	**23%**	**12%**	**45%**	**35%**

Source: UNM BBER Survey of Internet Adoption and Use in New Mexico, 2012.

Table 12. Home Internet Adoption Rates by Population Density and Internet Technology

	N	Without Home Access	Dial up	BB only	BB with Mobile Wireless	Mobile Wireless	With BB	With Mobile Wireless
<7.5 sq. mi	189	37%	5%	21%	25%	12%	47%	38%
7.5-106.7 / sq. mile	188	36%	1%	26%	24%	12%	51%	37%
106.7-897.6 / sq. mile	191	27%	5%	25%	32%	10%	58%	42%
897-2831 / sq. mile	187	31%	4%	26%	30%	9%	56%	40%
> 2,831 sq. mile	192	16%	7%	34%	29%	14%	64%	43%
NM Avg (17.2)	**947**	**29%**	**4%**	**27%**	**28%**	**11%**	**55%**	**40%**

Source: UNM BBER Survey of Internet Adoption and Use in New Mexico, 2012

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Table 13. Home Internet Adoption Rates by County and Internet Technology

	N	Without Home Access	Dial up	BB only	BB with Mobile Wireless	Mobile Wireless	With BB	With Mobile Wireless
Bernalillo	295	20%	4%	33%	34%	9%	66%	42%
Catron	0							
Chaves	18	26%	11%	39%	22%	0%	61%	22%
Cibola	35	38%	3%	37%	20%	0%	57%	20%
Colfax	9	11%	11%	33%	44%	0%	78%	44%
Curry	22	32%	0%	5%	41%	23%	45%	64%
De Baca	2	0%	50%	0%	50%	0%	50%	50%
Dona Ana	92	29%	7%	16%	25%	21%	41%	46%
Eddy	25	34%	8%	20%	20%	12%	40%	32%
Grant	14	13%	7%	50%	29%	0%	79%	29%
Guadalupe	0							
Harding	0							
Hidalgo	0							
Lea	38	28%	3%	21%	32%	16%	53%	47%
Lincoln	2	0%	0%	100%	0%	0%	100%	0%
Los Alamos	13	31%	8%	38%	23%	0%	62%	23%
Luna	10	45%	0%	10%	20%	20%	30%	40%
McKinley	57	48%	5%	19%	14%	11%	33%	25%
Mora	3	25%	0%	33%	0%	33%	33%	33%
Otero	33	9%	6%	39%	30%	15%	70%	45%
Quay	8	20%	0%	0%	63%	13%	63%	75%
Rio Arriba	15	44%	0%	27%	20%	7%	47%	27%
Roosevelt	9	56%	0%	33%	11%	0%	44%	11%
San Juan	85	37%	2%	20%	26%	14%	46%	40%
San Miguel	13	54%	0%	23%	23%	0%	46%	23%
Sandoval	22	35%	5%	14%	36%	9%	50%	45%
Santa Fe	49	15%	2%	27%	39%	16%	65%	55%
Sierra	6	57%	0%	17%	0%	17%	17%	17%
Socorro	5	40%	0%	20%	20%	20%	40%	40%
Taos	27	33%	0%	33%	26%	7%	59%	33%
Torrance	14	27%	7%	14%	29%	21%	43%	50%
Union	0							
Valencia	26	29%	12%	23%	19%	15%	42%	35%
Total	**947**	**28%**	**4%**	**27%**	**28%**	**11%**	**55%**	**40%**

Source: UNM BBER Survey of Internet Adoption and Use in New Mexico, 2012.

Table 14. Home Internet Adoption Rates by Stated Willingness to Pay and Internet Technology

	N	Without Home Access	Dial up	BB only	BB with Mobile Wireless	Mobile Wireless	With BB	With Mobile Wireless
$0/mo.	200	49%	12%	9%	7%	9%	8%	7%
$5/mo.	16	3%	5%	1%	0%		1%	0%
$10/mo.	9	0%	2%	1%	2%		1%	1%
$15/mo.	17	3%		2%	1%		2%	1%
$20/mo.	63	8%	17%	9%	3%	2%	6%	3%
$25/mo.	47	4%	2%	5%	4%	7%	5%	5%
$30/mo.	119	5%	22%	16%	12%	11%	14%	12%
$35/mo.	94	7%	5%	12%	10%	10%	11%	10%
$40/mo.	88	6%	10%	10%	12%	6%	11%	10%
$45/mo.	76	4%	7%	6%	14%	5%	10%	11%
$50/mo.	119	4%	2%	16%	15%	21%	15%	17%
$55/mo.	31	0%	5%	3%	4%	5%	4%	5%
$60/mo.	31	2%	5%	2%	3%	6%	3%	4%
$65/mo.	13		2%	1%	1%	4%	1%	2%
$70/mo.	17	1%		0%	3%	4%	2%	3%
$75/mo.	6	0%		1%	1%	1%	1%	1%
$80/mo.	13	1%		1%	1%	5%	1%	2%
$85/mo.	3	0%			1%		0%	1%
$90/mo.	4			0%	1%	1%	1%	1%
$95/mo.	2				1%		0%	1%
$100/mo.	20	1%	2%	2%	1%	4%	2%	2%
$105/mo.	1			0%			0%	
$110/mo.	3				1%		1%	1%
$115/mo.	1			0%			0%	
$120/mo.	2				1%		0%	1%
$130/mo.	1	0%						
$140/mo.	1			0%			0%	
$160/mo.	1			0%			0%	
$165/mo.	1	0%						
$175/mo.	1	0%						

Source: UNM BBER Survey of Internet Adoption and Use in New Mexico, 2012.

Table 15. Home Internet Adoption Rate by Income and Number of Children

	N	No Children	With Children	1 or 2 Children	3 or more Children	Total
< $10,000	46	52%	60%	64%	0%	54%
$10,000-$14,999	76	56%	58%	69%	0%	57%
$15,000-$24,999	153	67%	75%	72%	86%	69%
$25,000-$34,999	282	67%	73%	79%	53%	69%
$35,000-$49,999	257	73%	91%	95%	77%	78%
$50,000-74,999	128	80%	93%	92%	100%	85%
$75,000+	58	82%	75%	73%	80%	79%
Total	**1000**	**69%**	**79%**	**82%**	**69%**	**72%**

Source: UNM BBER Survey of Internet Adoption and Use in New Mexico, 2012.

Table 16. Home Internet Adoption Rate by Stated Willingness to Pay and Income

	$0	$5-$25/mo.	$30-50/mo.	$55/mo.
< $10,000	52%	14%	33%	0%
$10,000-$14,999	45%	18%	30%	6%
$15,000-$24,999	52%	15%	25%	8%
$25,000-$34,999	41%	26%	27%	6%
$35,000-$49,999	63%	14%	19%	4%
$50,000-74,999	37%	16%	32%	16%
$75,000+	58%	0%	25%	17%
Total	**49%**	**18%**	**26%**	**6%**

Source: UNM BBER Survey of Internet Adoption and Use in New Mexico, 2012.

Note: Rows total 100% -- values represent the percentage of the income category willing to the amount specified in the column.

7.2 Home Internet Use

Table 17. Internet Use at Home by Income
(% of Respondents with Stated Use)

	Total	Email	Business	Work/Job related	Job Search	Entertain-ment	Social net-working	File Sharing	Research & Inform-ation	Online Commerce	School work (own)	School work (children's)
< $10,000	22	64%	18%	9%	18%	36%	50%	32%	23%	14%	23%	0%
$10,000-$14,999	41	88%	12%	7%	17%	37%	34%	22%	32%	12%	5%	0%
$15,000-$24,999	97	85%	25%	8%	23%	53%	55%	25%	33%	23%	7%	1%
$25,000-$34,999	182	81%	31%	11%	24%	49%	47%	29%	40%	29%	4%	3%
$35,000-$49,999	192	88%	28%	23%	19%	47%	45%	22%	45%	27%	3%	2%
$50,000-74,999	107	86%	35%	24%	24%	60%	61%	35%	50%	30%	5%	7%
$75,000+	46	80%	30%	24%	28%	63%	46%	20%	35%	41%	7%	7%
Total	**687**	**84%**	**28%**	**17%**	**22%**	**51%**	**49%**	**26%**	**40%**	**27%**	**5%**	**3%**

Source: UNM BBER Survey of Internet Adoption and Use in New Mexico, 2012.

Note: Survey participants were permitted more than one use, thus the row total may be greater than 100%.

Table 18. Internet Use at Home by Age

	Total	Email	Business	Work/Job related	Job Search	Entertain-ment	Social net-working	File Sharing	Research & Inform-ation	Online Commerce	School work (own)	School work (children's)
18-24 y/o	63	81%	21%	14%	32%	60%	62%	30%	41%	14%	14%	3%
25-34 y/o	95	85%	25%	14%	26%	52%	61%	32%	28%	19%	13%	4%
35-44 y/o	142	87%	32%	25%	25%	56%	60%	37%	48%	42%	5%	5%
45-54 y/o	136	89%	30%	26%	22%	50%	46%	26%	41%	27%	3%	5%
55-64 y/o	128	84%	35%	9%	21%	51%	48%	23%	42%	27%	2%	1%
65-74 y/o	95	78%	25%	12%	13%	40%	31%	15%	42%	23%	1%	1%
75 y/o and over	28	64%	7%	0%	7%	36%	7%	4%	25%	14%	0%	0%
Total	**687**	**84%**	**28%**	**17%**	**22%**	**51%**	**49%**	**26%**	**40%**	**27%**	**5%**	**3%**

Source: UNM BBER Survey of Internet Adoption and Use in New Mexico, 2012.

Note: Survey participants were permitted more than one use, thus the row total may be greater than 100%.

Table 19. Internet Use at Home by Employment Status

	Total	Email	Business	Work/Job related	Job Search	Entertain-ment	Social net-working	File Sharing	Research & Inform-ation	Online Commerce	School work (own)	School work (children's)
Business owner	32	88%	56%	53%	22%	34%	28%	53%	50%	31%	0%	3%
Full time employed	312	88%	29%	42%	22%	28%	30%	56%	54%	29%	5%	5%
Part time employed	44	89%	39%	48%	39%	11%	36%	52%	52%	39%	5%	5%
Full time student	33	79%	6%	30%	24%	12%	33%	58%	55%	12%	39%	3%
Part time student	12	75%	17%	17%	17%	8%	33%	58%	50%	25%	25%	0%
Homemaker	37	81%	32%	43%	30%	0%	38%	62%	62%	43%	3%	8%
Unemployed	19	79%	47%	58%	42%	5%	37%	58%	68%	37%	0%	0%
Retired	167	77%	21%	40%	16%	4%	12%	31%	42%	22%	0%	0%
Other	11	82%	27%	27%	0%	0%	18%	36%	36%	9%	9%	0%
Refused	20	95%	20%	10%	10%	5%	20%	35%	35%	0%	0%	0%
Total	**687**	**84%**	**28%**	**17%**	**22%**	**51%**	**49%**	**26%**	**40%**	**27%**	**5%**	**3%**

Source: UNM BBER Survey of Internet Adoption and Use in New Mexico, 2012.

Note: Survey participants were permitted more than one use, thus the row total may be greater than 100%.

Table 20. Internet Use at Home by Geography

	Total	Email	Business	Work/Job related	Job Search	Entertain-ment	Social net-working	File Sharing	Research & Inform-ation	Online Commerce	School work (own)	School work (children's)
Urban	460	85%	32%	17%	22%	49%	49%	26%	42%	27%	4%	3%
Rural	201	83%	21%	17%	21%	53%	47%	26%	36%	26%	6%	4%
Tribal	26	81%	27%	8%	38%	69%	58%	35%	54%	35%	15%	4%
Total	**227**	**83%**	**22%**	**16%**	**23%**	**55%**	**48%**	**27%**	**38%**	**27%**	**7%**	**4%**

Source: UNM BBER Survey of Internet Adoption and Use in New Mexico, 2012.

Note: Survey participants were permitted more than one use, thus the row total may be greater than 100%.

7.3 Reasons for Non-adoption of Home Internet

Table 21. Stated Reasons for Non-Adoption of Home Internet Services by Income

	With home internet	Costs Too Much	No Computer	Don't Know how to Use internet	Don't Know how to Get internet	Not Available in Area	Never Consid-ered	Access Else-where	No reason
< $10,000	54%	28%	39%	22%		6%	6%	6%	14%
$10,000-$14,999	57%	24%	31%	17%	14%	7%	21%	3%	12%
$15,000-$24,999	69%	28%	41%	15%	4%	7%	22%	7%	4%
$25,000-$34,999	69%	16%	42%	29%	5%	14%	24%	6%	3%
$35,000-$49,999	78%	12%	42%	33%	4%	8%	38%	8%	9%
$50,000-74,999	85%		47%	24%		6%	41%	12%	11%
$75,000+	79%		22%	11%		11%	33%	22%	25%
Total	**72%**	**18%**	**40%**	**25%**	**5%**	**9%**	**26%**	**7%**	**8%**

Source: UNM BBER Survey of Internet Adoption and Use in New Mexico, 2012.

Note: 278 survey participants do not home internet access; values are percentage of those without internet who offered the given reason. Respondents were able to offer more than one reason, thus the row total may be greater than 100%.

Table 22. Stated Reasons for Non-Adoption of Home Internet Services by Age

	With home internet	Costs Too Much	No Computer	Don't Know how to Use internet	Don't Know how to Get internet	Not Available in Area	Never Consid-ered	Access Else-where	No reason
18-24 y/o	76%	36%	23%			9%	14%	18%	0%
25-34 y/o	76%	10%	45%	16%	13%	6%	26%	3%	3%
35-44 y/o	80%	27%	38%	14%	3%	22%	24%	11%	0%
45-54 y/o	76%	10%	43%	21%	5%	21%	14%	5%	9%
55-64 y/o	73%	21%	42%	19%		2%	30%	7%	12%
65-74 y/o	65%	20%	48%	39%	7%	4%	28%	7%	15%
75 y/o and over	44%	6%	35%	53%	6%		44%	3%	11%
Total	**72%**	**18%**	**40%**	**25%**	**5%**	**9%**	**26%**	**7%**	**8%**

Source: UNM BBER Survey of Internet Adoption and Use in New Mexico, 2012.

Note: 278 survey participants do not home internet access; values are percentage of those without internet who offered the given reason. Respondents were able to offer more than one reason, thus the row total may be greater than 100%.

Table 23. Stated Reasons for Non-Adoption of Home Internet Services by Geography

	With home internet	Costs Too Much	No Computer	Don't Know how to Use internet	Don't Know how to Get internet	Not Available in Area	Never Consid-ered	Access Else-where	No reason
Urban	77%	19%	44%	25%	4%	1%	25%	5%	4%
Rural	69%	19%	40%	22%	3%	17%	27%	9%	16%
Tribal	39%	11%	27%	27%	9%	20%	27%	9%	2%
Total	**72%**	**18%**	**40%**	**25%**	**5%**	**9%**	**26%**	**7%**	**8%**

Source: UNM BBER Survey of Internet Adoption and Use in New Mexico, 2012.

Note: 278 survey participants do not home internet access; values are percentage of those without internet who offered the given reason. Respondents were able to offer more than one reason, thus the row total may be greater than 100%.

Table 24. Stated Reasons for Non-Adoption of Home Internet Services by Employment Status

	With home internet	Costs Too Much	No Computer	Don't Know how to Use internet	Don't Know how to Get internet	Not Available in Area	Never Consid-ered	Access Else-where	No reason
Business owner	84%	20%	20%		20%		20%	40%	17%
Full time employed	84%	16%	41%	13%	3%	13%	23%	8%	3%
Part time employed	58%	22%	42%	14%	6%	8%	11%	11%	0%
Full time student	82%	44%	22%				33%		-13%
Part time student	70%		17%		17%		33%	33%	0%
Homemaker	59%	13%	43%	17%	4%	26%	13%	13%	12%
Unemployed	63%	15%	46%	23%		15%	15%		0%
Retired	65%	14%	41%	48%	5%	4%	41%	3%	15%
Other	61%	29%	57%	29%			14%		0%
Refused	51%	24%	41%	18%	6%	12%	29%		15%
Total	**72%**	**18%**	**40%**	**25%**	**5%**	**9%**	**26%**	**7%**	**8%**

Source: UNM BBER Survey of Internet Adoption and Use in New Mexico, 2012.

Note: 278 survey participants do not home internet access; values are percentage of those without internet who offered the given reason. Respondents were able to offer more than one reason, thus the row total may be greater than 100%.

Table 25. Stated Reasons for Non-Adoption of Home Internet Services by Willingness to Pay

	With home internet	Costs Too Much	No Com-puter	Don't Know how to Use internet	Don't Know how to Get internet	Not Avail-able in Area	Never Consid-ered	Access Else-where	No reason
$0	32%	14%	47%	34%	3%	4%	34%	6%	15%
$5/mo.	44%	22%	56%	33%	0%	0%	22%	0%	0%
$10/mo.	89%		100%	0%	0%	0%	0%	0%	0%
$15/mo.	59%	33%	33%	33%	0%	17%	50%	0%	14%
$20/mo.	65%	28%	44%	28%	6%	0%	11%	6%	18%
$25/mo.	77%	27%	36%	18%	0%	0%	27%	0%	0%
$30/mo.	87%	13%	20%	13%	7%	20%	20%	20%	0%
$35/mo.	80%	5%	37%	26%	0%	16%	32%	21%	0%
$40/mo.	82%	31%	44%	6%	0%	31%	0%	0%	0%
$45/mo.	86%	18%	55%	9%	9%	18%	9%	0%	0%
$50/mo.	90%	20%	13%	7%	20%	20%	20%	13%	-25%
$55/mo.	97%	100%	100%	0%	0%	100%	0%	0%	0%
$60/mo.	84%	20%	40%	0%	0%	20%	20%	0%	0%
$65/mo.	100%								
$70/mo.	82%			0%	50%	0%	0%	50%	33%
$75/mo.	83%			0%	0%	0%	100%	0%	0%
$80/mo.	85%			50%	0%	0%	50%	0%	0%
$85/mo.	67%	100%		0%	0%	0%	0%	0%	0%
$90/mo.	100%								
$95/mo.	100%								
$100/mo.	90%		100%	0%	0%	0%	0%	0%	50%
$105/mo.	100%								
$110/mo.	100%								
$115/mo.	100%								
$120/mo.	100%								
$130/mo.	0%	100%		0%	0%	0%	0%	0%	0%
$140/mo.	100%								
$160/mo.	100%								
$165/mo.	0%			0%	100%	0%	0%	0%	0%
$175/mo.	0%			0%	0%	0%	100%	0%	0%
Total	**72%**	**18%**	**41%**	**25%**	**5%**	**9%**	**26%**	**7%**	**9%**

Source: UNM BBER Survey of Internet Adoption and Use in New Mexico, 2012.

Note: 278 survey participants do not home internet access; values are percentage of those without internet who offered the given reason. Respondents were able to offer more than one reason, thus the row total may be greater than 100%.

7.4 Devices and Use of Mobile Wireless Services

Table 26. Frequency of Internet Access by Type of Device

	Smart-phone	Desktop	Laptop	Tablet	Netbook
Hourly	21%	17%	18%	27%	17%
Daily	60%	65%	66%	57%	60%
Weekly	9%	11%	9%	8%	13%
Monthly	4%	4%	4%	5%	5%
Few times a year	2%	3%	3%	3%	5%
Total	**408**	**478**	**469**	**220**	**63**

Source: UNM BBER Survey of Internet Adoption and Use in New Mexico, 2012.

Table 27. Home Internet Adoption With and Without Mobile Wireless Plans by Income

	N	No Internet	Internet with Mobile Wireless	Internet without Mobile Wireless
Business owner	38	16%	47%	37%
Full time employed	389	16%	57%	27%
Part time employed	85	42%	36%	21%
Full time student	44	18%	64%	18%
Part time student	20	30%	40%	30%
Homemaker	63	41%	32%	27%
Unemployed	35	37%	43%	20%
Retired	267	35%	20%	45%
Other	18	39%	17%	44%
Refused	41	49%	27%	24%
Total	**1,000**	**28%**	**41%**	**31%**

Source: UNM BBER Survey of Internet Adoption and Use in New Mexico, 2012.

Table 28. Home Internet Adoption With and Without Mobile Wireless Plans by Employment Status

	N	No Internet	Internet with Mobile Wireless	Internet without Mobile Wireless
Business owner	38	16%	47%	37%
Full time employed	389	16%	57%	27%
Part time employed	85	42%	36%	21%
Full time student	44	18%	64%	18%
Part time student	20	30%	40%	30%
Homemaker	63	41%	32%	27%
Unemployed	35	37%	43%	20%
Retired	267	35%	20%	45%
Other	18	39%	17%	44%
Refused	41	49%	27%	24%
Total	**1,000**	**28%**	**41%**	**31%**

Source: UNM BBER Survey of Internet Adoption and Use in New Mexico, 2012.

Table 29. Home Internet Adoption With and Without Mobile Wireless Plans by Age

	N	No Internet	Internet with Mobile Wireless	Internet without Mobile Wireless
18-24 y/o	91	24%	59%	16%
25-34 y/o	132	24%	56%	20%
35-44 y/o	185	20%	56%	24%
45-54 y/o	188	24%	45%	30%
55-64 y/o	183	27%	27%	46%
65-74 y/o	153	35%	23%	42%
75 y/o and over	68	56%	10%	34%
Total	**1,000**	**28%**	**41%**	**31%**

Source: UNM BBER Survey of Internet Adoption and Use in New Mexico, 2012.

Table 30. Home Internet Adoption With and Without Mobile Wireless Plans by Population Density

Persons / sq. mile	N	No Internet	Internet without Mobile Wireless	Internet without Mobile Wireless
0.5-7.5	200	35%	39%	27%
7.5-106.7	200	34%	38%	29%
106.7-897.6	200	26%	43%	32%
897-2831	200	29%	41%	30%
2831-12459	200	16%	45%	40%
Total	**1,000**	**28%**	**41%**	**31%**

Source: UNM BBER Survey of Internet Adoption and Use in New Mexico, 2012.

Table 31. Home Internet Adoption With and Without Mobile Wireless Plans by Geography

	N	No Internet	Internet with Mobile Wireless	Internet without Mobile Wireless
Urban	626	23%	43%	34%
Rural	300	31%	39%	30%
Tribal	74	61%	26%	14%
Total	**1,000**	**28%**	**41%**	**31%**

Source: UNM BBER Survey of Internet Adoption and Use in New Mexico, 2012.

7.5 Digital Literacy

Table 32. Period of Internet Literacy by Income

	N	Don't know Internet	< 6 mos.	6 mos.-1 yr.	1-2 yrs.	2-5 yrs.	>5 yrs.
< $10,000	**46**	22%	4%	4%	7%	15%	48%
$10,000-$14,999	**76**	18%	7%	5%	4%	12%	54%
$15,000-$24,999	**153**	16%	7%	3%	5%	13%	58%
$25,000-$34,999	**282**	18%	6%	1%	3%	12%	60%
$35,000-$49,999	**257**	16%	3%	2%	2%	8%	70%
$50,000-74,999	**128**	8%	3%	0%	2%	9%	79%
$75,000+	**58**	7%	9%	0%	2%	7%	76%
Total	**1,000**	**15%**	**5%**	**2%**	**3%**	**10%**	**65%**

Source: UNM BBER Survey of Internet Adoption and Use in New Mexico, 2012.

Table 33. Period of Internet Literacy by Age

	N	Don't know Internet	< 6 mos.	6 mos.-1 yr.	1-2 yrs.	2-5 yrs.	>5 yrs.
18-24 y/o	**91**	0%	5%	3%	7%	21%	64%
25-34 y/o	**132**	10%	5%	2%	4%	10%	70%
35-44 y/o	**185**	5%	3%	3%	4%	12%	72%
45-54 y/o	**188**	13%	4%	2%	3%	14%	63%
55-64 y/o	**183**	16%	5%	2%	0%	8%	69%
65-74 y/o	**153**	25%	8%	1%	1%	5%	59%
75 y/o and over	**68**	54%	6%	0%	1%	0%	38%
Total	**1,000**	**15%**	**5%**	**2%**	**3%**	**10%**	**65%**

Source: UNM BBER Survey of Internet Adoption and Use in New Mexico, 2012.

Table 34. Period of Internet Literacy by Employment Status

	N	Don't know Internet	< 6 mos.	6 mos.-1 yr.	1-2 yrs.	2-5 yrs.	>5 yrs.
Business owner	**38**	0%	3%	0%	8%	11%	79%
Full time employed	**389**	6%	3%	2%	2%	10%	77%
Part time employed	**85**	19%	2%	1%	4%	15%	59%
Full time student	**44**	0%	7%	0%	5%	25%	64%
Part time student	**20**	5%	0%	0%	25%	30%	40%
Homemaker	**63**	21%	6%	3%	3%	10%	57%
Unemployed	**35**	17%	3%	11%	0%	9%	60%
Retired	**267**	30%	6%	1%	2%	5%	56%
Other	**18**	17%	11%	6%	0%	22%	44%
Refused	**41**	27%	17%	0%	0%	15%	41%
Total	**1,000**	**15%**	**5%**	**2%**	**3%**	**10%**	**65%**

Source: UNM BBER Survey of Internet Adoption and Use in New Mexico, 2012.

Table 35. Period of Internet Literacy by Ethnicity

	N	Don't know Internet	< 6 mos.	6 mos.-1 yr.	1-2 yrs.	2-5 yrs.	>5 yrs.
Anglo	**562**	12%	3%	2%	2%	8%	73%
Black	**37**	14%	8%	5%	5%	22%	46%
Hispanic	**241**	22%	6%	2%	4%	17%	49%
Native American	**77**	16%	9%	1%	4%	9%	61%
Other	**14**	14%	0%	0%	0%	7%	79%
Refused	**69**	23%	9%	0%	0%	6%	62%
Total	**1,000**	**15%**	**5%**	**2%**	**3%**	**10%**	**65%**

Source: UNM BBER Survey of Internet Adoption and Use in New Mexico, 2012.

Table 36. Period of Internet Literacy by Geography

	N	Don't know Internet	< 6 mos.	6 mos.-1 yr.	1-2 yrs.	2-5 yrs.	>5 yrs.
Urban	**626**	12%	5%	1%	3%	9%	69%
Rural	**300**	20%	3%	4%	3%	12%	59%
Tribal	**74**	24%	12%	1%	3%	14%	46%
Total	**1,000**	**15%**	**5%**	**2%**	**3%**	**10%**	**65%**

Source: UNM BBER Survey of Internet Adoption and Use in New Mexico, 2012.

Table 37. How Respondents Learned to Use the Internet by Income

	N	Know how to use the internet	Self Taught at home	Friend or family	At Work	School	At Work
< $10,000	**36**	78%	58%	6%	0%	31%	8%
$10,000-$14,999	**62**	82%	58%	16%	16%	23%	0%
$15,000-$24,999	**129**	84%	59%	14%	12%	17%	2%
$25,000-$34,999	**231**	82%	64%	25%	16%	18%	1%
$35,000-$49,999	**217**	84%	74%	17%	16%	19%	1%
$50,000-74,999	**118**	92%	77%	17%	30%	14%	2%
$75,000+	**54**	93%	69%	11%	30%	19%	2%
Total	**847**	**85%**	**67%**	**18%**	**17%**	**19%**	**2%**

Source: UNM BBER Survey of Internet Adoption and Use in New Mexico, 2012.

Note: Respondents were able to offer more than one resource, thus the row total may be greater than 100%.

Table 38. How Respondents Learned to Use the Internet by Age

	N	Know how to use the internet	Self Taught at home	Friend or family	At Work	School	At Work
18-24 y/o	**91**	100%	63%	11%	9%	37%	1%
25-34 y/o	**119**	90%	75%	16%	12%	29%	1%
35-44 y/o	**175**	95%	70%	23%	22%	24%	3%
45-54 y/o	**163**	87%	69%	20%	25%	14%	2%
55-64 y/o	**154**	84%	68%	18%	17%	10%	2%
65-74 y/o	**114**	75%	56%	17%	17%	6%	1%
75 y/o and over	**31**	46%	65%	10%	6%	6%	0%
Total	**847**	**85%**	**67%**	**18%**	**17%**	**19%**	**2%**

Source: UNM BBER Survey of Internet Adoption and Use in New Mexico, 2012.

Note: Respondents were able to offer more than one resource, thus the row total may be greater than 100%.

Table 39. How Respondents Learned to Use the Internet by Employment Status

	N	Know how to use the internet	Self Taught at home	Friend or family	At Work	School	At Work
Business owner	**34**	89%	76%	26%	29%	12%	6%
Full time employed	**345**	89%	80%	17%	26%	21%	2%
Part time employed	**63**	74%	75%	30%	6%	29%	2%
Full time student	**41**	93%	71%	12%	10%	41%	2%
Part time student	**18**	90%	61%	6%	6%	56%	0%
Homemaker	**46**	73%	80%	26%	11%	17%	2%
Unemployed	**24**	69%	58%	33%	13%	29%	0%
Retired	**162**	61%	66%	21%	19%	12%	1%
Other	**11**	61%	82%	27%	0%	18%	0%
Refused	**17**	41%	82%	12%	6%	6%	0%
Total	**761**	**76%**	**75%**	**20%**	**19%**	**21%**	**2%**

Source: UNM BBER Survey of Internet Adoption and Use in New Mexico, 2012.

Note: Respondents were able to offer more than one resource, thus the row total may be greater than 100%.

Table 40. How Respondents Learned to Use the Internet by Ethnicity

	N	Know how to use the internet	Self Taught at home	Friend or family	At Work	School	At Work
Anglo	496	88%	71%	18%	21%	16%	2%
Black	32	86%	69%	25%	16%	28%	0%
Hispanic	189	78%	61%	17%	12%	26%	1%
Native American	65	84%	55%	14%	14%	29%	2%
Other	12	86%	75%	17%	33%	8%	0%
Refused	53	77%	68%	21%	8%	4%	0%
Total	**847**	**85%**	**67%**	**18%**	**17%**	**19%**	**2%**

Source: UNM BBER Survey of Internet Adoption and Use in New Mexico, 2012.

Note: Respondents were able to offer more than one resource, thus the row total may be greater than 100%.

Table 41. How Respondents Learned to Use the Internet by Geography

	N	Know how to use the internet	Self Taught at home	Friend or family	At Work	School	At Work
Urban	550	88%	68%	18%	16%	18%	2%
Rural	241	80%	68%	18%	20%	17%	2%
Tribal	56	76%	52%	16%	16%	27%	0%
Total	**847**	**85%**	**67%**	**18%**	**17%**	**19%**	**2%**

Source: UNM BBER Survey of Internet Adoption and Use in New Mexico, 2012.

Note: Respondents were able to offer more than one resource, thus the row total may be greater than 100%.

Table 42. Internet Learning Resources by Income

	N	Know how to use the internet	Friend or family	Co-worker	Librarian	Training Program	Self learning
< $10,000	46	78%	22%	0%	11%	6%	61%
$10,000-$14,999	76	82%	23%	3%	5%	6%	60%
$15,000-$24,999	153	84%	27%	4%	2%	5%	64%
$25,000-$34,999	282	82%	30%	4%	2%	5%	71%
$35,000-$49,999	257	84%	25%	3%	1%	4%	80%
$50,000-74,999	128	92%	39%	6%	1%	10%	75%
$75,000+	58	93%	30%	4%	0%	6%	65%
Total	**1,000**	**85%**	**29%**	**4%**	**2%**	**6%**	**71%**

Source: UNM BBER Survey of Internet Adoption and Use in New Mexico, 2012.

Note: Respondents were able to offer more than one resource, thus the row total may be greater than 100%.

Table 43. Internet Learning Resources by Age

	N	Know how to use the internet	Friend or family	Co-worker	Librarian	Training Program	Self learning
18-24 y/o	91	100%	29%	3%	2%	5%	77%
25-34 y/o	132	90%	21%	3%	1%	4%	80%
35-44 y/o	185	95%	30%	6%	3%	6%	75%
45-54 y/o	188	87%	36%	4%	3%	9%	72%
55-64 y/o	183	84%	30%	2%	1%	5%	69%
65-74 y/o	153	75%	23%	4%	2%	4%	61%
75 y/o and over	68	46%	26%	0%	0%	6%	48%
Total	**1,000**	**85%**	**29%**	**4%**	**2%**	**6%**	**71%**

Source: UNM BBER Survey of Internet Adoption and Use in New Mexico, 2012.

Note: Respondents were able to offer more than one resource, thus the row total may be greater than 100%.

Table 44. Internet Learning Resources by Employment Status

	N	Know how to use the internet	Friend or family	Co-worker	Librarian	Training Program	Self learning
Business owner	38	89%	38%	6%	3%	9%	76%
Full time employed	389	89%	28%	5%	2%	8%	84%
Part time employed	85	74%	40%	5%	5%	6%	79%
Full time student	44	93%	34%	2%	5%	10%	88%
Part time student	20	90%	28%	6%	0%	0%	94%
Homemaker	N	73%	37%	2%	2%	0%	87%
Unemployed	35	69%	33%	8%	0%	4%	67%
Retired	267	61%	36%	1%	2%	4%	67%
Other	18	61%	18%	0%	9%	0%	91%
Refused	41	41%	12%	6%	0%	0%	65%
Total	**1,000**	**76%**	**32%**	**4%**	**2%**	**6%**	**79%**

Source: UNM BBER Survey of Internet Adoption and Use in New Mexico, 2012.

Note: Respondents were able to offer more than one resource, thus the row total may be greater than 100%.

Table 45. Internet Learning Resources by Ethnicity

	N	Know how to use the internet	Friend or family	Co-worker	Librarian	Training Program	Self learning
Anglo	562	88%	33%	4%	2%	6%	72%
Black	37	86%	31%	3%	0%	0%	69%
Hispanic	241	78%	24%	4%	2%	5%	70%
Native American	77	84%	20%	2%	6%	6%	68%
Other	14	86%	25%	8%	8%	0%	83%
Refused	69	77%	17%	2%	2%	4%	68%
Total	**1000**	**85%**	**29%**	**4%**	**2%**	**6%**	**71%**

Source: UNM BBER Survey of Internet Adoption and Use in New Mexico, 2012.

Note: Respondents were able to offer more than one resource, thus the row total may be greater than 100%.

Table 46. Internet Learning Resources by Geography

	N	Know how to use the internet	Friend or family	Co-worker	Librarian	Training Program	Self learning
Urban	626	88%	30%	4%	2%	5%	73%
Rural	300	80%	27%	4%	2%	8%	69%
Tribal	74	76%	25%	2%	5%	4%	64%
Total	**1,000**	**85%**	**29%**	**4%**	**2%**	**6%**	**71%**

Source: UNM BBER Survey of Internet Adoption and Use in New Mexico, 2012.

Note: Respondents were able to offer more than one resource, thus the row total may be greater than 100%.

7.6 Internet Use Outside the Home

Table 47. Internet Use Outside of the Home by Income

	N	Outside Internet Use	Email	Work	Job Search	Entertain-ment	Social net-working	File sharing	Research & Information	Online Commerce	Education (own)	Education (Children's)
< $10,000	46	50%	52%	13%	52%	30%	48%	17%	26%	17%	22%	0%
$10,000-$14,999	76	34%	69%	12%	35%	31%	46%	27%	19%	19%	12%	0%
$15,000-$24,999	153	36%	78%	22%	35%	38%	47%	22%	25%	22%	11%	5%
$25,000-$34,999	282	35%	73%	18%	26%	54%	49%	27%	29%	21%	4%	2%
$35,000-$49,999	257	42%	80%	27%	17%	41%	44%	19%	34%	16%	2%	4%
$50,000-74,999	128	55%	83%	37%	16%	39%	43%	21%	34%	20%	6%	3%
$75,000+	58	64%	59%	30%	19%	27%	41%	11%	14%	11%	0%	0%
Total	**1,000**	**42%**	**75%**	**24%**	**25%**	**41%**	**45%**	**21%**	**29%**	**18%**	**6%**	**3%**

Source: UNM BBER Survey of Internet Adoption and Use in New Mexico, 2012.

Note: Respondents were able to provide more than one use; thus the row total may be greater than 100%.

Table 48. Internet Use Outside of the Home by Age

	N	Outside Internet Use	Email	Work	Job Search	Entertain-ment	Social net-working	File sharing	Research & Information	Online Commerce	Education (own)	Education (Children's)
18-24 y/o	91	60%	64%	18%	25%	47%	56%	18%	22%	11%	20%	4%
25-34 y/o	132	55%	68%	16%	30%	44%	55%	23%	22%	18%	10%	4%
35-44 y/o	185	59%	80%	35%	29%	39%	47%	28%	33%	24%	2%	2%
45-54 y/o	188	51%	79%	23%	17%	43%	39%	22%	29%	18%	4%	4%
55-64 y/o	183	32%	84%	21%	21%	36%	41%	14%	34%	19%	0%	0%
65-74 y/o	153	18%	57%	29%	21%	32%	29%	11%	25%	14%	0%	0%
75 y/o and over	68	3%	50%	0%	50%	0%	0%	0%	50%	0%	0%	0%
Total	**1,000**	**42%**	**75%**	**24%**	**25%**	**41%**	**45%**	**21%**	**29%**	**18%**	**6%**	**3%**

Source: UNM BBER Survey of Internet Adoption and Use in New Mexico, 2012.

Note: Respondents were able to provide more than one use; thus the row total may be greater than 100%.

Table 49. Internet Use Outside of the Home by Employment

	N	Outside Internet Use	Email	Work	Job Search	Entertain-ment	Social net-working	File sharing	Research & Information	Online Commerce	Education (own)	Education (Children's)
Business owner	38	45%	65%	18%	29%	35%	41%	18%	41%	18%	0%	0%
Full time employed	389	60%	79%	34%	20%	42%	42%	22%	28%	16%	3%	3%
Part time employed	85	47%	80%	20%	38%	45%	63%	30%	28%	23%	5%	0%
Full time student	44	66%	66%	3%	38%	34%	59%	17%	24%	17%	34%	3%
Part time student	20	70%	43%	21%	14%	43%	50%	21%	21%	21%	29%	7%
Homemaker	63	43%	81%	11%	41%	59%	63%	33%	44%	41%	4%	11%
Unemployed	35	40%	64%	7%	29%	43%	50%	21%	29%	14%	0%	0%
Retired	267	13%	65%	9%	21%	35%	29%	6%	26%	18%	0%	0%
Other	18	22%	50%	0%	0%	25%	0%	0%	25%	0%	25%	0%
Refused	41	22%	78%	0%	11%	0%	33%	11%	11%	0%	0%	0%
Total	**1000**	**42%**	**75%**	**24%**	**25%**	**41%**	**45%**	**21%**	**29%**	**18%**	**6%**	**3%**

Source: UNM BBER Survey of Internet Adoption and Use in New Mexico, 2012.

Note: Respondents were able to provide more than one use; thus the row total may be greater than 100%.

Table 50. Internet Use Outside of the Home by Geography

	N	Outside Internet Use	Email	Work	Job Search	Entertain-ment	Social net-working	File sharing	Research & Information	Online Commerce	Education (own)	Education (Children's)
Urban	626	39%	73%	24%	26%	38%	43%	21%	29%	16%	6%	2%
Rural	300	48%	78%	27%	20%	47%	47%	22%	28%	20%	6%	3%
Tribal	74	45%	70%	15%	36%	36%	61%	21%	30%	27%	3%	6%
Total	**1,000**	**42%**	**75%**	**24%**	**25%**	**41%**	**45%**	**21%**	**29%**	**18%**	**6%**	**3%**

Source: UNM BBER Survey of Internet Adoption and Use in New Mexico, 2012.

Note: Respondents were able to provide more than one use; thus the row total may be greater than 100%.

Table 51. Location of Internet Access Outside of Home by Income

	N	Access outside the home	At work	At School	At library	At commu-nity center	At friend or family	At Public Hotspot (free)	Public access (For fee)
< $10,000	46	50%	22%	26%	30%	4%	0%	13%	26%
$10,000-$14,999	76	34%	27%	19%	35%	8%	19%	23%	8%
$15,000-$24,999	153	36%	44%	15%	20%	0%	29%	38%	7%
$25,000-$34,999	282	35%	40%	9%	15%	1%	24%	31%	17%
$35,000-$49,999	257	42%	56%	4%	15%	4%	18%	37%	11%
$50,000-74,999	128	55%	70%	6%	6%	3%	11%	31%	13%
$75,000+	58	64%	65%	3%	5%	3%	11%	24%	30%
Total	**1,000**	**42%**	**50%**	**9%**	**15%**	**3%**	**18%**	**31%**	**15%**

Source: UNM BBER Survey of Internet Adoption and Use in New Mexico, 2012.

Note: Respondents were able to offer more than one location, thus the row total may be greater than 100%.

Table 52. Location of Internet Access Outside of Home by Age

	N	Access outside the home	At work	At School	At library	At commu-nity center	At friend or family	At Public Hotspot (free)	Public access (For fee)
18-24 y/o	91	60%	27%	31%	25%	0%	22%	33%	13%
25-34 y/o	132	55%	45%	15%	15%	4%	19%	34%	14%
35-44 y/o	185	59%	61%	4%	13%	2%	18%	34%	13%
45-54 y/o	188	51%	60%	3%	12%	2%	18%	33%	16%
55-64 y/o	183	32%	45%	3%	16%	3%	21%	26%	16%
65-74 y/o	153	18%	43%	0%	18%	4%	7%	18%	21%
75 y/o and over	68	3%	0%	0%	0%	50%	0%	50%	0%
Total	**1,000**	**42%**	**50%**	**9%**	**15%**	**3%**	**18%**	**31%**	**15%**

Source: UNM BBER Survey of Internet Adoption and Use in New Mexico, 2012.

Note: Respondents were able to offer more than one location, thus the row total may be greater than 100%.

Table 53. Location of Internet Access Outside of Home by Employment Status

	N	Access outside the home	At work	At School	At library	At commu-nity center	At friend or family	At Public Hotspot (free)	Public access (For fee)
Business owner	38	45%	53%	6%	24%	12%	35%	41%	6%
Full time employed	389	60%	73%	3%	6%	1%	12%	29%	13%
Part time employed	85	47%	30%	10%	35%	5%	35%	35%	20%
Full time student	44	66%	17%	52%	17%	7%	17%	31%	17%
Part time student	20	70%	7%	50%	29%	0%	14%	21%	7%
Homemaker	63	43%	11%	0%	26%	0%	41%	44%	11%
Unemployed	35	40%	14%	0%	36%	7%	36%	21%	14%
Retired	267	13%	24%	3%	21%	6%	21%	35%	29%
Other	18	22%	0%	50%	50%	0%	0%	25%	0%
Refused	41	22%	11%	11%	22%	0%	0%	33%	22%
Total	**1,000**	**42%**	**50%**	**9%**	**15%**	**3%**	**18%**	**31%**	**15%**

Source: UNM BBER Survey of Internet Adoption and Use in New Mexico, 2012.

Note: Respondents were able to offer more than one location, thus the row total may be greater than 100%.

Table 54. Location of Internet Access Outside of Home by Geography

		Access outside the home	At work	At School	At library	At commu-nity center	At friend or family	At Public Hotspot (free)	Public access (For fee)
Urban	626	39%	50%	11%	11%	2%	16%	33%	16%
Rural	300	48%	53%	6%	17%	2%	23%	30%	13%
Tribal	74	45%	33%	6%	39%	9%	15%	24%	12%
Total	**1,000**	**42%**	**50%**	**9%**	**15%**	**3%**	**18%**	**31%**	**15%**

Source: UNM BBER Survey of Internet Adoption and Use in New Mexico, 2012.

Note: Respondents were able to offer more than one location, thus the row total may be greater than 100%.

Table 55. Internet Use Outside of the Home by Home Internet Adoption

	Total	With Home internet	Without Home internet
Access internet outside the home	**42%**	**49%**	**24%**
Email	75%	78%	57%
Work	24%	26%	13%
Job Search	25%	24%	30%
Entertainment	41%	42%	36%
Social net-working	45%	45%	46%
File sharing	21%	24%	10%
Research & Information	29%	30%	22%
Online Commerce	18%	19%	16%
Education (own)	6%	6%	6%
Education (Children's)	3%	3%	3%

Source: UNM BBER Survey of Internet Adoption and Use in New Mexico, 2012.

Note: Respondents were able to offer more than one use, thus the column total may be greater than 100%.

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