

November 9, 2015

The Georgetown Center for Business and Public Policy is pleased to announce a new policy paper by Visiting Senior Policy Scholar Anna-Maria Kovacs, *Regulation in Financial Translation: Rebooting Lifeline for Broadband*. The paper sets forth the case for the FCC to make the Lifeline program more efficient and consumer-friendly by linking Lifeline eligibility-verification and enrollment to SNAP.

True to the spirit of the Center's work generating ideas, convening leaders, and shaping policy, this paper is a timely and important contribution to inform the policy debate.

John W. Mayo
Professor of Economics, Business and Public Policy
Executive Director, Georgetown Center for Business and Public Policy

Regulation in Financial Translation

Rebooting Lifeline for Broadband

Anna-Maria Kovacs, Ph.D., CFA

November 2015

© Anna-Maria Kovacs 2015. All rights reserved.

Anna-Maria Kovacs is a Visiting Senior Policy Scholar at the Georgetown Center for Business and Public Policy. She has covered the communications industry for more than three decades as a financial analyst and consultant.

Rebooting Lifeline for Broadband

Executive Summary

The Federal Communications Commission (FCC) is in the process of “rebooting” the Universal Service Lifeline program. The goal of the Universal Service program is to make communication available to all Americans, no matter where they live or what their income may be. Its Lifeline component provides subsidies to low-income households. Today, that support is targeted toward wired and wireless voice services. Given that 84% of American adults and 95% of teens use the Internet and almost all of them do so via fixed or mobile broadband at home, the FCC’s proposal to extend Lifeline to broadband is clearly justified. Because usage patterns differ enormously among various groups of Americans—with the oldest, poorest, least educated and disabled Americans least likely to use the Internet or adopt broadband—it is also important that the FCC provide Lifeline subscribers the option of using the subsidy for the technology of their choice.

While there is data to support extending Lifeline to broadband, there is no reliable data to support changing a key aspect of the program, the size of the subsidy it provides to households. The FCC’s ambitious and laudable attempt to do market research on factors that affect broadband adoption via a set of fourteen pilot tests in 2012-2014 resulted in inconclusive data. Particularly with regard to broadband pricing and take-rates, the test results form a meaningless scatter. In the absence of useable data that would inform a decision about the optimal size of the subsidy, the FCC’s tentative conclusion that it should keep the subsidy at its current level of \$9.25 in non-Tribal areas is the most reasonable decision it can make.

The FCC’s interest in making Lifeline more efficient by linking it to an existing federal program could prove particularly fruitful. Today, a household that wants to sign up for Lifeline has to verify eligibility to a provider of communications services, a process that takes time, lacks dignity, and threatens privacy. It also ties the Lifeline subscriber to the specific provider who has certified eligibility, and discourages looking for a better deal from another provider, who would have to start certification all over. The process is also extremely expensive to administer—the FCC estimated in 2012 that it costs providers and subscribers about \$600 million per year to verify eligibility. It is, of course, vital to ensure eligibility to avoid waste, fraud, and abuse. Fortunately, the USDA performs the same function for its Supplemental Nutrition Assistance Program (SNAP, i.e., food stamps). Linking Lifeline eligibility verification and enrollment/de-enrollment to SNAP would eliminate an enormous expense that does not benefit the households that subscribe to Lifeline, would increase legitimate enrollment by making the process easier for eligible subscribers, and would enhance competition by freeing Lifeline subscribers to seek the best deals they can get from any provider.

A data-driven approach supports the FCC’s intent of adding broadband to the services covered by Lifeline. It also supports the FCC’s conclusion that it should not, at this time, change the level of subsidy. Finally, it supports the conclusion that the FCC should link Lifeline’s eligibility verification to SNAP. This

combination of actions would increase Lifeline enrollment while optimizing use of Lifeline resources, and respecting the privacy, dignity, time and choices of Lifeline subscribers.

The Lifeline program

The Universal Service Lifeline program¹ was established in 1985 to ensure that low-income households would be able to afford local telephone service.² Congress reaffirmed the commitment to universal service in the Telecommunications Act of 1996 and the FCC subsequently revised and expanded the Lifeline program. In 2005, Lifeline began to subsidize wireless, including prepaid, as well as wireline voice service for low-income households. Service providers were responsible for enrolling Lifeline subscribers and did so with varying levels of competence. By 2012, when the FCC implemented reforms to rein in waste, fraud, and abuse, there were 16.1 million Lifeline subscribers. Since then, because of the elimination of subscribers who were ineligible or getting multiple subsidies, the Lifeline base has shrunk. At the end of 2014, there were 12.4 million subscribers.³

The federal Lifeline program currently provides a subsidy of \$9.25 per month for eligible low-income non-tribal households and \$34.25 for eligible low-income households residing in tribal areas.⁴ Under the FCC's current rules, each eligible household can receive support for one voice line, wired or wireless.⁵ In 2014, the program paid out \$1.6 billion in total.⁶ Lifeline constituted 21% of the \$7.8 billion in spending authorized by Universal Service Fund (USF) in 2014.⁷ The federal USF program is funded via an assessment on interstate telecommunications, collected from end-users, generally via a line-item on the phone bill.

¹ USF has four components: High Cost, Rural Healthcare, Schools and Libraries, and Low-Income. The Universal Service Low-Income program had, at various times, three additional components beside Lifeline. Our discussion and all of our figures cover Lifeline only, since the other programs are now either completely gone or, in the case of Link-up, of minimal financial significance. The Lifeline subscriber and expenditure data is derived from LI06, LI07, and LI08 quarterly appendices available on the Universal Service Administrative Company (USAC) website under FCC filings.

² A short history of the program is provided in Federal Communications Commission, *Second Further Notice of Proposed Rulemaking, Order on Reconsideration, Second Report and Order, and Memorandum Opinion and Order*, in dockets 11-42, 09-197, 10-90, released June 22, 2015, ¶ 1, and *Report and Order and Further Notice of Proposed Rulemaking*, in dockets 11-42, 03-109, 96-45, 12-23, released February 6, 2012, ¶ 11-23, [hereafter referred to as FCC #2 and FCC#3, respectively].

³ Universal Service Administrative Company, *Lifeline Subscribers by State or Jurisdiction at December 2014*, Appendix LI08 Q2 2015 for 2014 subscriber count and *Lifeline Subscribers by State or Jurisdiction January 2012 to December 2012*, Appendix LI08 Q3 2013 for 2012 subscriber count.

⁴ FCC #3, ¶14.

⁵ FCC #3, ¶69-90.

⁶ Universal Service Administrative Company, *Historical Data: Support Claimed by ETCs Each Month – January 1998 through December 2014*, LI06 Q2 2015, for amount of support.

⁷ Universal Service Administrative Company, *Annual Report 2014*, p. 45.

In addition to the reforms it implemented in 2012, the FCC began the process of transforming the Lifeline program from support for voice-only service to include support for broadband by authorizing a set of pilot-trials to test the effect of discounts and other factors on broadband adoption.⁸ In June 2015, the FCC took the next step toward expanding the Lifeline program to cover broadband Internet access service by issuing a Further Notice of Proposed Rulemaking (FNPRM) that proposes coverage of broadband as well as voice by Lifeline, proposes to leave the \$9.25 subsidy at its current level, and seeks to make the program more efficient.⁹

The importance of broadband as a choice for Lifeline subscribers

According to Pew Research, the Internet is used by 84% of American adults and 95% of American teens. As FCC Commissioner Clyburn has pointed out, it enhances Americans' lives in numerous ways: "For \$9.25 a month, consumers can improve their lives, find a job, stay in touch with loved ones, enroll and take classes, monitor their health and maintain connection with doctors, engage in their communities, and participate in e-commerce. If done right, the program could bridge divides, and the network effects of a modernized program could be tremendous."¹⁰ It also, as FCC Commissioner Pai has noted, provides businesses efficient access to consumers: "...broadband means opportunities for innovation, job creation, and economic growth. I've personally spoken with numerous entrepreneurs in the United States who have told me that without the Internet, they'd have no business."¹¹

There are, however, significant variations in Internet use by age, level of educational attainment, and income. As figure 1 shows,¹² while 84% of all adults use the Internet, only 58% of those over age 65 do so. Only 66% of adults who did not complete high school use the Internet, and only 74% of adults whose household income is below \$30,000 do so. Teens, on the other hand, show relatively little difference in Internet use regardless of household income. On average, 95% of teens use it, and even in households with income below \$30,000, 89% do so.

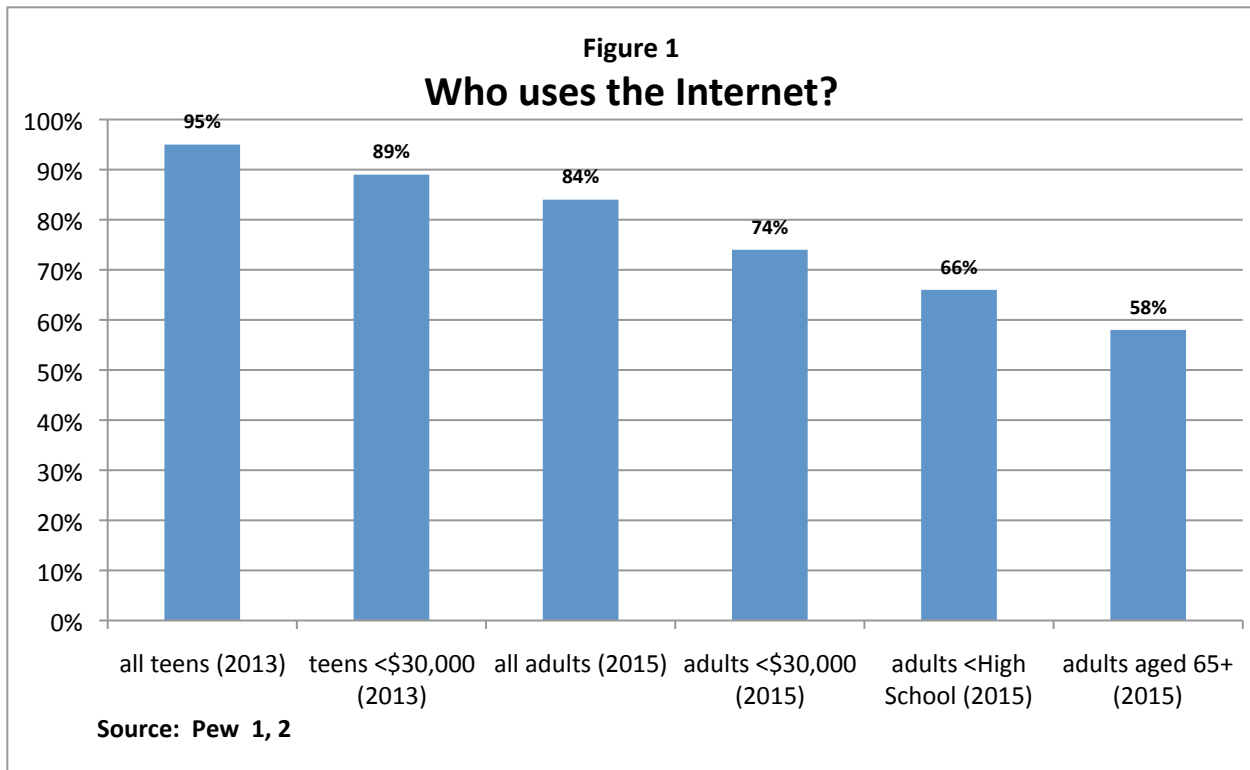
⁸ Federal Communications Commission, Wireline Competition Bureau, *Low-Income Broadband Pilot Program, Staff Report*, in WC Docket No. 11-42, May 22, 2015, ¶4. [hereafter referred to as FCC #1].

⁹ Both the 2012 order and the 2015 FNPRM have a heavy focus on reforms to minimize fraud, waste and abuse in the program. Spending by the low-income program peaked in 2012 at \$2.1 billion and was reduced by those reforms to \$1.6 billion in 2014 per USAC LI06 Q2 2015.

¹⁰ Federal Communications Commission, Commissioner Mignon Clyburn, *Enhancing Broadband through Innovation, Investment and Inclusion*, presented at Schools, Health & Libraries Broadband (SHLB) Coalition 5th Annual Conference, May 22, 2015.

¹¹ Federal Communications Commission, Commissioner Ajit Pai, *Remarks*, presented at International Institute of Communications Telecommunications and Media Forum, May 27, 2015.

¹² Andrew Perrin and Maeve Duggan, *Americans' Internet Access: 2000-2015*, Pew Research Center, June 26, 2015, [hereafter referred to as Pew # 1]. Mary Madden, Amanda Lenhart, Maeve Duggan, Sandra Cortesi, and Urs Gasser, *Teens and Technology 2013*, Pew Research Center, March 13, 2013, p. 4, [hereafter referred to as Pew #2].

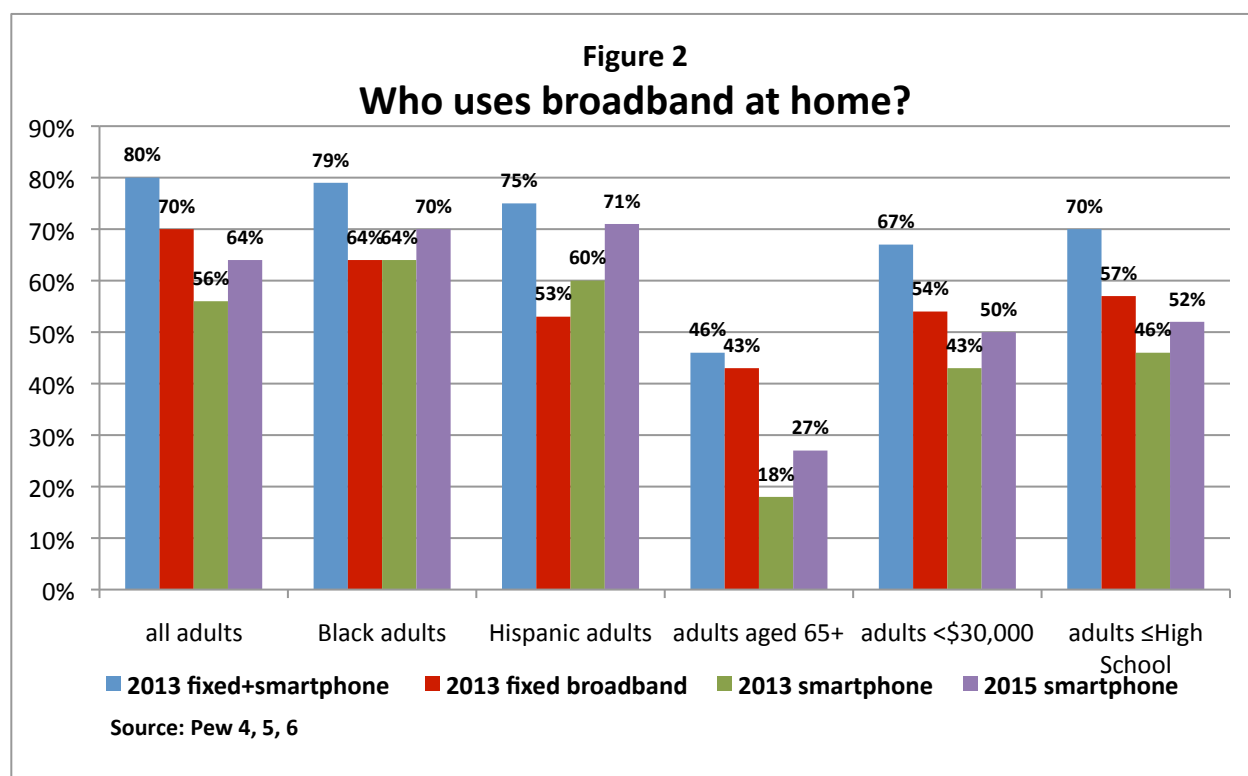


While the Internet was originally accessed over dial-up telephone lines, it is now almost universally accessed via a broadband connection, whether wired or wireless. The U.S. Census' 2013 report on computer and Internet use showed that 79% of Americans lived in a house with some Internet subscription and 78.1% lived in a house with a high-speed connection.¹³ Pew Research showed similar results for 2013, with 80% of American adults having at least one broadband connection at home. According to Pew, 70% had a fixed connection, 56% had a smartphone, and 80% had a fixed and/or mobile connection. That penetration of 'fixed or mobile' connection has undoubtedly risen since 2013, as smartphone penetration has increased by 14% from 56% of adults to 64%, while fixed broadband penetration has increased by 5%, all during a period in which population growth was estimated by the U.S. Census at roughly 1.5%.¹⁴

¹³ Thom File and Camille Ryan, *Computer and Internet Use in the United States: 2013*, U.S. Census Bureau, American Community Survey Reports, November 2014, table 2, p. 6, [hereafter referred to as Census #2]. This table encompasses all ages from "0-17 through "65 and older." Pew Research tends to report separately on adults from teens and does not generally include pre-teens.

¹⁴ Kathryn Zickuhr and Aaron Smith, *Home Broadband 2013*, Pew Research Center, August 26, 2013, pp. 4 and 5, [hereafter referred to as Pew #4]. Aaron Smith and Dana Page, *U.S. Smartphone Use in 2015*, Pew Research Center, April 1, 2015, p. 13, [hereafter referred to as Pew #5]. According to the Leichtman Research Group, *Releases*, dated March 17, 2014 and May 15, 2015, total broadband connections rose from 84.3 million to 88.5 million, i.e. by 5%, from Q4 2013 to Q1 2015. U.S. Census Bureau, *Statistical Abstract of the United States: 2012*, p. 9, shows roughly 1.5% population growth from mid-2013 to first-quarter 2015 [hereafter referred to as Census #1].

As is the case with Internet use, Figure 2 shows that broadband adoption varies among demographic groups by age, level of educational attainment, income, as well as racial and ethnic background.¹⁵ It is worth noting that mobile broadband, specifically smartphones, helps fill that gap for some demographics. In 2013, smartphones provided access to 10% of total adults who did not have fixed broadband. The effect was greatest for Hispanic adults, whose broadband access jumped from 53% to 75% thanks to smartphones. The incremental effect for Black adults was 15 percentage points, rising to 79% from 64%. The increase for adults whose income was below \$30,000 and/or who had not completed high school was 13 percentage points. However, for seniors, who had the greatest broadband-gap, smartphones had a minimal effect, with an increase of only 3 percentage points. Not only have few seniors adopted broadband in general, but far fewer have adopted smartphones, as figure 2 shows.¹⁶



Because of their low rate of Internet and broadband adoption, seniors constitute one of the two groups of particular interest to the FCC and warrant a deeper look. There is concern that seniors may not gain full access to healthcare, government services, social interaction, and other benefits of being online. As

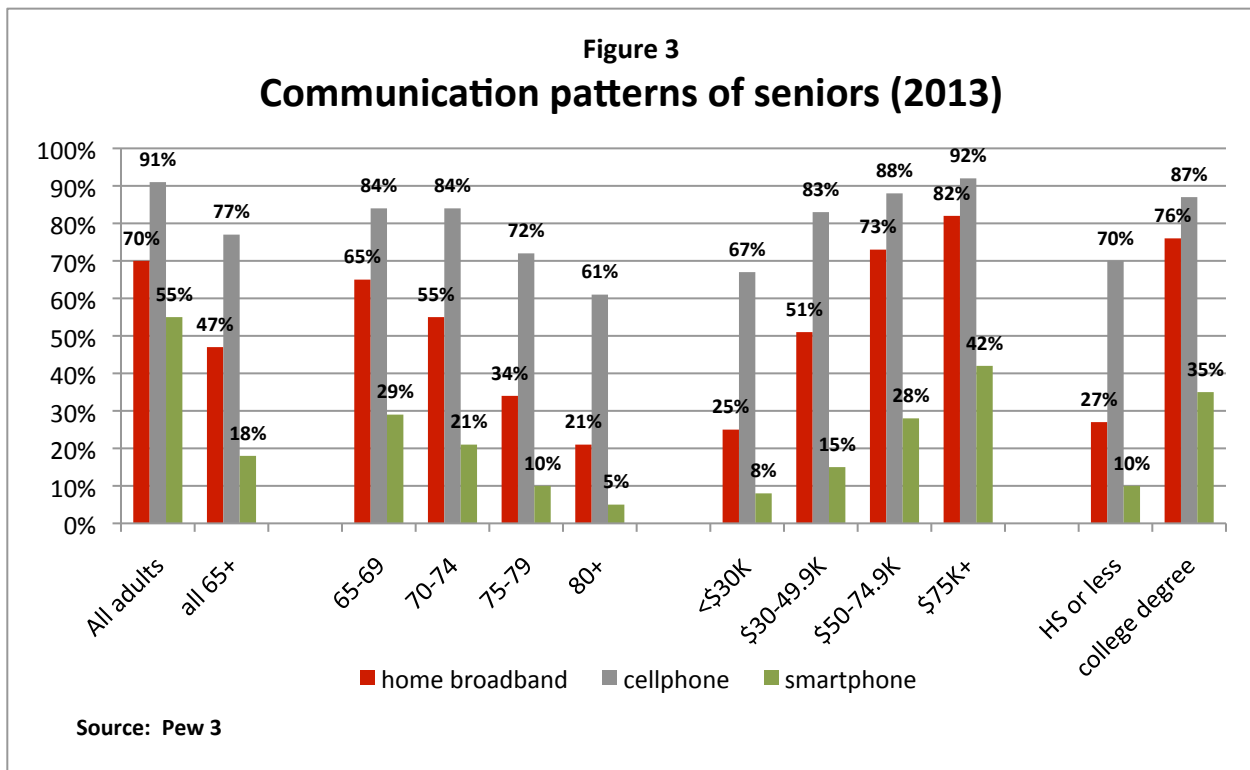
¹⁵ Pew #4, Pew #5, and Aaron Smith, *Smartphone Ownership – 2013 Update*, Pew Research Center, June 5, 2015, pp. 3-4, [hereafter referred to as Pew #6].

¹⁶ Aaron Smith, *Older Adults and Technology Use*, Pew Research Center, April 3, 2014, p.7, [hereafter referred to as Pew #3]. There are slight variations between the data in Pew #3 v. Pew #4, #6, and #10, which were based on different surveys.

Commissioner Clyburn points out, the elderly can too easily “become socially isolated, malnourished or even depressed before they get needed assistance,” and with a rapidly aging population, the U.S. will not have enough healthcare workers to meet this demand: “Broadband can serve as a bridge between this expanding chasm of diminishing resources and increasing need.”¹⁷

Pew data shows that seniors are by no means homogeneous. As figure 3 shows,¹⁸ home broadband adoption by seniors with an income over \$50,000 and/or with a college degree is higher than the average for all adults, but declines rapidly at lower levels of income or educational attainment. Similarly, adoption is about average for seniors aged 65-69, but declines sharply as age rises.

It is also worth noting that cellphones have been more extensively adopted by seniors than home broadband and far more extensively than smartphones. While there is some decline by age, income and educational attainment, 77% of seniors do have a cellphone. Even at the extreme, 61% of seniors aged over 80 and 67% of seniors with annual household income below \$30,000 had adopted cellphones in 2013 although only 21% had adopted home broadband and 5% had adopted smartphones. Data from

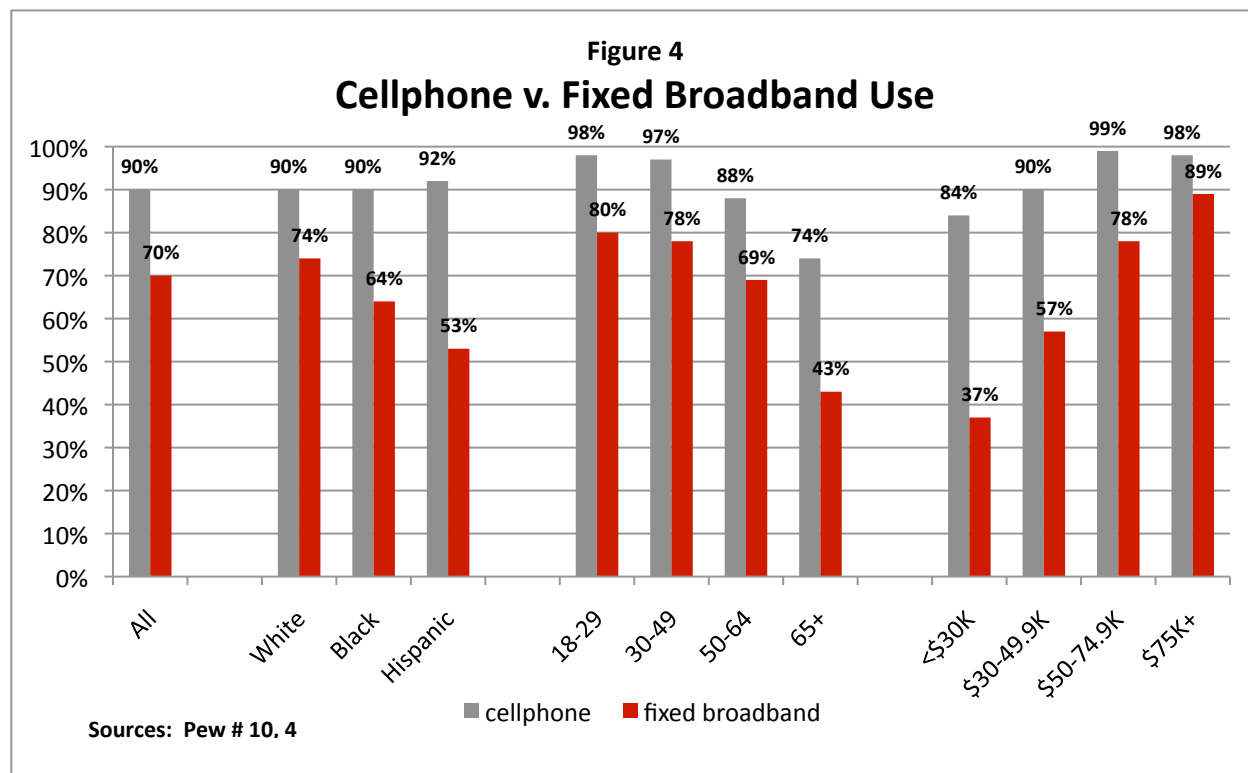


¹⁷ Federal Communications Commission, Commissioner Mignon Clyburn, *Building Connected Health and Smart Care Systems in Florida and Beyond*, presented at FCC-Mayo Clinic Broadband Health Summit, October 1, 2015.

¹⁸ Pew #3, pp. 1, 5, 7, 8.

the Centers for Disease Control and Prevention also show that seniors are least likely to have cut the cord for voice service.¹⁹ As of year-end 2014, 44.1% of all American adults lived in households that used wireless-only for voice, v. 17.1% of those aged 65 and over. Thus, for seniors in particular it will be critical to be able to apply the Lifeline subsidy to the technology of their choice, if all seniors are to have the chance to remain connected.

It is not only seniors, however, who rely on cellphones at a higher rate than they rely on fixed broadband. As figure 4 shows,²⁰ roughly 90% of all adults, regardless of race or ethnicity, have a cellphone of some sort—74%²¹ of all seniors do so, and 84% of those whose income is below \$30,000 do. Thus, the ability to choose whether to apply the Lifeline discounts to voice or broadband, fixed or mobile, will matter to low-income households of all ages and races.



The other demographic group on which there has been great focus at the FCC is low-income families with school-age children. Commissioner Rosenworcel uses the term “homework gap” to express her concern that children may be at a disadvantage vis à vis their peers if they cannot access assignments,

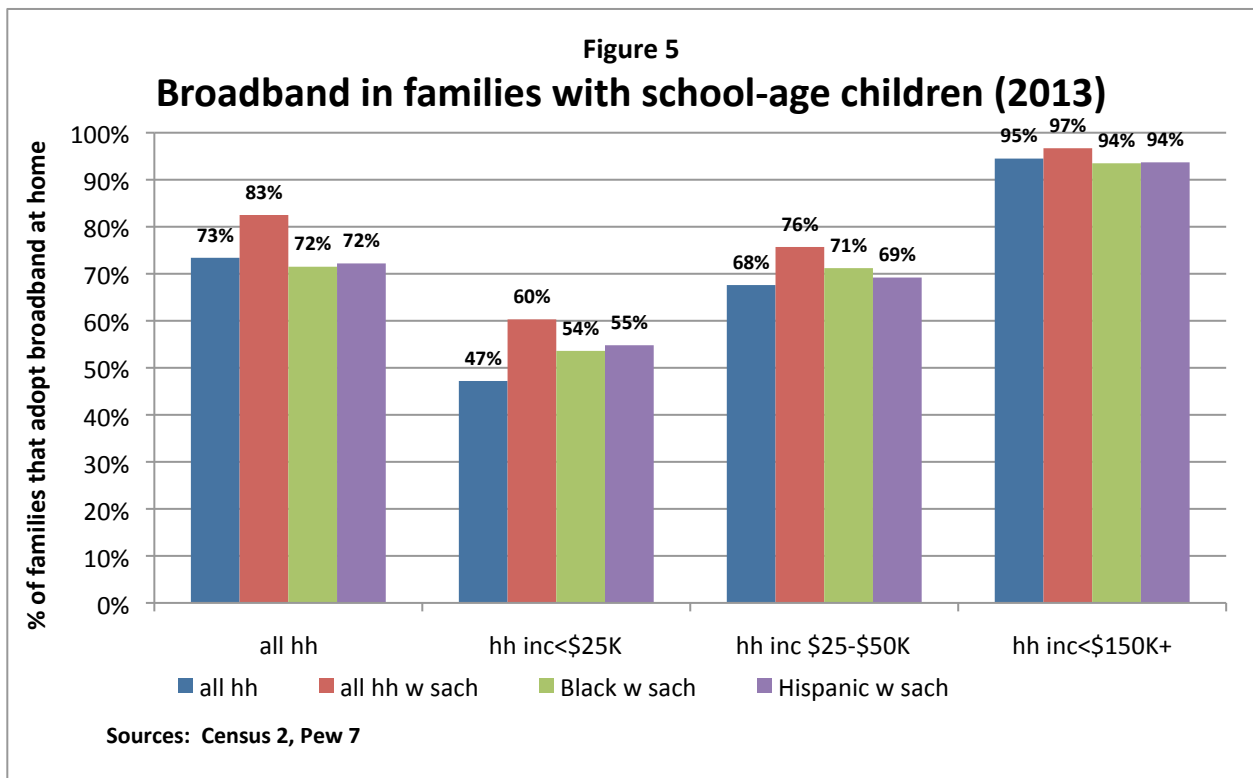
¹⁹ Stephen J. Blumberg, PhD. and Julian V. Luke, *Wireless Substitution: Early Release of Estimates from the National Health Interview Survey, July-December 2014*, Centers for Disease Control and Prevention, National Center for Health Statistics, released June 2015, pp. 1 and 6.

²⁰ Susannah Fox and Lee Rainie, *The Web at 25 in the U.S.*, Pew Research Center, February 27, 2014, p. 4, [hereafter referred to as Pew #10] and Pew #4, p. 3.

²¹ The Pew data in figures 3 and 4 vary slightly because they come from different surveys.

materials needed to complete their homework, school and scholarship applications online: “If you are a student in a household without broadband, just getting homework done is hard. Applying for a scholarship is challenging.”²²

Census Bureau data and an analysis of that data by John Horrigan at Pew Research provide some useful insights into the homework gap, as figure 5 shows.²³ It is noteworthy that in general, households with school-age children have a higher than average broadband-adoption rate, at 83% v. 73%. Broadband access to the Internet is clearly a priority for such families, as is obvious from looking at the pattern for low-income families. Even at household income below \$25,000, families with school-age children have a 60% broadband-adoption rate v. 47% for all families at that income level. Having said that, adoption rates do decline with income levels, both for average families and those with school-age children. For families with school-age children, that 60% broadband-adoption rate compares to 83% for all households and 97% for families with income over \$150,000.



²² Federal Communications Commission, Commissioner Jessica Rosenworcel, *Remarks*, Texas Computer Education Association, February 4, 2015.

²³ John Horrigan, *The numbers behind the broadband 'homework gap'*, Pew Research Center, FACTANK, April 20, 2015, [hereafter referred to as Pew # 7] and Census #2, table 1, p. 3. Families with school-aged children are referred to as 'w sach' in figure 3.

Another issue that affects Internet use and adoption of broadband is disability. In *Computer and Internet Use in the United States: 2013*, the Census Bureau reports that while 80.3% of Americans who are not disabled have a high-speed Internet connection at home, only 62.5% of those who are disabled have one.²⁴

Bottom line, ensuring that all Americans are connected to twenty-first century communications via broadband requires a focus on those groups that are lagging: households with low-income, especially those that include children, seniors, and disabled individuals. The FCC's proposal to add broadband to voice as a service covered by Lifeline is supported by the importance broadband Internet access has achieved in the lives of Americans. At the same time, to ensure that all households can remain connected via some technology, it is crucial to give households the choice to apply the Lifeline subsidy to the technology with which they are most comfortable.

Sizing the amount of subsidy

In its Lifeline FNPRM, the FCC tentatively concluded that the non-tribal subsidy, which is currently at \$9.25 per household, should remain at its current level.²⁵ Pending statistically-valid data that would support a change, that is the most reasonable conclusion. At the moment, there is no such data, although the FCC made a laudable and ambitious attempt via its broadband pilots to obtain some.

The FCC ran a set of pilot studies in 2012-2014, which attempted to test the effect of various factors that might pose potential barriers to broadband adoption.²⁶ The fourteen pilots funded by the FCC tested discounted service-prices, prices that bundled broadband with voice and/or video, various data allowances, different technologies and broadband speeds, the provision of digital literacy training, the provision of discounted equipment, and various marketing and outreach methods. The offers were open to households that qualified for Lifeline and were not currently using broadband at home of the offered type (fixed or mobile).

However, the pilots did not result in data that would support conclusions about the relationship of pricing and broadband adoption. As the FCC's staff report summarizing the pilots indicates, the tests were run for a very limited period.²⁷ As the U.S. Government Accountability Office pointed out,²⁸ there

²⁴ Census #2, table 2, p. 6.

²⁵ FCC #2, ¶152.

²⁶ Federal Communications Commission, *Broadband Adoption Lifeline Pilot Program FCC-USAC Kick-Off Meeting*, January 15, 2013, [hereafter referred to as FCC #4] and FCC #1, the FCC-WCB *Staff Report*, describe the pilots' design and some of the results. The data in figures 6 and 7 is based on the datasets provided on the FCC's websites for the broadband pilots.

²⁷ FCC #1, p. 24.

²⁸ U.S. Government Accountability Office, *FCC Should Evaluate the Efficiency and Effectiveness of the Lifeline Program*, March 2015, pp. 31-35, [hereafter referred to as GAO].

were methodological issues in terms of test design. In analyzing the data, it becomes obvious that additional problems developed during the actual pilots and the development of the datasets. The average take rate²⁹ was far lower than expected, resulting in some cases in samples of enrollees too small to be statistically meaningful even when the pilots are taken individually. As a result, some of the pilots changed their marketing midstream to try to increase subscribership. Consequently, there was a huge range of sample sizes among the pilots, stretching from a few hundred households to millions of households who were offered discounted broadband.³⁰ Incomplete responses to questionnaires and varying interpretations of the FCC's instructions by those compiling the datasets resulted in datasets that were flawed in various ways. Only eight pilots provided final reports, two heavily redacted. To the extent that the final reports attempted to draw conclusions from the pilot tests, they were hampered by the unreliable underlying data. They also focused on the few who accepted offers and did not attempt to explain the vast majority who did not.

Overall, 1.2% of the people who received offers accepted them.³¹ There was considerable variation in take-rates, however, as figure 6 shows. Despite the fact that they did not offer the lowest end-user service prices, the two pilots held on tribal lands, Gila River Telecommunications (GRT) and Hopi Telecommunications (HT) had by far the highest adoption rates, at 22% and 16%.³²

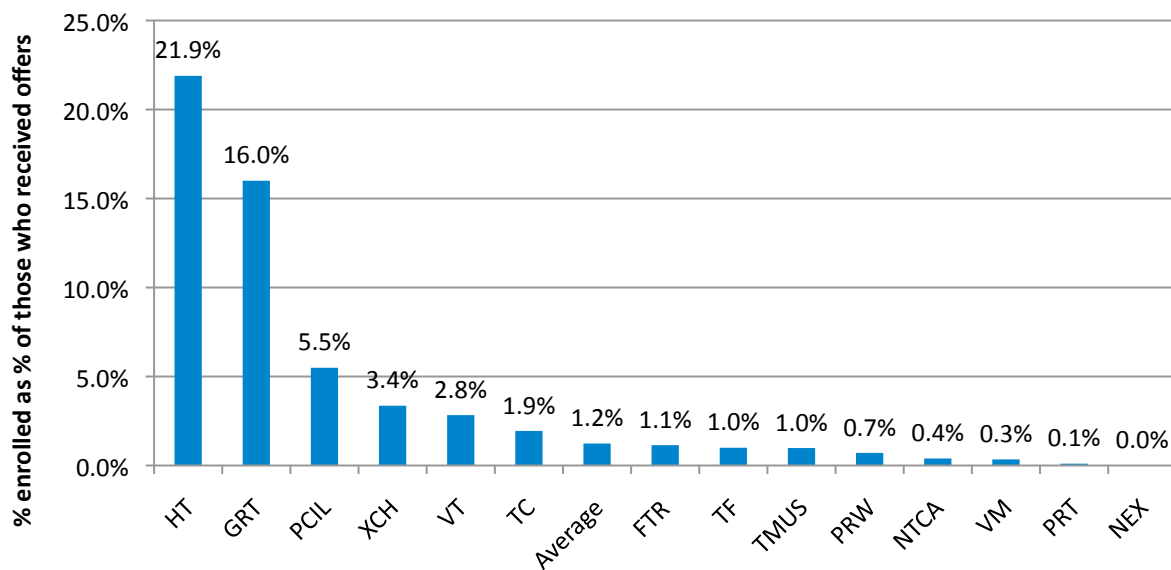
²⁹ The take rate is the number enrolled divided by the number who received offers. E.g., if ten enroll out of a thousand who receive an offer, the take rate is 1%.

³⁰ Hopi Telecommunications (HT) and Nexus (NEX), respectively. HT had 8 permutations of treatments and plans within one geographic area that was offered to 507 people, of whom 111 enrolled. At the other extreme, NEX had 57,296 permutations of geographies, treatments, and plans that were offered to about 6.6 million people, of whom 274 enrolled.

³¹ To avoid distorting the results of the other pilots, in calculating this average, we are excluding NEX which enrolled only 274 subscribers despite a mass market campaign that addressed 6.6 million people. If we included Nexus, the average would be 0.1%. Nexus was the most extreme case of a midstream change in marketing/outreach strategy in response to the very low take-rates.

³² The abbreviations in figure 6 from left to right stand for: Hopi Telecommunications, Gila River Telecommunications, Partnership for a Connected Illinois, Xchange, Vermont Telecommunications, Troy Cablevision, Frontier, TracFone, T-Mobile Puerto Rico, PR Wireless, NTCA, Virgin Mobile, Puerto Rico Telephone, Nexus.

**Figure 6
Broadband pilot take rates**



Source: FCC pilot datasets. note: average excludes NEX

The obvious question is why two pilots were so much more successful than the rest, but there is no obvious answer.³³ For example, all pilot tests offered digital literacy in at least some of their permutations, but the response rates to the tests varied wildly as figure 6 shows. Partnership for a Connected Illinois (PCIL) and Troy Cablevision (TC) and Xchange (XCH) marketed through community outreach as well as other methods, but had much lower success rates than did GRT and HT, which also used those methods. Vermont Telephone (VT) offered much higher speeds than HT and somewhat higher than GRT and, like them, operates in a rural area, but its take-rate was much lower. Bottom line, the pilots tested many variables, raised some outstanding questions, but no answers that are reliable across the tests.

One of the questions that the pilots leave wide open is the relationship of broadband-service end-user pricing and broadband adoption. As figure 7 shows, the pilots tested a wide range of prices, but did not obtain the results one would expect. In figure 7, we have plotted the price-to-the end-user, i.e. subscriber, of each offering by each of the pilot-test-providers against the take rate. The take rate is the percent of those who were offered a broadband service at a certain price who then enrolled at that price.

³³ Both GRT and HT were tests were conducted on tribal lands, with extensive outreach, and both offered digital literacy training. Both offered standalone fixed broadband. There was a substantial variation in speed offered, however, with HT offering 3 mbps download for all its offerings and GRT offering speeds ranging from 1.5 mbps (for its highest priced offering at \$53.19) to 20 mbps.

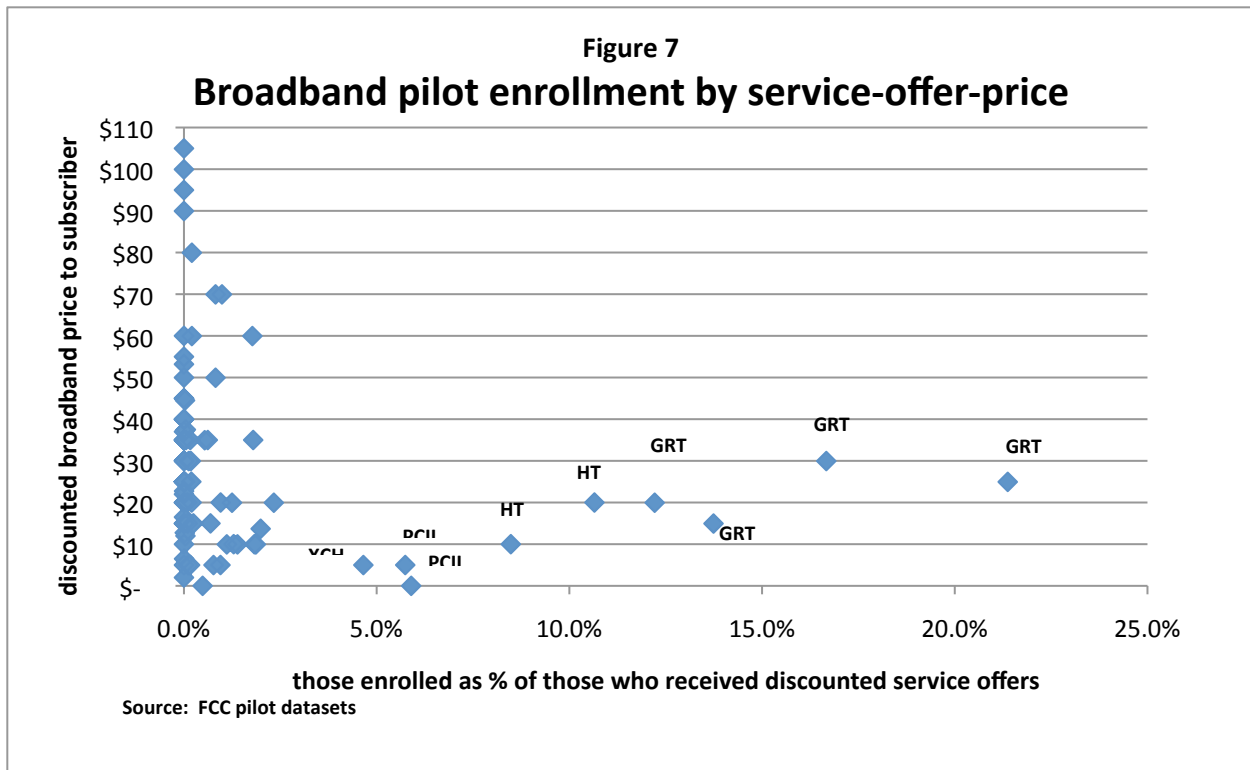


Figure 7 shows an unusual demand pattern. With a few exceptions, adoption rates cluster between 0% and 2% at all prices from \$0 to \$105.³⁴ Out of eighty-five offerings, there was a 0.0% take rate for forty-three offers at prices ranging from \$1.99 to \$104.99. Another twenty-three offers ranging from \$0 to \$79.95 had take rates between 0.1% and 1.0%. Ten offers at prices ranging from \$9.95 to \$59.95 resulted in take rates from 1.1% to 2.3%. The prices and take rates noted above essentially describe a meaningless cluster.

There are also nine outliers with take rates of 4.7% to 21.4% at prices ranging from \$0 to \$30. These are labeled by trial-provider-name on the graphic, with six from HT and GRT and three from PCIL and XCH. To put these nine in perspective, within that price range below \$30, there were a total of fifty-five offers. Of those, twenty four offers had a 0% take rate, nine had 0.1% or 0.2% take rates, and thirteen had take rates between 0.5% and 2.3%.

To give only a few examples of the confounding information that abounds in the datasets:

- PCIL and Virgin Mobile (VM) each offered a price of \$0 but had adoption rates of 5.9% and 0.5% respectively for those offers.
- Virgin Mobile's offer at a price of \$0 had a take rate of 0.5%, while its \$20 offer had a 0.2% take rate. While it is true that 0.5% is higher than 0.2%, it is more significant that 99.5% of those offered a price of \$0 rejected it.

³⁴ However, sixty-nine of the offers, i.e. 81%, were at prices below \$40, providing little data about what demand might be at the higher prices.

- There were seven offers at about \$10 (i.e. \$9.95 to \$10.00). The take rates ranged from 0% for NEX to 8.5% for HT.
- T-Mobile Puerto Rico (TMUS) and Puerto Rico Wireless (PRW) both offered wireless options to the same population during the same marketing period. Their most popular offerings both had low take rates at 0.9% and 0.6%, respectively, although TMUS's end-user price was \$5 and PRW's was \$35.
- There was a 0% take rate for 44% of the fifty-five offers priced from \$0 to \$30 as well as a 0% take rate for 58% of the twenty-six offers priced between \$31 to \$80. Given the much smaller sample size at higher prices, is the even higher rate of rejection meaningful?
- Further obscuring any analysis of pricing and take rates, some of the offers were for stand-alone broadband and others were for a bundled service.

In other words, when the entirety of the pilot tests is considered, the only clear conclusion is that they do not provide useful guidance about end-user service-pricing as an influence on broadband-adoption. It would be very helpful to have additional research about the relationship of price and broadband adoption.³⁵

A study by Pew Research encourages such caution, by confirming that the reasons for broadband adoption are complex, with service price a fairly minor factor in discouraging adoption. In 2013, Pew Research surveyed adults who were not using the Internet or were not using it at home. As figure 8 shows,³⁶ only 6% of offline adults, i.e. those who didn't use the Internet at all, gave the price of the access service as their reason for not having adopted the technology. Conversely, 70% of non-adoption was accounted for by reasons that were variations on lack of interest, lack of skills, and fears.

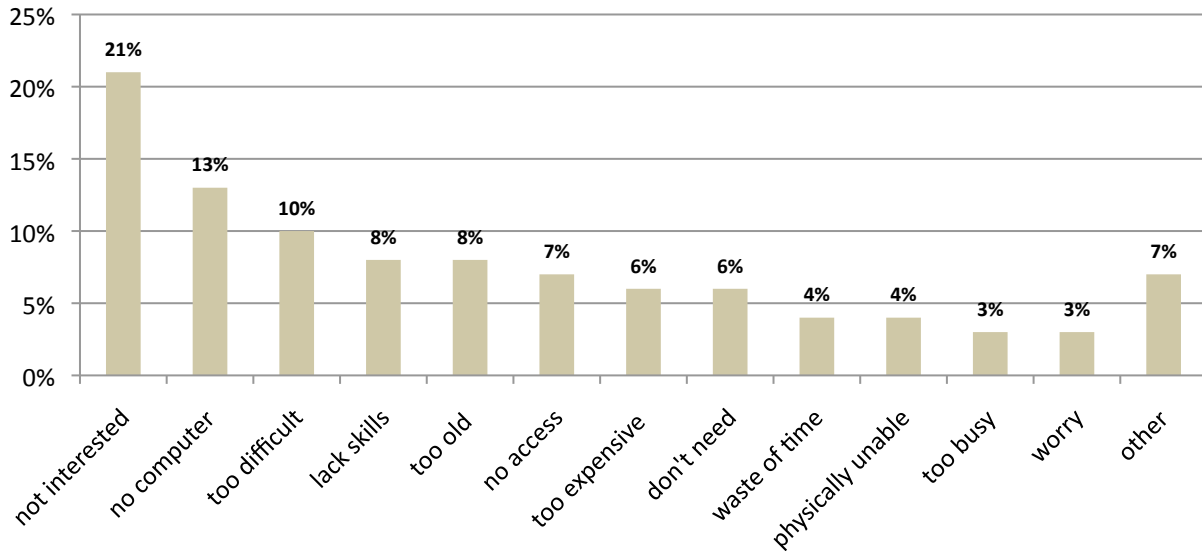
What is perhaps more surprising is that even among those who do go online but do so away from home and thus presumably value use of the Internet, only 9% gave the cost of the access service as their reason.³⁷ As figure 9 shows, the most common reasons for these online adults' not using the Internet at home were lack of a working computer at 24% (with 20% of the 24% saying they found computers too expensive), little need for the Internet at home at 10%, lack of access at their location at 9%, or lack of knowledge about setting up service at home at 9%.

³⁵ John W. Mayo, Olga Ukhaneva and Scott Wallsten, *Toward a More Efficient and Effective Lifeline Program*, Economic Policy Vignette, Georgetown Center for Business and Public Policy, August 2015, pp. 2-4, discusses the need to perform research on consumer behavior to identify those marginal consumers most likely to adopt broadband in response to subsidies.

³⁶ Kathryn Zickuhr, *Who's not online and why*, Pew Research Center, September 25, 2013, p. 2, [hereafter referred to as Pew #8].

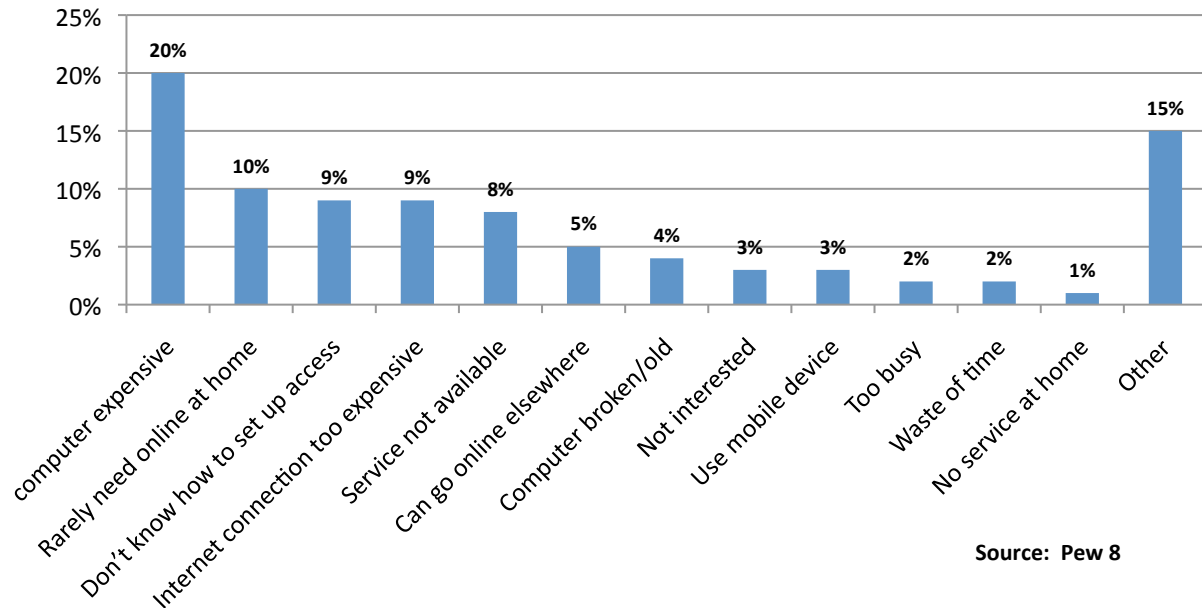
³⁷ Pew #8, p. 12.

Figure 8
Offline adults' reasons for not using the Internet (2013)



Source: Pew 8

Figure 9
Online adults' reasons for not going online at home



Source: Pew 8

Bottom line: The FCC's tentative conclusion that it should not alter the current Lifeline subsidy is reasonable given that there is no reliable data that would support any particular change in the amount. Keeping the current amount and allowing those who receive the Lifeline subsidy to make their own decision about the best way it can help them be connected, whether voice or broadband, fixed or mobile, is the most consumer-friendly way to fulfill the Telecommunications Act of 1996's goal of achieving universal service.

Making Lifeline more efficient and consumer-friendly

The FCC's FNPRM states that the FCC seeks to make the program more efficient by "targeting support to those low-income consumers who really need it while at the same time shifting the burden of determining consumer eligibility for Lifeline support from the provider. We further seek to leverage efficiencies from other existing federal programs and expand our outreach efforts."³⁸ An effective way to accomplish this goal is to link Lifeline to SNAP for eligibility verification and enrollment.

In 2012, the FCC instituted numerous reforms to reduce waste, fraud, and abuse. As a result, the Lifeline Fund's authorized expenditures fell from \$2.2 billion to \$1.6 billion by 2014 and the number of households subsidized fell from 16.1 million to 12.4 million.³⁹ However, the effort to ensure that only eligible households receive support from Lifeline and that they do not receive duplicative support comes with a very high administrative cost, albeit one that is not carried on Lifeline's books.

While Lifeline's administrative cost on the USAC books is quite low at 0.8% of revenues,⁴⁰ its off-the-books administrative cost is massive. In September 2012, the FCC submitted a Supporting Statement to the Office of Management and Budget (OMB) in which the FCC estimated the annual cost to Lifeline providers and subscribers of collecting the data necessary to administer the program.⁴¹ The FCC calculated that each year providers would spend 15.4 million hours and \$614 million on data-collection for the program, with 95% of that spent on verifying the eligibility of subscribers.⁴² The FCC calculated that subscribers themselves would spend 8.8 million hours, all on verification. The subscriber hours account for filling out forms, but not for the time spent locating and collecting data and delivering the paperwork. Furthermore, the FCC costed out the subscriber hours at \$8.8 million, using a rate of \$1 per hour, a figure that does not attribute full market value to subscribers' time. In other words, the total cost of \$623 million estimated by the FCC attributed very little cost to the enormous amount of time

³⁸ FCC #2, ¶13.

³⁹ USAC, LI08 Q2 2015, LI08 Q3, 2013, LI06 Q2 2015.

⁴⁰ USAC, *Annual Report 2014*, p. 32, cash flow statement for 2013 shows cash paid for administrative costs of \$13.8 million out of cash received from contributors of \$1694.8 million.

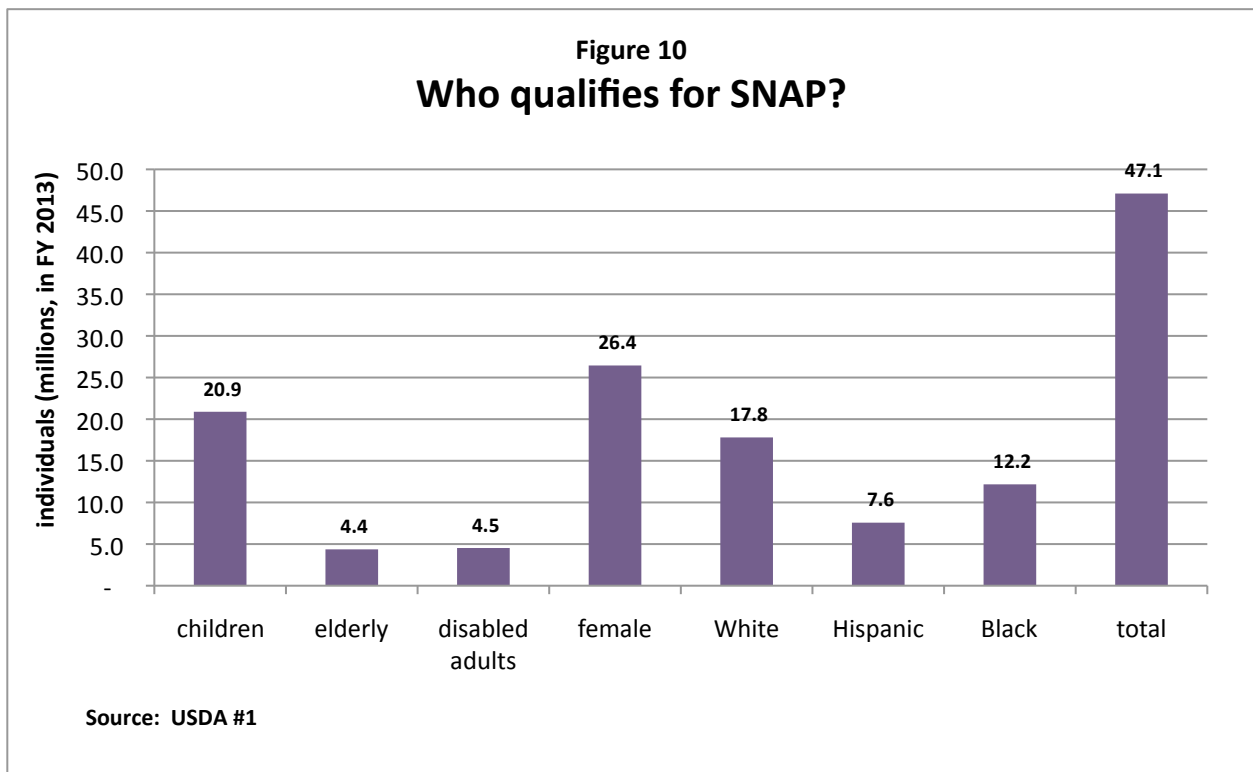
⁴¹ Federal Communications Commission, *Supporting Statement to the Office of Management and Budget*, September 2012, uploaded 11/5/2012, [hereafter referred to as FCC #5].

⁴² FCC #5, pp. 9-16, items 12a-n for the \$614 million, 15.4 million provider hours and 8.8 million subscriber hours. The 95% spent on verifying eligibility includes only 12c and 12d, which are directly related to verification and reverification of eligibility.

subscribers would have to spend on verification of their eligibility. Bottom line, even using the FCC’s figures for both the providers and the subscribers, the program spent \$2.2 billion in 2012 on its books, but had off-the-books administrative costs of \$623 million, almost all of it spent on verifying eligibility.

It is, of course, essential to verify eligibility in order to avoid waste, fraud, and abuse. But to do so in a way that duplicates another agency’s work is also wasteful. As the FCC’s FNPRM indicates, the job of verifying that households have low-income is already being verified by other federal agencies. Most notably, the USDA verifies the eligibility of those households that qualify for SNAP. SNAP not only enrolls those households whose low income qualifies them, but de-enrolls them if their income rises. In other words, SNAP already does the job the FCC duplicates at a cost of roughly \$600 million. Thus, the first argument for relying on SNAP for eligibility verification is that doing so would save roughly \$600 million in wasted administrative effort.

Even more important is that using SNAP to verify and enroll subscribers would help target Lifeline spending to those who need it. At the end of 2014, 12.4 million households participated in Lifeline while 22.7 million households participated in SNAP in FY 2013.⁴³ That implies that many households that need support did not enroll in Lifeline. Linking enrollment and de-enrollment in Lifeline with SNAP would ensure that those who need support get it, for as long as they need it.



⁴³ The most recent number for FY 2014 (as of October 9, 2015) was 22.7 million households. U.S. Department of Agriculture, *Annual Summary of Food and Nutrition Programs (Data as of October 9, 2015)*, [hereafter referred to as USDA #2].

As figure 10 shows, in FY 2013, the SNAP households included 47.1 million individuals: 20.9 million children, 4.4 million seniors, and 5.6 million disabled individuals, of whom 4.5 million are non-elderly adults.⁴⁴ The total number of SNAP participants corresponds closely to the 45.3 million classified by the U.S. Census as living below poverty in 2013.⁴⁵ While SNAP is not perfectly representative of Americans who live below poverty, it comes generally close and its emphasis on children reflects the FCC's interest in reducing the "homework gap." SNAP also allows for multiple households in one dwelling,⁴⁶ thus ensuring that a household that needs support would not be excluded because it shares housing with another eligible household. As households make their way out of poverty, SNAP can also automatically de-enroll them and SNAP can also separately enroll and de-enroll multiple households sharing a dwelling.

In other words, SNAP performs all the verification and enrollment functions Lifeline needs, without the duplicative nearly \$600 million cost. Just as SNAP provides an EBT (debit) card that can be used at any participating grocer, it could provide a card that can be used at any participating communications provider. Lifeline subscribers could then easily change providers and look for the best deal for their needs.

The hundreds of millions of dollars spent by Lifeline providers on duplicating a task that is performed by USDA for SNAP do not benefit Lifeline subscribers. Indeed, the prohibitive unreimbursed cost of participating in the program can only be a deterrent to providers, especially to small providers. Thus, the current method of administering the program tends to reduce competition by discouraging potential providers. It also reduces competition by making it unnecessarily difficult for the Lifeline subscriber to enroll and to change providers.⁴⁷ Changing providers to get a better deal requires that the subscriber undergo the whole verification process again. Dissociating Lifeline-subscriber eligibility verification from the provision of communications by linking Lifeline enrollment to SNAP would not only ensure that the households that need Lifeline receive it, but it would enhance competition and increase consumer choice.

Summary

As the FCC "reboots" the Lifeline program, it has the opportunity to bring it into the Twenty-first Century by adding broadband as a covered service. Because the Internet has become a vital form of

⁴⁴ Kelsey Farson Gray, *Characteristics of Supplemental Nutrition Assistance Program Households: Fiscal Year 2013*, U.S. Department of Agriculture, Food and Nutrition Service, Office of Policy Support, Alexandria, VA, 2014, table 3.5, p. 22 and tables A23 on p. 59, [hereafter referred to as USDA #1]. The SNAP figures for the disabled include 1.1 million children and 4.5 million adults below age 60. For 2013 households, also see USDA #2.

⁴⁵ Carmen DeNavas-Walt and Bernadette D. Proctor, *Income and Poverty in the United States: 2013*, U.S. Census Bureau, Current Population Reports, September 2014, table 3, p. 13, [hereafter referred to as Census #3].

⁴⁶ USDA #1, p. 3.

⁴⁷ The FCC is in the process of instituting a centralized verification database, but that does not eliminate duplication of effort with SNAP nor does it liberate the Lifeline subscriber from the provider in the way that a SNAP-based EBT card would.

communication, it is used by 84% of American adults and 95% of American teens. To be connected and competitive, low-income households need broadband access to the Internet. At the same time, because not all demographic groups are equally comfortable with the Internet and with broadband, ensuring that all Americans remain connected requires that Lifeline subscribers have the option of applying the subsidy to the technology of their choice.

The FCC's tentative conclusion that it should continue the subsidy at its current level of \$9.25 per household (outside tribal lands) is the most reasonable given that there is no reliable data that would support a different level. While the FCC's attempt to gather data about the relationship of pricing and adoption via the broadband pilots was laudable, it resulted in data that was profoundly unreliable and contradictory. More research is needed before any change to the subsidy can be justified.

The FCC could make the program both more efficient and consumer-friendly by linking Lifeline eligibility-verification and Lifeline enrollment to SNAP. That would minimize waste, fraud, and abuse while eliminating duplication of administrative effort that was sized at about \$600 million by the FCC in 2012. It would provide automatic enrollment for low-income households that need Lifeline, and make it easier for them to apply the discount to the technology and provider of their choice. By making it easier for both providers and low-income households to participate in Lifeline, the FCC would also enhance competition.