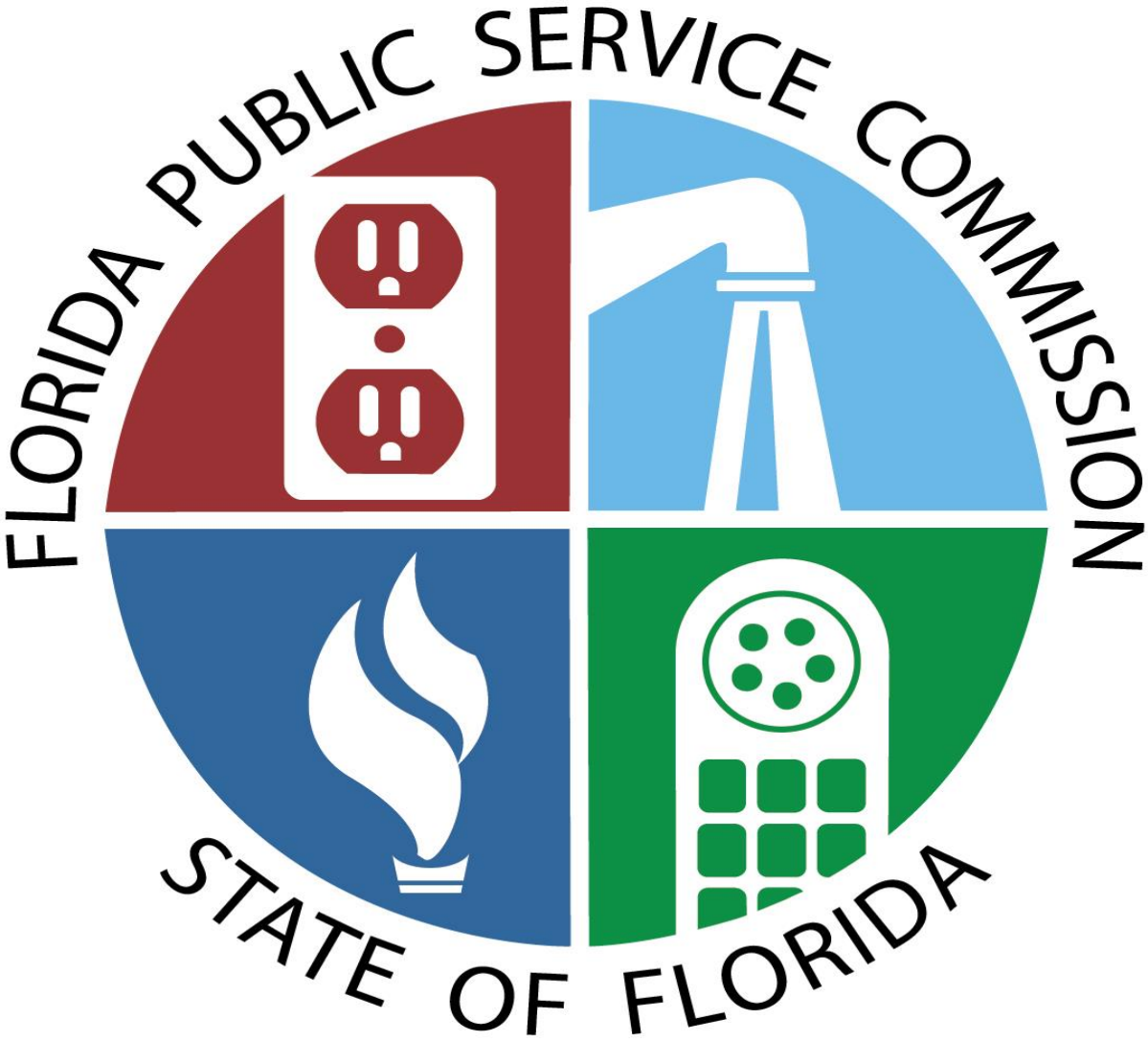
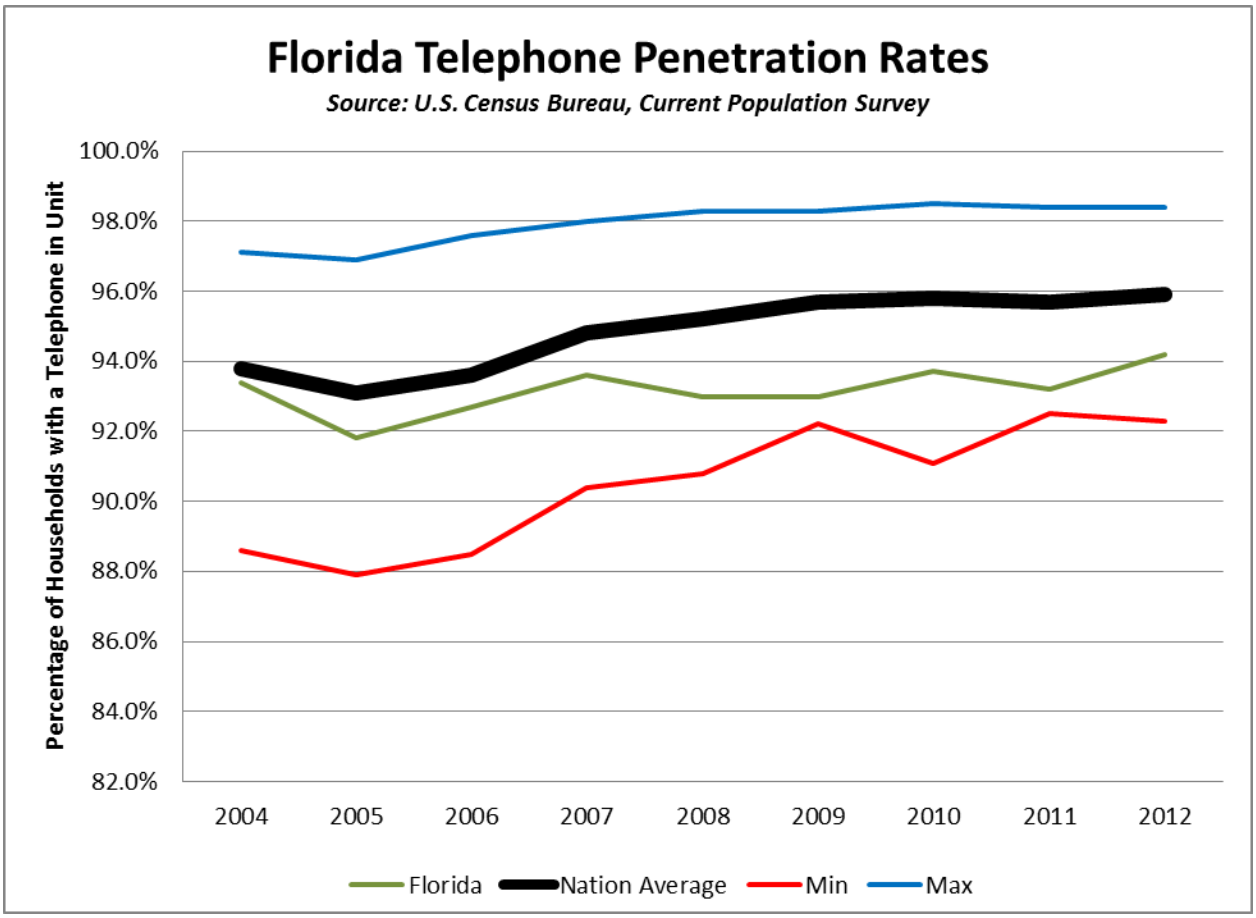
Telephone Subscribership Rates in Florida



Introduction

Telephone subscribership (also referred to as telephone penetration) is the percentage of households that have telephone service. This includes wireline, wireless, or Voice over Internet Protocol (VoIP) services. While it has varied over time among states, the national residential subscribership rate has remained over 90 percent for more than a quarter of a century. Between 2008 and 2012, the national average rate was roughly 96 percent.[1] By comparison, Florida's rate has generally been a little lower than the national average for the last nine years, coming closest to the national average in 2004 (by 0.4 percent). The largest difference during this period was in 2009 with a difference of 2.7 percent. The purpose of this report is to conduct an initial review of factors that may explain the differences between the subscribership rates in Florida relative to other states.



Staff used data from the FCC's 2013 Universal Service Monitoring Report Table 3.7, which measures telephone penetration by state using the U.S. Census Bureau's Current Population Survey (Survey).[2] The Survey monitors demographic trends between decennial

[1] As measured from *U.S. Census Bureau, Current Population Survey*.
[2] Universal Service Monitoring Report 2013, Table 3.7, http://transition.fcc.gov/Bureaus/Common_Carrier/Reports/FCC-State_Link/Monitor/2013_Monitoring_Report.pdf, accessed on January 28, 2014.

censuses. The FCC requested that the Census Bureau include questions on telephone availability as part of its Survey. The telephone availability questions are used to measure the percentage of households with a telephone.[3] According to the Survey, Florida ranked 48th among the states in 2012 with 94.2 percent of Florida households having a telephone compared to 95.9 percent nationwide. **Table 1**, located in the Appendix, lists the Survey telephone subscribership rates for each state and their ranking.

The Current Population Survey is a staggered panel survey in which persons residing at particular addresses are included in the survey for four consecutive months in one year and the same four months in the following year. Use of the Survey has several advantages: it is conducted every month by an independent and expert agency, the sample is large, and the questions are consistent. Although the Survey is conducted every month, not all questions are asked every month. The telephone questions are asked once every four months, in the month that a household is first included in the sample and in the month that the household re-enters the sample a year later. Aggregated summaries of the responses are reported to the FCC in March, July, and November of each year. The Survey data is based on a nationwide sample of about 50,000 to 60,000 households in the 50 states and the District of Columbia.

Methodology

Factors

Since Florida's telephone subscribership rate is below the national average, staff set out to determine what factors may explain the differences between the subscribership rates in Florida relative to other states. Staff identified five factors: immigration, age, income/poverty, race/ethnicity, and education. Immigration and age were chosen because Florida has a larger population of immigrants and residents who are 65 and older than most states. Income/poverty was identified as an influencing factor because the percentage of Florida's population who live in poverty is slightly higher than the national average. Race/ethnicity was chosen after reviewing FCC data that indicated that non-Hispanic White households had higher telephone subscribership rates than non-Hispanic African-American and Hispanic households. Lastly, staff identified education as a factor based on data suggesting that educational attainment was associated with income levels.

Data Analysis

After gathering data on each of the five factors, staff conducted a series of regression analyses to assess the relationship between the 2012 telephone subscribership rates and the various factors.

State Comparison

Seven states, with different subscribership rates, were chosen to compare with Florida. The purpose of selecting specific states to compare was to try to identify unique characteristics

[3] A household consists of all individuals who occupy a housing unit. A house, an apartment or group of rooms, or a single room is regarded as a housing unit when occupied or intended for occupancy as separate living quarters.

within the states that may give some insight on what Florida can do to improve its telephone subscribership rates.

California, Texas, and New York were chosen for because, like Florida these states are highly populated and are in regionally diverse locations. Georgia was chosen because it is a neighboring state to Florida and has a similar subscribership rate. Indiana had the lowest subscribership rate according to the latest Current Population Survey data and was chosen as a result.[4] Finally, Oregon and Maine were chosen due to their relatively high subscribership rates and because they are located in opposite geographical regions.

Variance

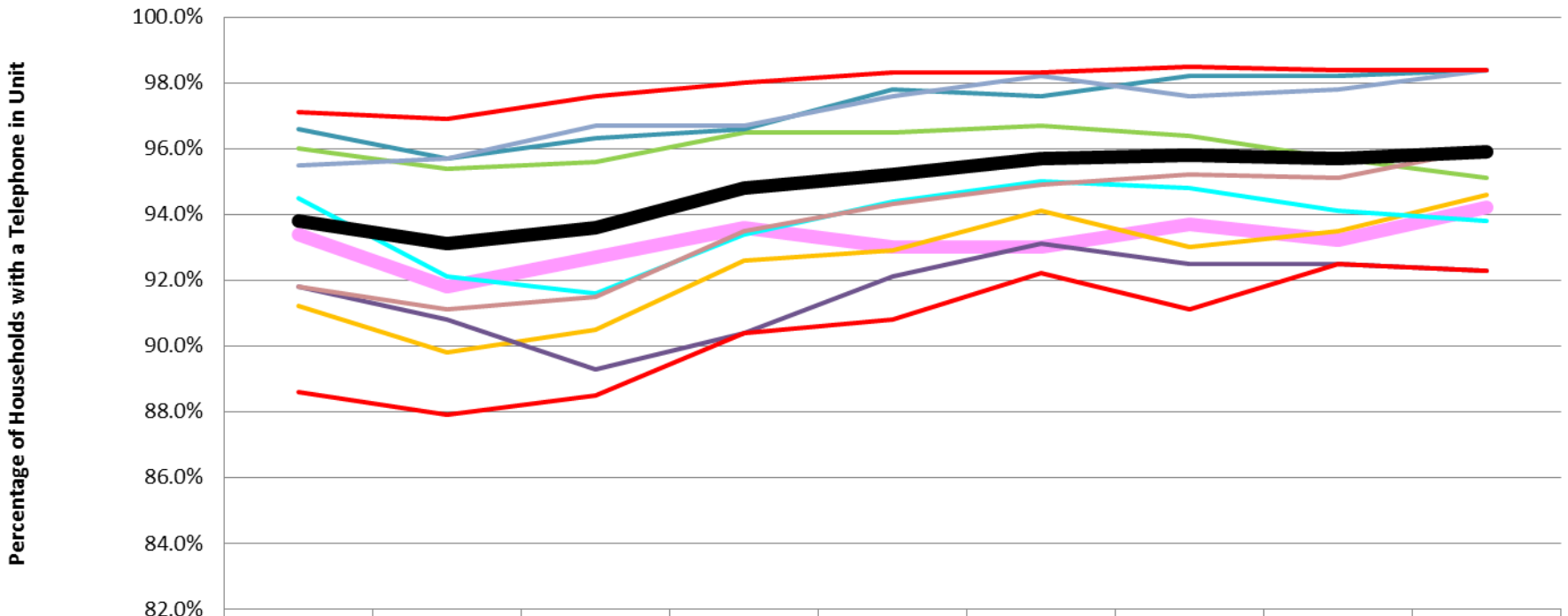
While a diverse group of states was chosen for comparison, it is important to note that the disparity in subscribership rates is relatively small. In 2012, telephone subscribership rates ranged from a low of 92.3 percent to a high of 98.4 percent, a difference of 6.1 percentage points. Maine, along with Oregon, had the highest subscribership rate while Indiana had the lowest.

The following graph, of Telephone Penetration by Selected States tracks the telephone penetration rates from 2004-2012 of the eight states that were compared in this study as well as the national rate. The graph also displays the maximum and minimum penetration rates during the same time period. The telephone penetration rates of the comparison states were all relatively close to the national percentage. This also seems to be the case for most states.

[4] While staff looked at telephone subscribership data from both the ACS and CPS surveys, CPS data was the most current. Therefore, the most current data was used when comparing the states.

Telephone Penetration by Selected States

Source: U.S. Census Bureau, Current Population Survey



	2004	2005	2006	2007	2008	2009	2010	2011	2012
California	96.0%	95.4%	95.6%	96.5%	96.5%	96.7%	96.4%	95.7%	95.1%
Florida	93.4%	91.8%	92.7%	93.6%	93.0%	93.0%	93.7%	93.2%	94.2%
Georgia	91.2%	89.8%	90.5%	92.6%	92.9%	94.1%	93.0%	93.5%	94.6%
Indiana	91.8%	90.8%	89.3%	90.4%	92.1%	93.1%	92.5%	92.5%	92.3%
Maine	96.6%	95.7%	96.3%	96.6%	97.8%	97.6%	98.2%	98.2%	98.4%
New York	94.5%	92.1%	91.6%	93.4%	94.4%	95.0%	94.8%	94.1%	93.8%
Oregon	95.5%	95.7%	96.7%	96.7%	97.6%	98.2%	97.6%	97.8%	98.4%
Texas	91.8%	91.1%	91.5%	93.5%	94.3%	94.9%	95.2%	95.1%	96.0%
Nation Average	93.8%	93.1%	93.6%	94.8%	95.2%	95.7%	95.8%	95.7%	95.9%
Min	88.6%	87.9%	88.5%	90.4%	90.8%	92.2%	91.1%	92.5%	92.3%
Max	97.1%	96.9%	97.6%	98.0%	98.3%	98.3%	98.5%	98.4%	98.4%

Factors

Immigration

According to the latest data available from the Census Bureau, 13 percent of the U.S. population is foreign-born. The Center for Immigration Studies reports that Florida has the fourth largest immigrant population (also referred to as foreign-born persons) in the country. Immigrants in Florida account for 19 percent of Florida's population.

Immigrants in Florida tend to be poorer than native-born residents. This is primarily because many immigrants who come to the U.S. come as adults with relatively low levels of education. Twenty-one percent of Florida immigrants live in poverty compared to 14 percent of natives and their children. Of households headed by foreign-born persons in Florida, 31 percent used at least one major welfare program, primarily food assistance and Medicaid, compared to 20 percent of native-headed households. [5]

After conducting our analyses, staff determined that the percentage of foreign-born persons does slightly affect telephone subscribership rates. Higher immigrant populations often equate to decreased subscribership rates. A more detailed analysis of how immigration affects telephone subscribership rates is discussed in the Data Correlation Section of this report.

Age

In 2012, those 65 and older attributed to 13.7 percent of the U.S. population compared to 13 percent in 2011.[6] However, the 65 and older age group accounted for 18.2 percent of the Florida's population in 2012 and approximately 17.3 percent in 2011. As a result, Florida is one of the top five states with the highest elderly population.[7]

When reviewing the FCC's telephone subscribership data, staff found that the percentage of householders age 55 and older who had telephone services was consistently higher than the national percentage when compared to other age groups. The Telephone Penetration by Age table lists the percentage of households with telephone service by age for the years 2008-2012. Although Florida has a large population of residents who are 65 and older, and this demographic tends to have higher telephone penetration rates, staff was unable to definitively conclude that

[5] U.S. Department of Commerce, United States Census Bureau American Fact Finder, http://factfinder2.census.gov/bkmk/table/1.0/en/ACS/12_5YR/DP02/0400000US12%7C0100000US, access on February 21, 2014, and New Study Examines Florida's Immigrants Poverty and Welfare Usage Higher among Immigrants, http://www.prnewswire.com/news-releases/new-study-examines-floridas-immigrants-poverty-and-welfare-usage-higher-among-immigrants-165388016.html, accessed January 30, 2014.

[6] U.S. Department of Commerce, United States Census Bureau American Fact Finder, http://factfinder2.census.gov/bkmk/table/1.0/en/ACS/12_5YR/DP02/0400000US12%7C0100000US, access on February 21, 2014, and A Profile of Older Americans: 2012, http://www.aoa.gov/Aging_Statistics/Profile/2012/docs/2012profile.pdf, accessed January 30, 2014.

[7] Emily Brandon, *65-and-Older Population Soars*, http://money.usnews.com/money/retirement/articles/2012/01/09/65-and-older-population-soars, accessed January 30, 2014.

age had an effect on telephone subscribership in Florida. When tested, age was not a statistically significant factor even at the 90 percent confidence interval.

Telephone Penetration by Age[8]					
Householder Age	**2008**	**2009**	**2010**	**2011**	**2012**
15 - 24	90.8	92.0	93.5	93.4	94.1
25 - 54	94.8	95.2	95.5	95.5	95.7
55 - 59	96.0	96.6	96.6	95.9	96.2
60 - 64	96.5	97.0	96.2	96.4	96.4
65 - 69	96.5	97.2	96.8	96.6	96.9
70 - 99	96.6	96.9	96.7	96.5	96.4
Total US %	95.2	95.7	95.8	95.7	95.9

Source: U.S. Census Bureau, Current Population Survey. Note that 2009 to 2011 values are annual averages.

Income/Poverty

In 2012, the percentage of Florida's population in poverty was 17.1 percent, compared to 15.9 percent nationally.[9] The FCC's 2012 Universal Service Monitoring Report lists telephone penetration rates by state and income.[10] This information is found in **Table 2** in the Appendix. According to the FCC, in 2012 the telephone penetration rate in Florida for low income households with an annual income of $9,999 or less was 90.9 percent. The national telephone penetration rate for the same group was 92 percent. This is in contrast to the overall nationwide penetration rate of 95.9 percent.

Staff's analysis, discussed in the Data Correlations section, indicates that income is a statistically significant factor for explaining fluctuations in telephone penetration rates. More specifically, higher poverty levels tend to lead to lower telephone subscribership rates. A Pennsylvania study conducted in 2003 for the Council for Utility Choice seems to support staff's conclusion.

In the 2003 Pennsylvania report, *Understanding Telephone Penetration in Pennsylvania*, the data suggested that impoverished households in Pennsylvania were six times more likely than

[8] Universal Service Monitoring Report 2011, Table 3.5, http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-311775A1.pdf, and Universal Service Monitoring Report 2013, Table 3.5, http://transition.fcc.gov/Bureaus/Common_Carrier/Reports/FCC-State_Link/Monitor/2013_Monitoring_Report.pdf, accessed January 28, 2013.
[9] Alemayehu Bishaw, U.S. Census Bureau, Poverty: 2000 to 2012 American Community Briefs (issued September 2013), http://www.census.gov/prod/2013pubs/acsbr12-01.pdf, accessed February 22, 2014.
[10] Universal Service Monitoring Report 2013, Table 3.8, http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-319744A1.pdf, accessed January 28, 2013

affluent households to lack telephone service.[11] The report also indicated that impoverished property renters were 13 times more likely than impoverished property owners to lack telephone service. The study further pointed out that penetration rates were lower in specific census tracts or communities where clusters of individuals living in poverty resided and higher among individuals below the poverty level that resided outside of these communities.

While the Pennsylvania study was focused on identifying and understanding households within Pennsylvania that lacked telephone service, the authors of the report drew the same conclusion as staff. Low-income levels are related to low telephone penetration rates. The Pennsylvania study further suggested that other factors may be relevant beyond poverty such as: demographics, cultural/ethnic, and ownership of property.

Lifeline and Link-Up

Lifeline and Link-Up are national programs that were specifically designed by the FCC to increase subscribership in low-income households. There is data available that suggests subscribership would be lower for low-income households absent these programs. Data presented in the 2011 report, *Low-Income Demand for Local Telephone Service: Effects on Lifeline and Linkup* [*sic*], suggests that telephone penetration rates would be 4.7 percentage points lower without these policies.[12] The data further suggests that Link-Up is more cost-effective than Lifeline and that Lifeline automatic enrollment policies are important. Staff notes that after this report was published, in 2012 the FCC adopted the Lifeline Reform Order (FCC 12-11) which largely discontinued the Link-Up program.[13]

The FCC's 2010 penetration report shows that between 1985 and 2009, penetration rates among low-income households grew from 80.0 percent to 90.4 percent. The report also points out that states that provided a high level of Lifeline support ($3.00 or more in state support) experienced an average growth in penetration of 4.6 percent for low-income households from March 1997 to March 2009. In contrast, states that provided a low level of Lifeline support (less than $0.50 in state support) experienced an average growth of 2.9 percent in telephone penetration rates for low-income households during the same time period.[14]

Along with Lifeline support levels, a state's Lifeline participation rate will affect the program's influence on subscribership; the Lifeline program cannot help eligible households that do not subscribe to it. The Universal Service Administrative Company's latest annual estimates show one state below 10 percent participation, 15 states between 10 and 20 percent, 20 states

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[11] Understanding Telephone Penetration in Pennsylvania, A Report Prepared for the Council for Utility Choice February 2003, http://www.publicutilityhome.com/speeches/Telephone%20Penetration%20Pa.pdf, accessed January 28, 2014.

[12] Low-Income Demand for Local Telephone Service: Effects on Lifeline and Linkup [*sic*], http://www.columbia.edu/~mhr21/papers/ARRW.pdf, accessed January 28, 2014.

[13] Lifeline Reform Order, FCC 12-11, http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-12-11A1.pdf, accessed April 4, 2014.

[14] Telephone Penetration by Income by State, Industry Analysis and Technology Division, Wireline Competition Bureau, Federal Communications Commission, http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-297986A1.pdf, accessed February 21, 2014.

(including Florida) between 20 and 50 percent, and 14 states above 50 percent.[15] More precisely, the Florida Public Service Commission's 2013 Lifeline Report shows that in June 2013 Florida had 918,245 participants enrolled in the Lifeline Program, representing a 47 percent participation rate.[16]

Race/Ethnicity

According to a Florida Population Study published in 2013, the three largest racial/ethnic groups in Florida are non-Hispanic Whites, non-Hispanic African-Americans, and Hispanics.[17] These three groups account for approximately 97 percent of Florida's population.[18] According to the FCC's Universal Service Monitoring Report, in 2012 the telephone subscribership rate for non-Hispanic White households was 96.4 percent, compared to the national percentage of 95.9. The telephone subscribership rates for non-Hispanic African-American households and Hispanic households were 93.2 percent and 93.1 percent, respectively.

Based on the FCC's data, it appears that African-American and Hispanic households typically have lower telephone penetration rates than Whites. The chart below shows the telephone penetration rates by race/ethnicity for the years 2008 through 2012. Although African-American and Hispanic households have lower telephone penetration rates than White households, no data was found to suggest that this trend goes beyond high poverty levels. African-American and Hispanic households with higher incomes tend to have similar telephone penetration rates as higher income White households.

Telephone Penetration by Race/Ethnicity[19]

Householder Race	2008	2009	2010	2011	2012
White	95.9	96.3	96.4	96.3	96.4
African-American	91.0	92.1	92.7	92.5	93.2
Hispanic	91.7	92.6	93.1	92.7	93.1
Total US %	95.2	95.7	95.8	95.7	95.9

Source: U.S. Census Bureau, Current Population Survey. Note that 2009 to 2011 values are annual averages.

[15] 2011 Lifeline Program Participation Rate Data, http://www.usac.org/li/about/getting-started/participation-rate.aspx, accessed February 21, 2014.
[16] Florida Lifeline Assistance: Number of Customers Subscribing to Lifeline Service and the Effectiveness of Procedures to Promote Participation, December 2013, http://www.floridapsc.com/publications/pdf/telecomm/tele-lifelinereport2013.pdf, accessed February 22, 2014.
[17] Stanley K. Smith and Stefan Rayer, Florida Population Studies Bulletin 166, June 2013, Population Projections by Age, Sex, Race, and Hispanic origin, for Florida and its Counties, 2015-2040, with Estimates for 2012, https://www.documentcloud.org/documents/811046-florida-race-projection-report-by-bebr-2013.html, access on February 22, 2014.
[18] This percentage is based on 2010 census data.
[19] Universal Service Monitoring Report 2011, Table 3.5, http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-311775A1.pdf, and Universal Service Monitoring Report 2013, Table 3.5, http://transition.fcc.gov/Bureaus/Common_Carrier/Reports/FCC-State_Link/Monitor/2013_Monitoring_Report.pdf, accessed January 28, 2013.

Education

According to the U.S. Census Bureau, 85.8 percent of the Florida population age 25 and older obtained a high school diploma or higher during 2008-2012, compared to 85.7 percent nationally.[20] The Education Week's 2014 Quality Counts Report indicated that Florida has a 79.9 percent high school graduation rate.[21] The National Center for Education Statistics reported that higher educational attainment is associated with higher median earnings. This tends to be the case across gender and selected racial/ethnic subgroups (White, African-American, Hispanic, and Asian).[22]

Based on the data collected regarding education, it would appear that education, alone, would have an affect on telephone penetration rates since more educated people tend to have higher incomes. However, staff determined that education was not a statistically significant factor. As mentioned earlier, income is a better predictor of subscribership rates.

State Comparisons

The following chart (State Comparison Chart), gives an overview of how Florida measures when compared to the seven states (California, Texas, New York, Georgia, Indiana, Oregon, and Maine) that were chosen for comparison in this study. The chart lists data for some of the factors that we looked at, such as income, age, education, and immigration/U.S. citizenship status. Additional data regarding available telephone service for various household types and occupied housing units is also listed. The information listed in the chart was obtained from the U.S. Census Bureau's American Community Survey.

When compared to the other states, Florida had the lowest median household income ($47,309) for 2008-2012 and largest number of Supplemental Nutrition Assistance Program (SNAP) recipients for the 2012 fiscal year. With 18.2 percent of its residents age 65 and older, Florida had the highest percentage of elderly residents followed by Maine with 17 percent. Also, 3 percent of Florida's occupied housing units do not have telephone service available. Georgia, at 3.5 percent was the only state that had a higher percentage of occupied housing units without an available telephone.

[20] U.S. Department of Commerce, United States Census Bureau American Fact Finder, http://factfinder2.census.gov/bkmk/table/1.0/en/ACS/12_5YR/DP02/0400000US12%7C0100000US, accessed on February 21, 2014.
[21] Thomas C. Frohlich and Michael B. Sauter, States with the Best (and Worst) Schools, 24/7 Wall St, January 14, 2014, http://247wallst.com/special-report/2014/01/14/states-with-the-best-and-worst-schools-2/2/, accessed February 21, 2014.
[22] National Center for Education Statistics, Annual Earnings of Young Adults (Updated May 2013), http://nces.ed.gov/programs/coe/indicator_cba.asp, accessed February 21, 2014.

State Comparison Chart								
	Florida	California	Georgia	Indiana	Maine	New York	Oregon	Texas
Occupied Housing Units	7,147,013	12,466,331	3,508,477	2,478,846	553,208	7,230,896	1,512,718	8,782,598
No Telephone Service Available	213,065	241,513	122,090	74,995	10,268	194,437	35,792	229,360
Percentage with no telephone service available	3.0%	1.9%	3.5%	3.0%	1.9%	2.7%	2.4%	2.6%
Income								
Median Household Income	$47,309	$61,400	$49,604	$48,374	$48,219	$57,683	$50,036	$51,563
Persons below poverty level, percent 2008-2012	15.6%	15.3%	17.4%	14.7%	13.3%	14.9%	15.5%	17.4%
Per capita money income in last 12 months (2012 dollars), 2008-2012	$26,451	$29,551	$25,309	$24,558	$26,464	$32,104	$26,702	$25,809
SNAP Recipients (FY 2012)	1,825,813	1,779,241	879,493	401,415	131,153	1,650,099	447,338	1,666,362
Lifeline Recipients (2012)	1,024,344	1,528,001	1,063,435	171,886	107,412	1,231,226	59,686	902,133
Percentage of SNAP recipients receiving LifeLine	56.1%	85.9%	100.0%	42.8%	81.9%	74.6%	13.3%	54.1%
U.S. Citizenship Status								
Population in Households	18,461,796	36,504,565.00	9,455,567.00	6,298,088.00	1,293,440.00	18,810,163.00	3,750,575.00	24,625,722.00
Foreign Born	19.7%	27.7%	9.9%	4.7%	3.4%	22.7%	10.0%	16.7%
Naturalized U.S. Citizen	9.7%	12.8%	3.6%	1.7%	1.9%	11.9%	3.8%	5.5%
Not a U.S. Citizen	10.0%	14.9%	6.3%	3.1%	1.5%	10.8%	6.3%	11.2%
Age								
Persons under 18 years, percent, 2012	20.70%	24.30%	25.10%	24.30%	20.00%	21.80%	22.10%	26.80%
Persons 65 years and over, percent, 2012	18.20%	12.10%	11.50%	13.60%	17.00%	14.10%	14.90%	10.90%
Education								
High school graduate or higher, percent of persons age 25+, 2008-2012	85.80%	81.00%	84.40%	87.00%	90.60%	84.90%	89.20%	80.80%
Bachelor's degree or higher, percent of persons age 25+, 2008-2012	26.20%	30.50%	27.80%	23.00%	27.30%	32.80%	29.20%	26.30%
Households								
Total Households	7,147,013	12,466,331	3,508,477	2,478,846	553,208	7,230,896	1,512,718	8,782,598
Owner Occupied Households	4,865,400	6,978,397	2,315,287	1,749,798	398,593	3,940,688	945,824	5,609,007
Owner Occupied, No Telephone Service Available	81,784	62,097	45,557	33,654	4,502	44,112	12,615	88,694
Owner Occupied, No Telephone Service Available Percentage	1.7%	0.9%	2.0%	1.9%	1.1%	1.1%	1.3%	1.6%
Renter Occupied Households	2,281,613	5,487,934	1,193,190	729,048	154,615	3,290,208	566,894	3,173,591
Renter Occupied, No Telephone Service Available	131,281	179,416	76,533	41,341	5,766	150,325	23,177	140,666
Renter Occupied, No Telephone Service Available Percentage	5.8%	3.3%	6.4%	5.7%	3.7%	4.6%	4.1%	4.4%

Source: U.S. Census Bureau, American Community Survey.

Data Correlations

Staff conducted several regression analyses to evaluate the relationship between the 2012 subscribership rates and a number of variables to examine their difference between states. The model developed does not control for price of telephone services, and thus the regression results must be interpreted cautiously. The regression equation can be interpreted as capturing the effect of demand shifts on telephone subscribership only if demand is price inelastic. Of the variables tested, only the percent of persons below the poverty level (2008-2012), and percent of foreign born persons (2008-2012) were statistically significant at the 95 percent confidence interval. Variations in these variables explain about 32 percent of the variation among the states for 2012.

The resulting model suggests that a 1 percent increase in a state's poverty level results in a corresponding decrease in subscribership of .276 percent. By comparison, a 1 percent increase of foreign-born persons in a state results in a corresponding decrease in subscribership of .067 percent. Since the percent of Florida's population in poverty (15.6 percent for 2008-2012) and foreign-born (19.3 percent for 2008-2012) exceeds the national average (14.9 and 12.9 percent, respectively), it is not surprising to see Florida's subscribership level below that of the national average. Conversely, if Florida's population characteristics for these variables matched the

national rate, the model predicts that Florida's 2012 telephone penetration rate would have been 96 percent compared to the national average of 95.9 percent.

The following variables were also tested; however, none of these variables were statistically significant even at the 90 percent confidence interval.

Education

- High school graduate or higher, percent of persons age 25 and older, 2008-2012
- Bachelor's degree or higher, percent of persons age 25 and older, 2008-2012

Demographic

- Female persons, percent, 2012
- Hispanic or Latino, percent, 2012 (b)
- Black or African-American alone, percent, 2012 (a)
- White alone, percent, 2012 (a)
- Persons 65 years and over, percent, 2012
- Persons under 18 years, percent, 2012
- Persons under 5 years, percent, 2012

Income

- Per capita money income in past 12 months (2012 dollars), 2008-2012
- Median household income, 2008-2012

Federal Policy

- USF Lifeline Only Claims per Capita
- USF Low Income per Capita

State Policy

- Presence of a State Funded Lifeline Program (i.e., yes/no)
- State Funded Lifeline Program per capita[23]

Household

- Living in same house one year & over, percent, 2008-2012
- Mean travel time to work (minutes), workers age 16 and older, 2008-2012
- Homeownership rate, 2008-2012
- Persons per household, 2008-2012
- Percent of population 18 and older in Shared households (2011)

Weather Variables

- Average number of Snow Days
- Annual Inches of Snow
- Average Temp (F°)

[23] Three states were removed from the population due to suspect or missing data. Those states were: Nevada, Texas, & Utah.

- Annual Precipitation (inches)
- Temp squared
- Precipitation squared
- Temp x Precipitation

Conclusion

In this study, staff reviewed several factors that may explain the differences between the telephone subscribership rates in Florida relative to other states. Staff identified and researched five main factors: immigration, age, income/poverty, race/ethnicity, and education. After conducting our research, staff ran a series of regression analyses to evaluate the relationship between telephone subscribership rates and the chosen variables.

Based upon the initial review of available data, it appeared that age influenced telephone subscribership rates. For instance, the FCC's telephone penetration data indicated that those 65 and older had higher telephone penetration rates than other age groups. The FCC's data further suggested that race and having a low-income adversely affected subscribership rates. There was also data found from other sources that indicated that citizenship status negatively affected subscribership rates.

While telephone penetration rates vary among demographics, staff determined that, among the factors that were reviewed in this study, only citizenship status (immigration) and income were statistically significant factors for explaining differences in telephone subscribership rates. The results of staff's regression analyses suggest that, at a 95 percent confidence interval, the percentage of persons below the poverty level and the percentage of foreign-born persons explains about 32 percent of the variation of telephone penetration rates among the states for 2012.

What this means is that a 1 percent increase in the poverty level would result in a corresponding decrease of .276 percent of the telephone penetration rate. A 1 percent increase in the population of immigrants would result in a .067 percent decrease in the penetration rate. In Florida, the percentage of the population in poverty and the percentage who are immigrants is well above the national percentage. This may explain, in part, why Florida's telephone subscribership rates trail the national average. The results of staff's analyses further support this.

Telephone subscribership rates vary each year. However, if Florida's population characteristics for poverty and immigration matched the national rate, the model predicts telephone subscribership rates closer to the national average. More specifically, if Florida's population characteristics for these variables mirrored the national average in 2012, the model predicted that Florida's 2012 telephone subscribership rate would have been 96 percent compared to the national average of 95.9 percent.

In addition, telephone subscribership rates are likely higher as a result of the Lifeline program. Continued emphasis on Florida's Lifeline participation rate is one variable that should continue to have a positive impact on Florida's telephone subscribership rate relative to the national average.

Appendix

Table 1
Telephone Penetration by State, 2008-2012
(Percentage of Households with a Telephone in Unit)

State	2008	2009	2010	2011	2012	2012 Ranking
Alabama	94.0 %	95.2 %	95.2 %	96.2 %	96.4 %	30
Alaska	96.4	96.2	97.1	96.2	96.7	28
Arizona	94.6	93.7	95.2	95.6	95.5	38
Arkansas	92.9	93.0	93.4	95.2	96.0	34
California	96.5	96.7	96.4	95.7	95.1	40
Colorado	98.0	97.4	97.7	97.3	98.1	5
Connecticut	97.1	97.7	97.9	97.8	98.1	8
Delaware	94.7	95.9	97.4	97.2	97.4	16
District of Columbia	92.0	92.2	91.1	93.1	95.1	41
Florida	**93.0**	**93.0**	**93.7**	**93.2**	**94.2**	**48**
Georgia	92.9	94.1	93.0	93.5	94.6	44
Hawaii	96.5	97.7	95.7	94.9	95.9	35
Idaho	96.0	97.0	97.9	95.9	96.8	27
Illinois	94.1	95.1	95.2	95.3	94.6	45
Indiana	92.1	93.1	92.5	92.5	92.3	51
Iowa	97.4	98.1	97.7	98.2	98.0	10
Kansas	96.4	96.8	97.5	97.9	97.0	22
Kentucky	94.1	93.7	95.0	94.8	94.8	42
Louisiana	95.7	95.9	96.5	97.9	96.9	24
Maine	97.8	97.6	98.2	98.2	98.4	1
Maryland	94.7	95.4	96.2	95.8	97.4	17
Massachusetts	96.4	98.2	97.6	97.5	98.3	3
Michigan	96.0	96.7	96.8	97.2	97.3	18
Minnesota	98.2	97.8	98.5	97.8	98.2	4
Mississippi	92.7	94.0	96.0	95.6	95.6	37
Missouri	96.8	96.3	96.1	96.4	97.2	20
Montana	94.5	93.3	94.9	95.5	94.7	43
Nebraska	94.7	95.7	95.6	97.5	97.7	13
Nevada	94.0	94.3	96.6	97.3	96.8	26
New Hampshire	97.7	98.3	98.2	98.1	98.1	6
New Jersey	94.8	95.6	95.9	95.4	96.3	31
New Mexico	92.6	92.8	92.4	92.9	94.4	46
New York	94.4	95.0	94.8	94.1	93.8	49
North Carolina	93.5	94.9	95.5	96.0	96.9	23
North Dakota	98.3	98.1	98.5	98.2	97.5	15
Ohio	96.9	97.1	96.7	96.6	96.6	29
Oklahoma	95.3	96.6	95.7	95.8	95.6	36
Oregon	97.6	98.2	97.6	97.8	98.4	2
Pennsylvania	97.9	98.0	98.2	97.8	98.1	7
Rhode Island	96.4	96.6	97.2	97.4	97.2	21
South Carolina	90.8	93.9	94.3	95.4	96.2	32
South Dakota	96.8	97.1	97.8	97.7	97.3	19
Tennessee	93.0	93.2	92.2	92.8	93.3	50
Texas	94.3	94.9	95.2	95.1	96.0	33
Utah	96.9	96.5	96.7	97.1	98.0	11
Vermont	97.0	98.1	98.1	98.1	97.7	14
Virginia	95.7	96.0	95.3	95.4	95.5	39
Washington	98.1	98.2	98.1	98.4	98.0	9
West Virginia	94.5	95.3	96.2	95.9	94.4	47
Wisconsin	97.2	97.3	98.3	97.1	96.8	25
Wyoming	95.8	97.2	97.3	97.7	97.9	12
Total United States	95.2 %	95.7 %	95.8 %	95.7 %	95.9 %	95.9

Source: U.S. Census Bureau, Current Population Survey.

Appendix

Table 2
Household Telephone Penetration by State and Income, 2012

State	$9,999 or Less	$10,000 to $19,999	$19,999 to $29,999	$30,000 to $39,999	$40,000 or More	All Households
Alabama	92.4 %	95.1 %	96.4 %	99.2 %	99.3 %	95.9 %
Alaska	93.7	94.3	97.5	99.2	98.0	96.5
Arizona	85.5	96.6	99.3	98.9	99.8	95.6
Arkansas	91.2	97.0	97.7	96.3	97.5	95.5
California	92.5	94.6	96.9	96.9	98.4	95.9
Colorado	94.6	96.9	98.1	99.5	99.8	97.9
Connecticut	95.2	99.5	97.6	98.2	99.6	98.3
Delaware	97.1	96.5	97.7	98.5	98.5	97.6
District of Columbia	92.1	96.7	97.7	96.0	96.0	95.4
Florida	**90.9**	**93.9**	**94.7**	**97.5**	**93.8**	**93.7**
Georgia	89.3	92.4	93.7	99.5	97.4	93.7
Hawaii	92.1	91.5	97.4	94.5	99.3	95.4
Idaho	93.9	96.3	98.1	97.1	99.7	97.0
Illinois	91.0	94.1	94.7	96.4	97.7	94.7
Indiana	89.2	91.0	94.2	95.6	97.1	92.9
Iowa	95.5	97.1	98.2	99.6	98.7	97.7
Kansas	92.9	97.1	99.3	98.2	99.7	97.2
Kentucky	90.2	95.6	96.7	98.0	99.2	95.2
Louisiana	93.4	97.3	98.4	98.3	97.7	96.5
Maine	97.4	98.6	99.1	97.9	99.1	98.5
Maryland	93.3	96.3	93.8	99.0	99.1	96.9
Massachusetts	93.7	97.1	99.6	100.0	98.8	97.8
Michigan	93.5	96.2	98.9	100.0	98.8	97.1
Minnesota	92.4	97.0	98.7	99.1	100.0	97.6
Mississippi	94.5	97.0	97.4	96.0	99.4	96.7
Missouri	93.0	97.2	98.6	98.4	98.9	96.8
Montana	91.5	93.3	97.4	96.0	98.2	94.7
Nebraska	96.1	97.5	97.7	99.2	98.3	97.7
Nevada	94.3	94.9	98.8	97.4	98.5	96.5
New Hampshire	93.9	96.4	97.9	99.6	99.7	97.9
New Jersey	93.0	96.1	97.8	96.5	98.8	96.9
New Mexico	91.3	90.2	91.9	97.0	98.5	93.2
New York	89.1	92.0	94.8	97.0	96.9	93.6
North Carolina	94.0	97.2	98.9	98.9	99.8	97.5
North Dakota	94.9	97.7	98.3	100.0	98.1	97.7
Ohio	92.0	96.3	97.4	97.4	99.4	96.2
Oklahoma	97.9	96.6	95.9	96.0	97.4	96.9
Oregon	97.1	98.6	99.3	100.0	99.5	98.9
Pennsylvania	96.9	98.7	99.4	98.5	99.6	98.6
Rhode Island	92.2	96.7	97.2	99.5	98.5	96.4
South Carolina	90.5	95.8	97.7	96.2	98.9	95.2
South Dakota	93.9	97.6	98.9	99.6	99.4	97.6
Tennessee	84.6	93.0	92.6	91.1	94.9	90.8
Texas	92.0	95.5	97.0	97.6	97.8	95.8
Utah	98.4	97.3	98.4	99.4	97.9	98.1
Vermont	94.9	97.1	99.7	98.3	98.9	97.8
Virginia	89.1	95.0	99.0	99.2	99.2	96.6
Washington	95.6	95.9	98.5	98.9	99.2	97.7
West Virginia	91.6	93.9	95.4	98.0	96.1	94.4
Wisconsin	90.5	94.3	99.0	98.8	98.6	96.1
Wyoming	95.2	98.2	97.7	100.0	100.0	98.2
United States	92.0 %	95.3 %	96.9 %	97.8 %	98.3 %	95.9 %

Source: U.S. Census Bureau, Current Population Survey (March CPS Supplement).