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Broadband Adoption in Illinois

Jonathan A. Cape
Southern Illinois University Carbondale, cape@siu.edu

BROADBAND ADOPTION IN ILLINOIS

by

Jonathan A. Cape

B.S., Western Illinois University, 2003

A Research Paper
Submitted in Partial Fulfillment of the Requirements for the
Masters of Science Degree.

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RESEARCH PAPER APPROVAL

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Approved by:

Ira A. Altman, PhD

Graduate School
Southern Illinois University Carbondale
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This research paper discusses broadband demographic factors which may affect adoption in Illinois. Primary data was collected by the PEW Internet & American Life Project, which has made multiple data sets available for public use. Calculations were conducted to specifically analyze Illinois broadband adoption by demographic variables of income, ethnicity/race, education, gender, and age.

Analysis confirmed previous studies showing similar demographic factors affecting adoption of broadband apply to Illinois. The most prevalent factor in determining adoption is education. This study shows 90% of Illinois residents who have a college degree or higher adopts broadband. Income results are in line with previous studies in which households with earnings of $20,000 to $40,000 are significant as a predictor of non-adoption, and 64% are non-adopters. Gender was determined to be a predictor of broadband adoption which was not in line with other studies.

The author of this paper has no connection to the entities mentioned herein.

ACKNOWLEDGEMENTS

I would first like to express gratitude to my wife, Nadine, and daughter, Annabelle, for all the support during the completion of this research. There have been many late nights and time spent away from them. Without their unwavering support, this research could not have been completed. I would also like to thank Dr. Altman for sharing his tremendous knowledge and offering guidance throughout this entire project. Finally, I would like to thank my friends and the professors of the Agribusiness Economics Department for their insight into the systems and processes that made this project go smoothly.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER 1

INTRODUCTION

Broadband Internet connectivity throughout the United States is priority of the Government as stated by the Federal Communications Commission. There have been advancements beginning with the Telecommunications Act of 1996 and the American Reinvestment and Recovery Act of 2009, (ARRA). The ARRA provided $7.2 billion in governmental funding for the expansion of broadband throughout the United States. With difficult economic times at hand there have been multiple organizations focusing on the expansion of broadband internet connectivity. This has been the case within the State of Illinois. Figure 1 shows broadband availability throughout the State. The southern and western regions of Illinois are still on the fringe compared to the rest of the state.

The "digital divide" has impacted the adoption of broadband throughout the United States. The digital divide was initiated to explain the gap in internet access identified by the National Telecommunication and Information Administration (NTIA). (Robinson, DiMaggio and Hargittai 2003) The digital divide occurs when a significant portion of a minority population has effectively been denied a technology which has become a necessity today. For broadband to continue to gain momentum and expand the knowledge of the general population, we must determine what factors influence the adoption of broadband in Illinois.

This study begins with a literature review to identify socio-economic variables and formulate hypotheses. The next chapter discusses the various connection types as well as current programs aiding in broadband adoption. Chapter four explains the research methodology utilized, which includes an explanation of the survey used. The results are then presented and

discussed. Chapter five discussed different barriers that may influence broadband adoption. Finally, recommendations are made, using the findings of this research.

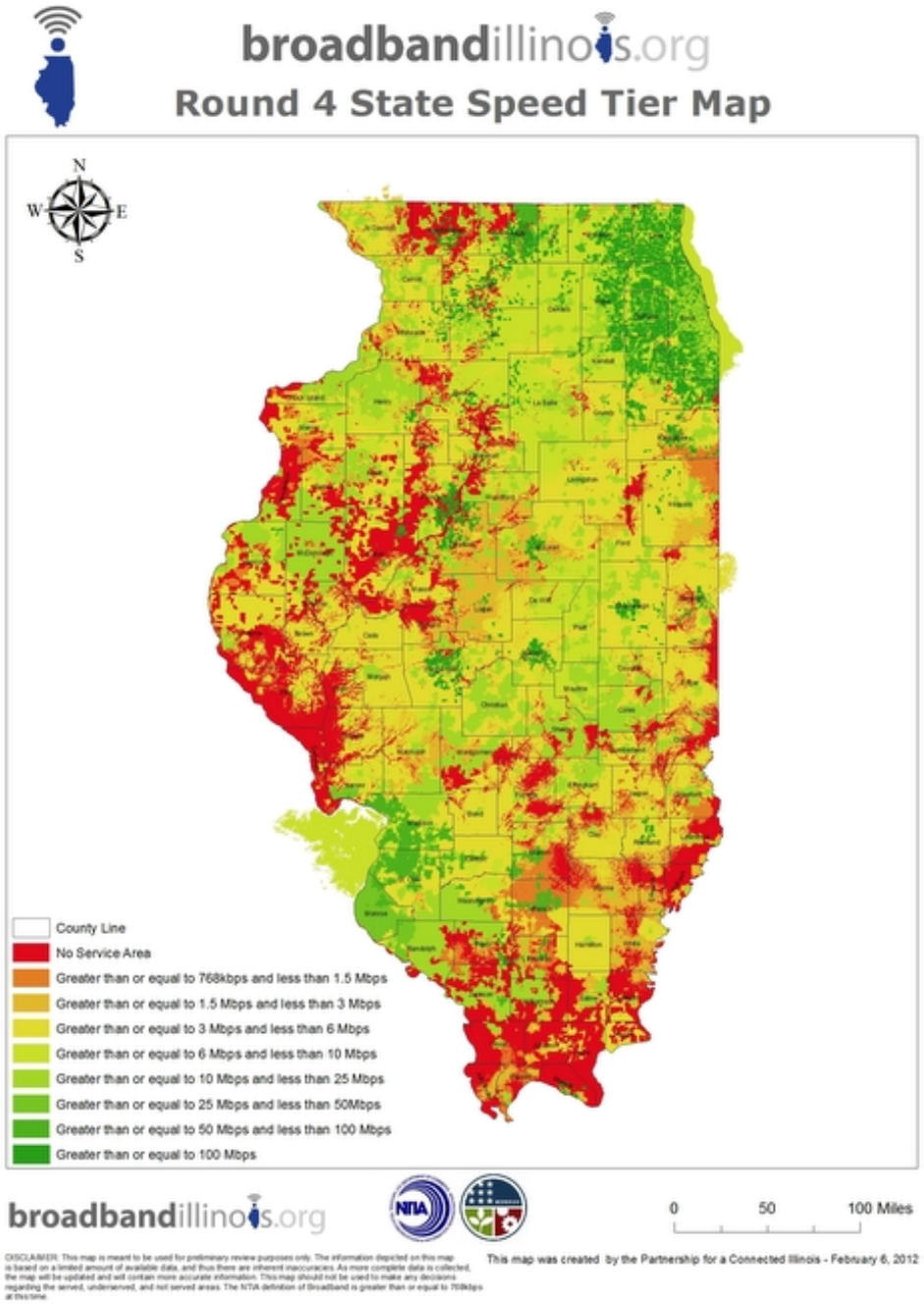

Figure 1 State Speed Map Source: Broadbandillinois.org

CHAPTER 2

LITERATURE REVIEW

The demand for broadband has not increased as anticipated despite expanding access and decreasing prices. Researchers suggest broadband adoption is more constrained by demand than supply (Dwivedi 2008, Howick and Whalley 2008). To encourage widespread adoption and reduce the digital divide, it is necessary to focus on understanding the factors that influence the consumer's decision on a household level.

The Pew Internet & American Life Project has conducted multiple survey studies showing dial-up users are less attracted to broadband adoption because they are older, have lower income, are less educated, or are more apathetic about internet use. August 2011 survey conducted by Pew shows that 78% of all Americans use the internet; down slightly from 79% in May 2010. During the Pew survey it was asked, what the main reason adults do not use the internet, 31% were just not interested, 12% did not have a computer, 10% thought it was too expensive; and 9% thought it was too difficult. Trend data (pertaining to broadband versus dial-up) compiled by Pew shows since 2000, the adoption of broadband was at its highest in May 2011 at 66% while, in August 2011, dial-up use declined to 3%.

The digital divide with respect to race and ethnicity is narrowing but is still present. As stated by John Horrigan, "Between 2000 and 2010 the proportion of internet users who are black or Latino has nearly doubled – from 11% to 21%. At the same time, African-Americans remain somewhat less likely than whites to go online."

When looking at the digital divide with respect to annual income Pew claims, 87% of U.S. households who earn incomes $75,000 or more have broadband access at home; versus 40%

of households who earn less than $30,000 per year.

Yogesh Kumar Dwivedi and Banita Lal discussed factors at the consumer level that drove broadband adoption in the United Kingdom. Dwivedi studied five socio-economic factors that he thought would influence broadband adoption (similar to the work of Howick and Whalley). The five socio-economic factors were: income, education, age, occupation, and gender. Age, education, income, and occupation were proven to be significant, but gender was not. His study found more adopters in the age category of 25-54 were more economically active with higher disposable income. However, there were still a large number of non-adopters in this category. With respect to education, he found a majority of adopters, 39%, had earned at least an undergraduate degree, followed by respondents who had reached the post graduate level at 33%. Household income data showed the lowest number of adopters (9.4%), earned less than 10,000 Euros per year. All other income categories above 19,000 Euros per year contained more adopters than non-adopters. (Dwivedi 2007)

Anthony Cresswell wrote, *Broadband Internet Serivce Adoption and Use in New York State Households*, which examined the economic, social, and cultural benefits of broadband in the state of New York. Broadband services throughout New York were reported at 92% with a 67% adoption rate. The preferred type of connection was cable modem at 59%, while digital subscriber line (DSL) was 22%, and the remaining 19% were a mixture of fiber optic, satellite, dial-up, and cellular. With regard to annual household incomes, 37% of residents who made less than $20,000 adopted broadband while 91% of the richest households adopted. Residents who had not completed high school, and people who were over 65 years of age were the lowest of adopters at 44% and 39% respectively. Cresswell agrees with previous studies as to the reasons for non-adoption. His study determined consumers thought it was too expensive or they had no

interest in it. His report recommends a combination approach to, "… reduce cost of broadband, reduce knowledge and attitude barriers, and encourage investment in greater access and online security." (Cresswell 2011)

When reviewing broadband adoption there are certain barriers that have influenced adoption rates, as pointed out by Hauge and Preiger: price of broadband service; lack of computer ownership; lack of digital literacy; and lack of perceived value. Due to the complexity of barriers identified they discovered successful programs must address many goals. The encourgement of adoption is a small part of the digital literacy effort and programs that make non-adopters want to adopt, make internet easier to use and less expensive have been more effective. With any policy at the local or national level there are strengths and weaknesses. At the national level, a coordinated effort to set up programs that can be evaluated and analyzed may be more beneficial. At the local level, organizations may be more effective in ensuring utilization of broadband by intended recipients because they have the knowledge of what barriers directly affect their community. They explain the United States has a history of subsidizing voice telephone technology through, " Lifeline and Link-Up America programs". The direct subsidies to the end-user appear to be rare within the United States. They suggest a cost-benefit analysis as a standard to ensure the program is meeting the policy goals. (Hauge and Prieger 2009)

Howell explains that the premise of the United States policy has been to increase the availablity of coverage leading to greater broadband adoption and increased social welfare.

> Needless to say, the determinants of broadband adoption are more complex and include both demand and supply factors. On the demand side, many have argued that there will be no mass-market adoption of broadband, regardless of availability, until sufficiently attractive broadband applications emerge that makes the additional cost of broadband access worthwhile. (Howell 2002)

Howell claims cable modem adoption has generally exceeded DSL adoption due to bundled products that combine access and content, which increases demand putting pressure on DSL products. He also argues that low broadband adoption reflects lack of applications which utilize high speed, and the substitution requirements exceed the cost consumers are willing to pay. Policies for infrastructure improvement need to factor in demand-driven applications or run the risk of inefficient investments.

CHAPTER 3

BROADBAND

There is no single definition adopted in explaining broadband. The International Telecommunication Union (ITU) defines broadband when transmission speeds exceed 1.5 or 3 megabytes per second (Mbps). However, the Federal Communications Commission (FCC) defines broadband as 768 kilobytes per second (kbps) or greater upload speed, and 3 Mbps download speed. To skew the definition even further, the OECD adopted a downstream speed of 256 kbps. As there is no universal definition many countries have decided to use their own definitions. (Howick and Whalley 2008) For the purpose of this study I will follow the FCC's.

Currently throughout Illinois people connect to the internet many different ways. Six connection types are analyzed: dial-up, DSL, cable, satellite, wireless, and fiber optic. Dial-up uses current telephone lines that connect to specific locations, and is not considered broadband due to the slow connection speed, which is approximately 56kbps. "In rural areas the speed often has been much less, with connection speeds of 14kbps."(Stenberg 2009) DSL is a wire line technology that connects through traditional copper telephone lines and allows for speeds up to 7 Mbps download and 1 Mbps upload. For Illinois residents 30% responded as having a DSL connection. Cable modem connectivity runs through the same coaxial copper line as cable television, and is provided by the various cable companies. The connection speed of cable internet is up to 15 Mbps download and 2Mbps upload. Satellite connection is a dish on the outside of a residence that has a direct line of sight to a satellite orbiting above the earth. There are terrestrial stations which allow for coverage in areas where signal may be weak to due lack of direct line of sight. Connection speeds for satellite are approximately 15Mbps download and 2Mbbs upload, but can be affected by weather conditions. Wireless connection is the ability to

connect to the internet through a wireless device such as a Smartphone or other device. There are two types of wireless services available; fixed wireless and mobile wireless. (Moore 2008) The connection speed for wireless can vary depending on the area. There have been advancements in the wireless network connection speed with the development of the "4G" network used by Verizon Wireless, AT&T, and others. The connectivity of this system is limited in more rural areas. (National Telecommunications and Information Agency 2011)

Fiber optic networking is one of the next advancements in communication technology which uses fiber optic cable instead of the traditional coaxial copper cable. Fiber optic technology transforms the electrical signals into light and sends it through glass fibers as thin as a human hair. (Commission, Broadband.gov 2012) Use of this type of cable will allow for delivery of telephone, internet, and video at speeds which have yet to be reached. There are many different fiber networks currently being discussed: Fiber-to-the-x (FTTx) has been adopted as a generic term for the different fiber optic networks. There are four different fiber configurations: Fiber-to-the-Node (FTTN) has fiber which terminates at a street cabinet or node more than 1000ft from the building. Fiber-to-the-Cabinet/Curb (FTTC) has fiber from the third party provider and terminates at the cabinet/curb, which is similar to FTTN but is fewer than 1000ft from the building. Fiber-to-the-building/basement (FTTB) has fiber that terminates at the building in a multi-dwelling unit or office. Fiber-to-the-Home (FTTH) is fiber reaches the individuals home. All of the above fiber networks have a combination of fiber and copper cable. The foremost difference is where the fiber ends and the copper cable begins. There are companies working on Fiber-to-the-device/desk, but due to cost involved with running fiber inside structures, this has been slow to expand. With changes in economic conditions and

technological advancement this may become a more prevalent network in the future. (Council 2006)

Broadband expansion has been gaining momentum in the United States due to the ARRA and an increased emphasis by United States government. Per the legislative directive the priority goes to the applications that expand broadband to the largest number of end users, which could explain why the focus is on the more urban areas throughout the state.

At the national level the United States Department of Agriculture's Rural Development department has a number of programs working on the expansion of broadband. The ARRA provided the USDA's Rural Utilities Service (RUS) $2.5 billion to assist broadband expansion in rural areas. (Commission, Broadband.gov 2012) Illinois organizations anticipate $415,041,151.00, which will allow for increased technology throughout the state. There are currently 16 different projects throughout the state. (Broadbandillinois.gov 2012)

The Illinois Commerce Commission has created the Digital Divide Elimination Infrastructure Fund (DDEIF) Program to work on decreasing the effects of the digital divide in Illinois. This fund was set up in 2005 to be used in conjunction with local telecommunications providers. A large portion of the program has been focused on the southern Illinois region. There currently are grant opportunities through the DDEIF to help decrease the digital divide. (Broadbandillinois.gov 2012)

Partnership for Connected Illinois (PCI) is a non-profit 503(c) corporation that is currently funded by the ARRA and other grants which has allowed better transparency in broadband expansion throughout the state. There has been a focus on northern Illinois similar to many other funding streams that enter the state of Illinois, but that focus has shifted to more rural areas. PCI is using complied data from throughout the state as the baseline for counties and the

state to evaluate broadband plans and strategies. (Illinois 2011) The State of Illinois has created anchor institutions that have helped to bring broadband to Illinois communities. There have been investments throughout Illinois which are implementing infrastructure improvements, and should allow for increased connectivity throughout the state. These improvements should aid in narrowing the digital divide in Illinois, but further research is needed to analyze the direct effects.

CHAPTER 4

ILLINOIS BROADBAND STUDY

Many studies at the national level have determined lower income households use the internet less frequently than higher income ones, but this is not the only factor that may determine internet usage. Other factors that may influence broadband adoption are: income, education, ethnicity/race, gender, and age. The sections below explore the demographic variables that may affect broadband adoption in Illinois.

RESEARCH QUESTION

How do the demographics of income, education, ethnicity/race, gender, and age affect broadband adoption of Illinois?

HYPOTHESIS

H1: There will be a difference between adopters and non-adopters of various income levels.

H2: There will be a difference between adopters and non-adopters of various education levels.

H3: There will be no significant difference between adopters and non-adopters of different ethnic backgrounds and races.

H4: There will be no significant difference between adopters and non-adopters of gender categories.

H5: There will be a significant difference between adopters and non-adopters of various age groups.

THE SURVEY

The Pew Internet and American Life Project has conducted multiple studies with regard to broadband adoption on a national scale, and have made public primary data for their studies. The following analysis uses the data from the Spring Tracking 2009 Survey. (Center 2012) Calculations have been conducted to specify Illinois as the focus of this study. Telephone interviews were conducted March 26 – April 23, 2009 by Princeton Survey Research Associates International; 48.6% were landline respondents and 51.4% were cellular telephone respondents. Two versions of the survey were used in which 53.3% had Form A and 46.7% had Form B. This allowed for a more random sample. In those calls, respondents were asked about a multitude of topics regarding cell phone usage, internet usage, broadband type, and activities. Upon contact, the interviewer asked a screening question in order to determine that the respondent was at least 18 years old. A total of 2250 interviews were completed for the national data reported. The Illinois specific respondents totaled 80. To correct for sample bias due to the small sample, a set of weights was applied, bringing the total sample size to 248.

Demographic questions regarding income, education, race, gender, and age, were asked of all respondents. The survey spanned eight different modules, depending on how the questions were answered. Questions were asked to determine if the respondent was an internet user. (See Appendix B) If the respondent was an internet user the survey asked questions to determine what

type of connection was used, location of usage, and activities. If the respondent was not an internet user they were asked questions regarding their potential to use the internet.

ANALYSIS METHODS

The results reported include analysis of descriptions of respondents and variation of broadband adoption and use. This analysis included comparison of demographics and linear regression. Demographic variables used in this research are as follows:

1. Household Income: less than $20,000; $20,000-$40,000; $40,000-$75,000; $75,000 and above; Refuse/Unknown.

2. Education: Less than High School; High School Graduate; Some College, College graduate or higher, Refuse/Unknown.

3. Ethnicity/Race: White Non-Hispanic, African American Non-Hispanic, Hispanic, Other Non-Hispanic.

4. Gender: Male, Female

5. Age: 18-24; 25-34; 35-49; 50-64; 65+, Refuse/Unknown.

The dependent variable used in the chi-squared (χ^2) and regression analyses was labeled "Broadband" for those who responded internet user with either a DSL- enabled phone line, cable modem, wireless connection, fiber optic, or T-1. The respondents were labeled "not broadband" for those with a dial-up telephone connection or did not use the internet.

The χ^2–test in Table 1 showed statistically significant relationships with the presence or absence of broadband adoption. The only variable that was not statistically significant was

Ethnicity/Race but only slightly at 0.057. Since all χ^2 values are above the critical value of their respected degrees of freedom, all variables were used. The results from the χ^2–test were used to build the regression model to explain the combined effects of the variables studied using ordinary least-squares regression. (Cresswell 2011) The descriptions for the regression model are available in Appendix A.

Table 1 Demographic Variable Chi-Squared Analysis

Chi-Squared (χ^2)Analysis						
Variable	Frequency	χ^2 Value	df	Sig.	HN	A/R
Income	248	37.898	4	0.000	H1	A
Education	248	60.326	3	0.000	H2	A
Ethnicity/Race	248	7.541	3	0.057	H3	A
Gender	248	15.771	1	0.000	H4	A
Age	248	53.068	5	0.000	H5	A
Notes: Sig.= asymp, significance(2-sided); HN=hypothesis no.; A/R=accept/reject						

SAMPLE CHARACTERISTICS

Tables 2 – 6 show the weighted and reported respondents by demographic factor. The differences in the sample are most likely due to survey methods and low sample size. The weighted results were compiled using the Census Bureau's March 2008 Annual Social and Economic Supplement and were current. These weights were derived by the Pew Internet and American Life Project. Their analysis created population parameters for the demographic

characteristics of 18 years-or-older respondents. Those parameters were then compared to sample characteristics to create the weights. (Horrigan 2009)

Table 2 Income of Sample Respondents

Income of Sample Respondents				
	Reported		**Weighted**	
	Frequency	Percent	Frequency	Percent
Less than $20,000	11	14%	51	21%
$20,000 to under $40,000	21	26%	72	29%
$40,000 to under $75,000	17	21%	46	19%
$75,000 and above	15	19%	45	18%
Refused/Unknown	16	20%	34	14%
Total	80	100%	248	100%

Table 3 Education of Sample Respondents

Education of Sample Respondents				
	Reported		Weighted	
	Frequency	Percent	Frequency	Percent
Less than high School	7	9%	48	19%
High school graduate (grade 12 or GED certificate)	22	28%	58	23%
Some college, no 4-year degree (includes associate degree)	22	28%	61	25%
College graduate or higher	28	35%	79	32%
Refused/Unknown	1	1%	2	1%
Total	80	100%	248	100%

Table 4 Ethnicity/Race of Sample Respondents

Ethnicity/Race of Sample Respondents				
	Reported		Weighted	
	Frequency	Percent	Frequency	Percent
White	60	75%	143	58%
African-American Non-Hispanic	10	13%	39	16%
Hispanic	6	8%	46	19%
Other Non-Hispanic	3	4%	17	7%
Refused/Unknown	1	1%	3	1%
Total	80	100%	248	100%

Table 5 Gender of Sample Respondents

Gender of Sample Respondents				
	Reported		**Weighted**	
	Frequency	Percent	Frequency	Percent
Male	33	41%	113	46%
Female	47	59%	135	54%
Total	80	100%	248	100%

Table 6 Age of Sample Respondents

Age of Sample Respondents				
	Reported		**Weighted**	
	Frequency	Percent	Frequency	Percent
18-24	12	15%	67	27%
25-34	13	16%	60	24%
35-49	12	15%	45	18%
50-64	15	19%	33	13%
65 and over	27	34%	43	17%
Refused	1	1%	1	0%
Total	80	100%	248	100%

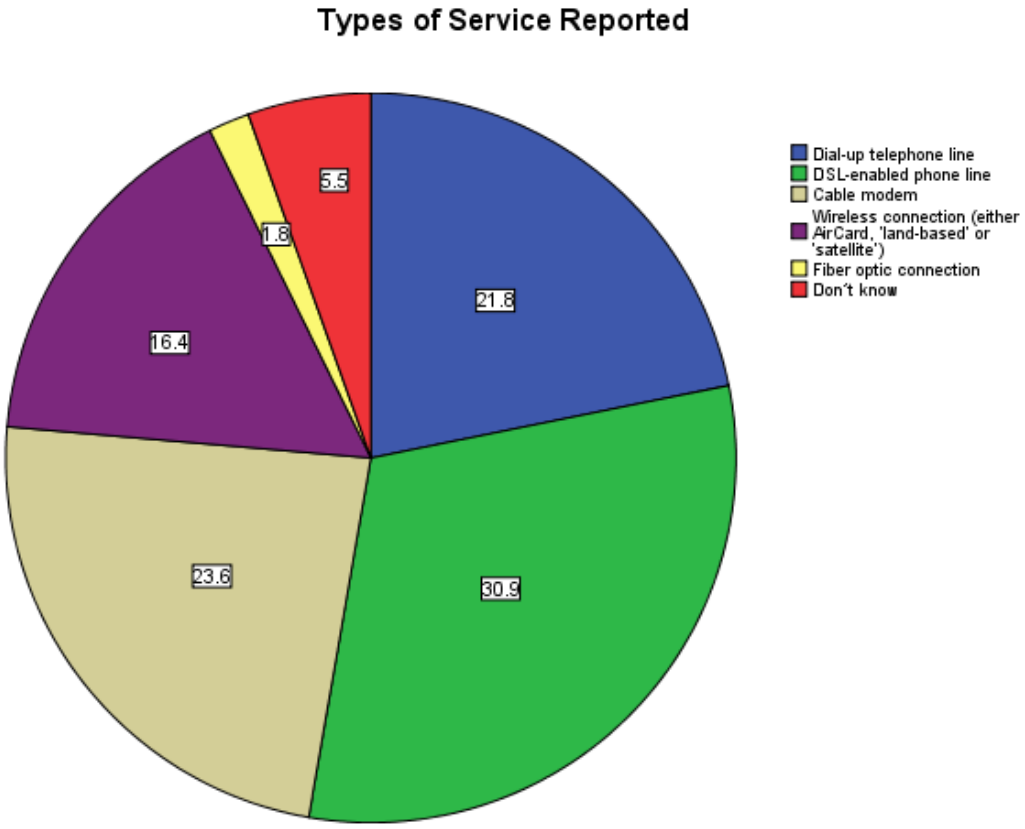

Figure 2 Type of Internet Service Reported

Illinois' representation in the survey shows 21.8% of respondents use a dial-up connection; 30.8% use a DSL-enabled phone line; 23.6% use a cable modem, and only 1.8% use fiber optic. This is in-line with previous studies.

DEMOGRAPHIC FACTORS IN BROADBAND ADOPTION

Upon analyzing Figure 3 it appears that income does matter with regard to broadband adoption. The adoption of broadband in households whose annual income is less than $20,000 is

42%. While households whose income is $75,000 or more is 73%. For non- adoption the percentages are 58% and 27% respectively.

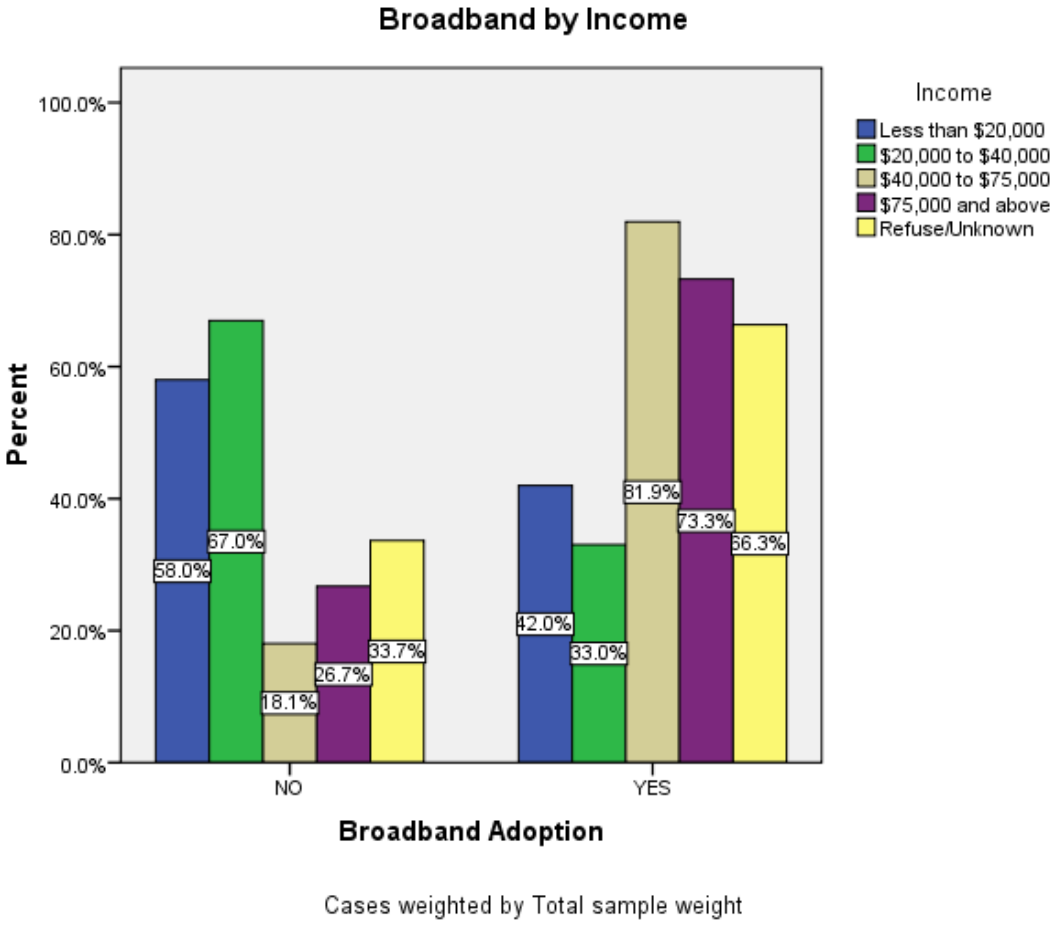

Figure 3 Broadband by Income

Higher levels of education can be a factor in broadband adoption as seen in Figure 4, with 90% of respondents who have a college degree or higher adopt broadband while only 30% of respondents with less than a high school education adopt.

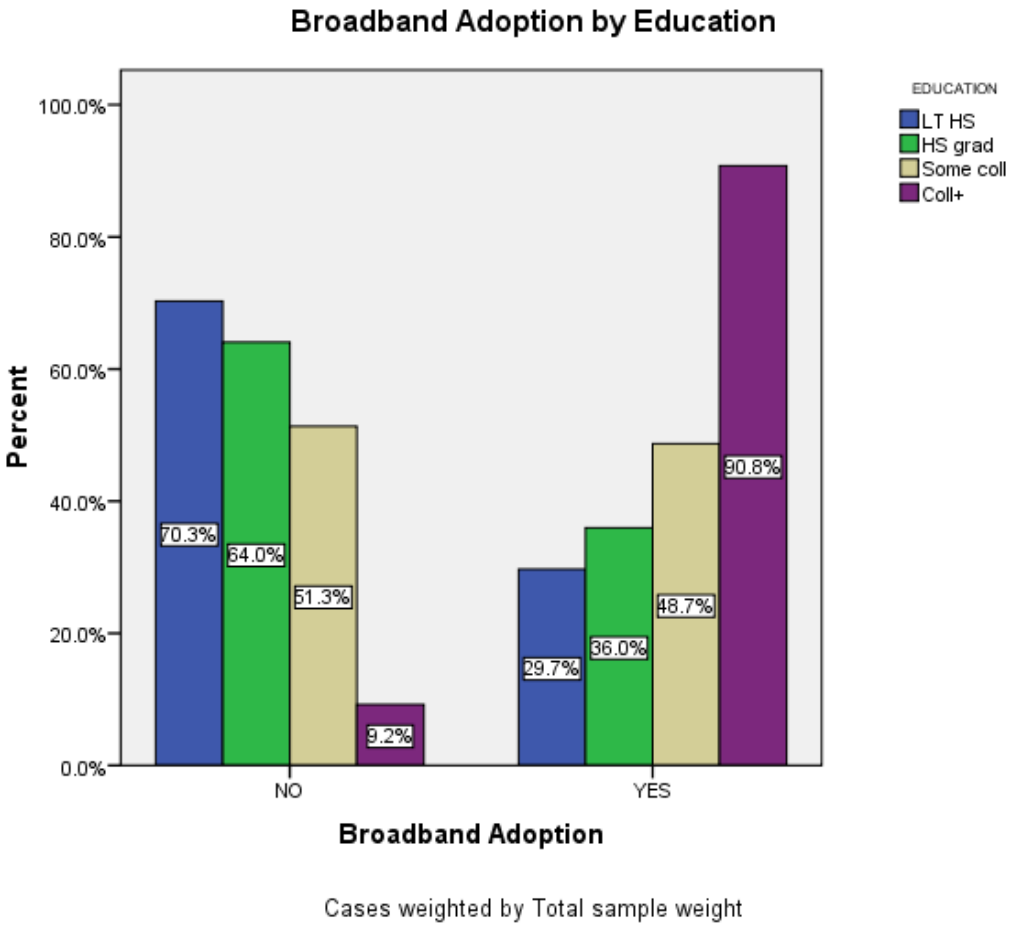

Figure 4 Broadband by Education

Adoption by race does not show such a clear picture as do income and education (Figures 3 and 4). This lack of clarity is likely due to a more comprehensive relationship not analyzed within this study. However, additional studies may focus on specific ethnicity/racial factors to clearly define the complexity of those relationships.

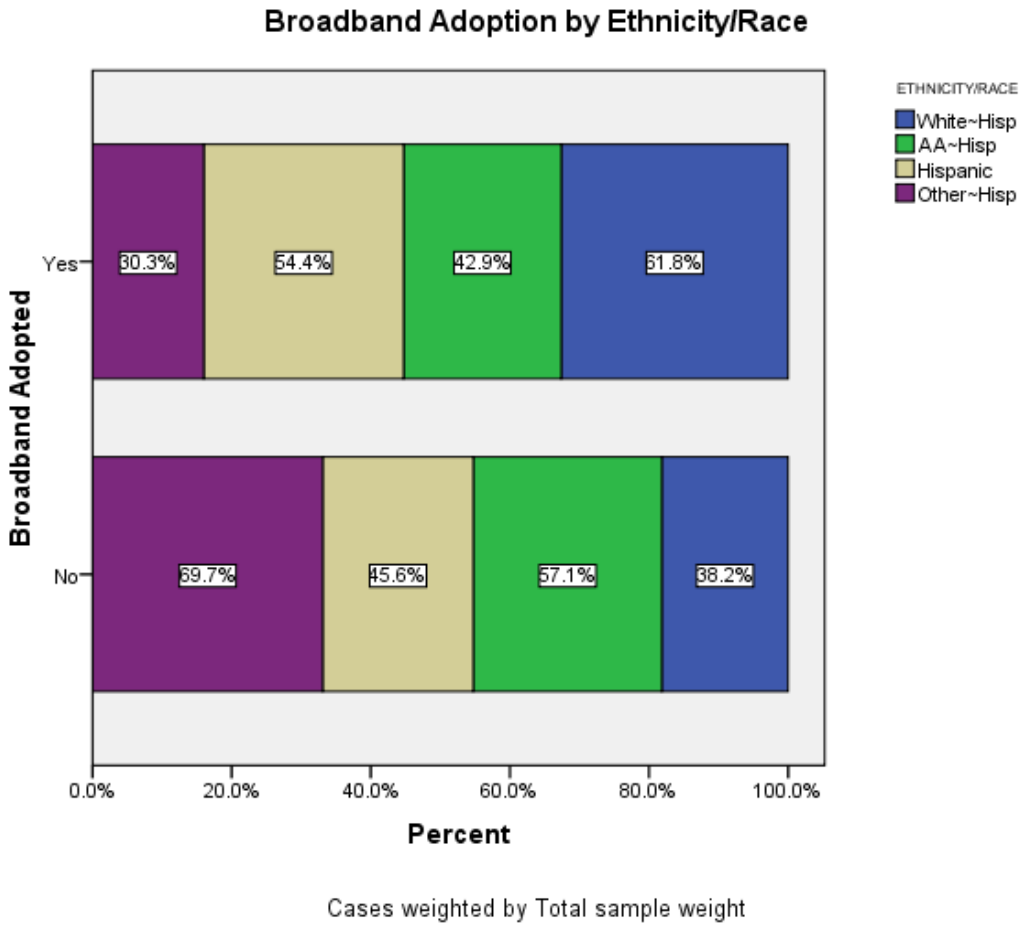

Figure 5 Broadband by Ethnicity/Race

For the demographic factor of gender, Figure 6 shows 57% of females adopt broadband opposed to 42% of males. This can be explained by the sample of this study and is in line with historical trends.

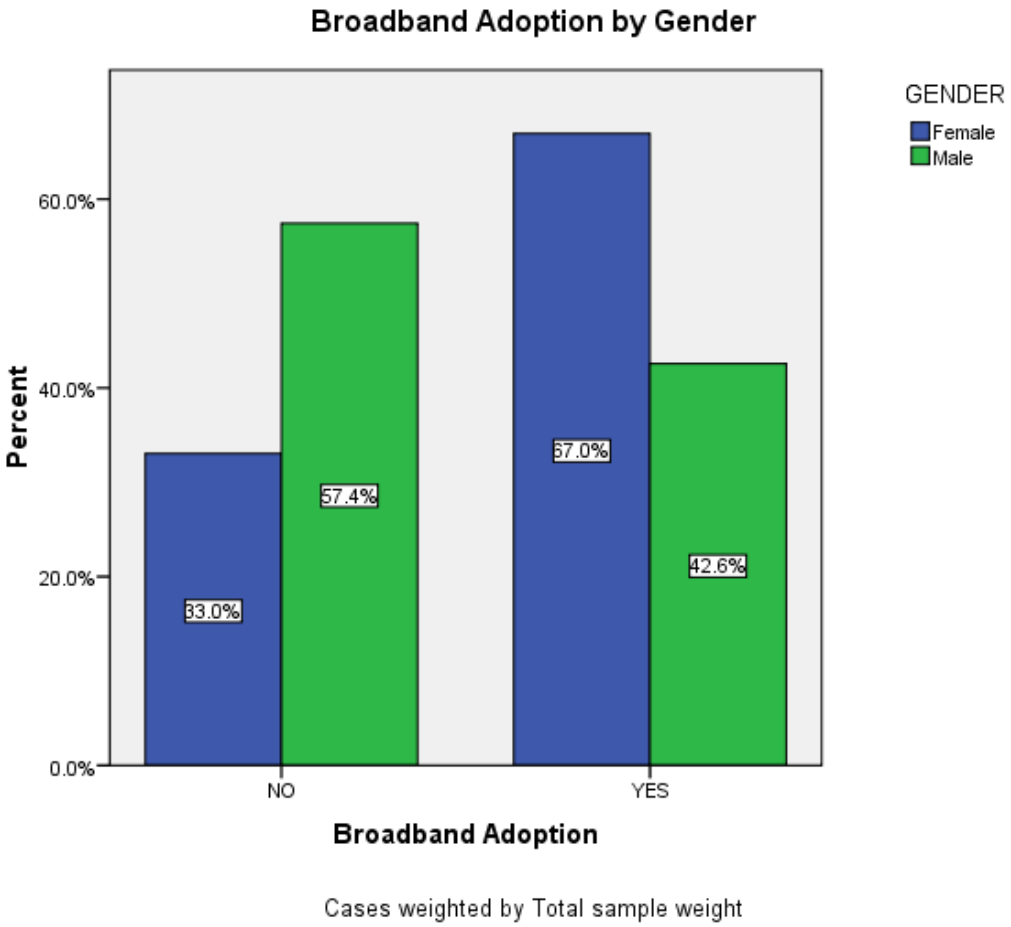

Figure 6 Broadband by Gender

Broadband adoption has been associated with younger age groups. Figure 7 shows 18-24 year old respondents, as well as 35-54 year old respondents, were more likely to adopt broadband. The adoption rate of respondents age 65 or over and 55-64 were only 22% and 35% respectively.

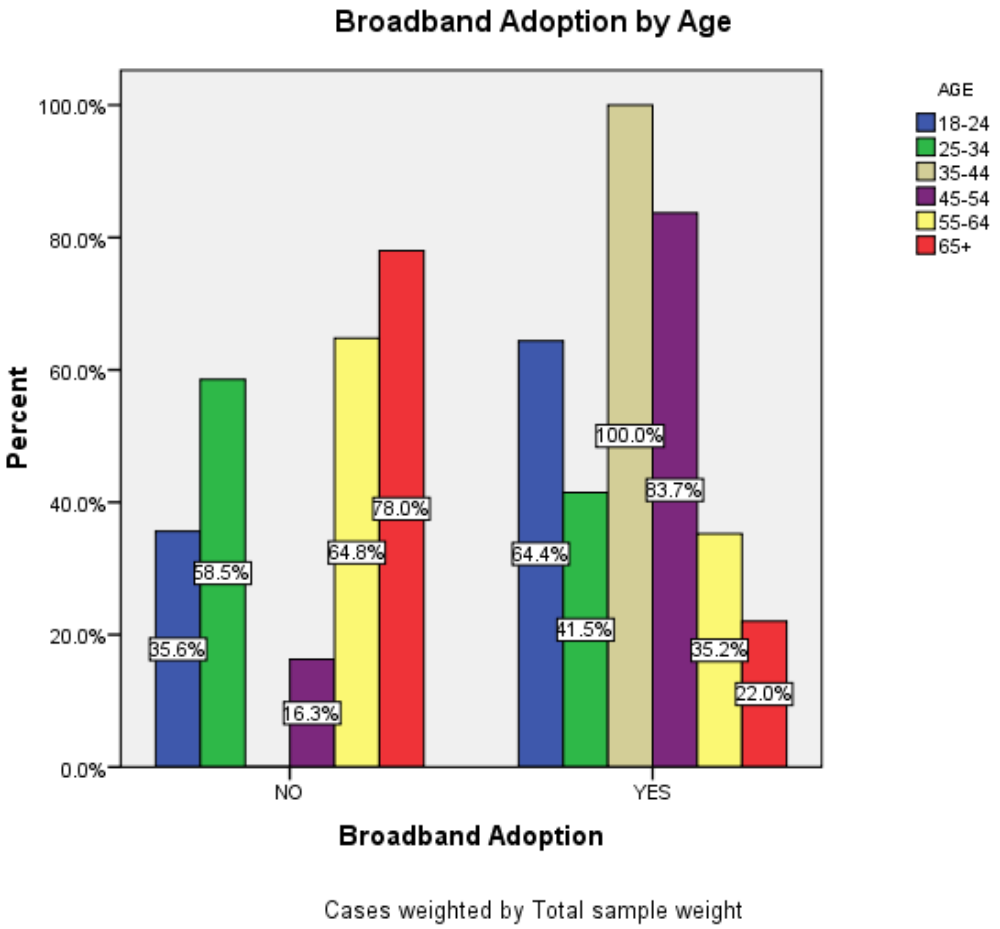

Figure 7 Broadband by Age

REGRESSION MODEL

The results from above and the individual regression models (See Appendix A) were used to create a regression model of broadband adoption. The independent predictor variables (including negative variables) selected were: INCOME: $20,000 to $40,000; $40,000 to $75,000; EDUCATION: college graduate or higher; ETHNICITY/RACE: African American Non-Hispanic, and Other Non-Hispanic; and Gender. The model summary below shows R

squared being 0.290 meaning that 29% of variance in broadband adoption can be explained by the independent predictor variables used.

Table 7 Regression Model Summary

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.538[a]	.290	.272	.426

a. Predictors: (Constant), GENDER, African American Non-Hispanic, $40,000 to $75,000, Other Non-Hispanic, $20,000 to $40,000, College Grad or more

The ANOVA table shows an F statistic of 16.397 and is statistically significant.

Table 8 Analysis of Variance Test of Regression Results

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	17.826	6	2.971	16.397	.000[a]
	Residual	43.716	241	.181		
	Total	61.541	247			

a. Predictors: (Constant), GENDER, African American Non-Hispanic, $40,000 to $75,000, Other Non-Hispanic, $20,000 to $40,000, College Grad or more

b. Dependent Variable: Broadband

The models Coefficient table shows that being a college graduate or higher is statistically significant and has a t-statistic of 3.876, making it a predictor of adoption. Gender is also statistically significant as a predictor of adoption. The income range of $20,000 to $40,000 is

statistically significant but as a predictor of non-adoption. The tolerances are all over 0.400 and the small variance inflation factors (VIFs) suggest that collinearity is not an issue in the model. (O'brien 2007)

Table 9 Regression Coefficients and Significance

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.228	.098		2.327	.021		
	$20,000 to $40,000	-.141	.065	-.129	-2.166	.031	.832	1.201
	$40,000 to $75,000	.119	.077	.093	1.542	.124	.810	1.235
	College Grad or higher	.410	.064	.384	6.361	.000	.809	1.235
	African American Non-Hispanic	-.023	.077	-.017	-.302	.763	.933	1.072
	Other Non-Hispanic	-.141	.116	-.072	-1.222	.223	.846	1.182
	GENDER	.142	.058	.142	2.455	.015	.877	1.141

a. Dependent Variable: Broadband

DISCUSSION

The initial analysis of the χ^2 test is in line with the assumptions made when determining what hypotheses to use. These hypotheses were determined upon the completion of the literature review in Chapter 2. Table 1 illustrates that all five demographic factors used in this study

differentiated the adopters from non-adopters. Cramer's V was also used to determine "goodness of fit". (Cresswell 2011) Upon completion of those tests individual binary regression models in Appendix A were conducted to determine predictors of the dependent variable. The independent predictor variables that were significant were used in the model to determine broadband adoption. Completing an education level of college degree or higher was the strongest predictor of broadband adoption. Gender was determined to be a predictor of broadband adoption which differs from other studies. Having an income level of $20,000 to $40,000 was the only significant predictor of non-adoption.

Overall, the results in Table 9 suggest some demographic variables affect broadband adoption, but there are other factors that may determine adoption that were not analyzed in this study. The model shows betas and significance levels which are consistent with what are expectation showing that low income affects broadband adoption negatively. Ethnicity and race continue to prove they are not factors in determining broadband adoption.

CHAPTER 5

BROADBAND INFLUENCE

Accessing the internet allows for a wide range of advantages and benefits for the communities that are able to gain this technology. This is particularly true for rural areas, allowing for access not commonly available to more remote communities. The following discusses the different advantages available to communities with broadband accessibility.

Advancements in education are possible because of the internet and now individuals can gain more knowledge via online educational programs through a multitude of online degree programs as long as they have access. The educational aspect is not only at the college level but also at the primary level, where students have access to information not available at their local libraries. There are high schools throughout Illinois issuing laptop computers to their students and teachers, allowing for more technologically advanced children and educators. A report by the Economic Research Service of the USDA claims that internet access in the home may come from educational programs but also states, "…distance education is beneficial to economic well-being, [and] continuation of this rural-urban dichotomy could put rural households at a disadvantage." (Stenberg, et al. 2009)

Internet connectivity and higher on-line speeds have become essential to the medical field, allowing for real-time tracking of patients and long distance consultations with medical experts thousands of miles away. The advancements in the medical field have also allowed for more expeditious diagnosis of medical conditions. Doctors are able to access ample amounts of information to ensure the correct diagnosis is made. Also, cutting-edge treatment plans are available. People with disabilities have benefited with the advancement of broadband. For

example, users of the Telecommunications Relay Service (TRS) use Video Relay Services (VRS) can now communicate more easily and effectively with traditional telephone users. (Commission, Broadband.gov 2012)

Internet connectivity has aided in the economic conditions of many remote communities by allowing access to the world marketplace. Specifically for Illinois the Governor has implemented projects making Illinois more competitive in the world marketplace. He has traveled to China with various industry leaders in order to build relationships that should, in-turn, advance the Illinois economy. This is only possible by advanced internet connectivity and higher speeds. The increase in connectivity and speeds allows rural communities access to unlimited products which would never have been available in local stores. The southern Illinois region has the Shawnee Hills Wine Trail consisting of 16 wineries. The member wineries have used the internet to expand population knowledge about the Trail bringing not only an increase of wine sales, but also an increase of tourism to the southern Illinois region.

Improvements in governmental services have been realized via internet technology. For example, police and fire departments have increased knowledge of community buildings by receiving and storing blueprints. This has allowed for numerous conflict resolutions that involved law enforcement officers entering a building with suspects barricaded inside. It also allows police officers the ability to complete mandatory reports from their patrol cars through wireless connectivity. This allows them to remain on patrol in the community; thus deterring crime.

Additionally, governments have modernized citizen interaction with various government agencies, which allow more transparency and better information flow. Local governments vary drastically regarding the type of interaction that contributed to availability of resources. Smaller

communities do not have the revenue to invest in the technology that larger communities have. For example, local county courthouse officials have the ability to upload case documentation to websites making, it easier to access public records. This capability aids in completing background checks. It also helps civilians to research businesses in the area for potential interaction. (Commission, Broadband.gov 2012)

John Horrigan has identified internet availability and price as barriers to broadband adoption. “These are the main issues for about a third of the adult population currently without broadband service.” (Horrigan 2009) Non-adopters in Illinois have similar reasons as to why they do not adopt; 22% claim they do not have access; 13% claim it is too expensive; and 9% claim they are too old to learn. The initial price barrier has been addressed by the ARRA stimulus funding. Upon completion of the broadband network, the issue of consumer cost associated with the higher speed and more advanced technology remains; 28% of the respondents prefer faster “broadband” per the survey 42.1% of non-adopters claim a price reduction would be necessary to persuade them to adopt; 16% claim nothing would convince them. When analyzing internet prices 13% reported broadband internet was too expensive. In Illinois, accessibility may be another barrier, although there are multiple providers. The more rural communities have been limited to only a few providers.

CHAPTER 6

CONCLUSION

In order to be competitive globally today, broadband internet access is a necessity. The United States government has put emphasis on ensuring the citizens of this country have broadband internet available in almost all areas. Currently there is a digital divide throughout the United States, but thanks to the ARRA, steps are being taken to close the gap between the "haves and have not's". There are a multitude of factors that affect broadband adoption. This study discussed demographic variables that may influence adoption in Illinois. Those demographic were: income, education, ethnicity/race, gender, and age. This study determined education attainment of a college degree or higher positively influenced broadband adoption and low income negatively influenced broadband adoption. These findings agree with several other (previous) studies.

This clearly demonstrates that the higher the education level, the more likely respondents were to adopt broadband. This particular study shows that 90% of Illinois residents with a college degree or higher adopt broadband, while 70% of residents with less than a high school degree do not adopt broadband. This is also evident when looking at household income; 73% of the highest income level adopts broadband and only 42% of the lowest income level adopt.

Broadband adoption by age also clearly shows that younger people are more willing to adopt as evident by the fact that 78% of respondents over age 65 do not adopt. Conversely, 64% of respondents age 18 – 24 adopt.

Analyzing the demographic factor of gender for this study determined that gender is a predictor of broadband adoption which is not in line with other studies. The difference in results

could be a result of the small sample of respondents used in this study plus weights that were created from the national survey. Additional research specific to Illinois needs to be conducted to determine if the findings are, indeed, unlike those of previous studies.

This study discussed broadband adoption in Illinois by demographic factors. However, due to the small sample size and calculations targeting Illinois from a national survey, an in-depth study specifically for Illinois and regions therein should be conducted. This would provide more accurate information specific to Illinois and its various regions. Additional studies should analyze other factors which may influence broadband. Recommendations for further research are: effects of the digital divide within rural communities throughout Illinois; economic impact studies dealing with ARRA funding; barriers that specifically affect Illinois residents; and the effects of broadband policies that benefit the consumers, as opposed to the suppliers.

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APPENDICES

APPENDIX A

ANALYSIS METHODS

INCOME: There was significant association between adoption and INCOME (χ^2= 37.898, df= 4, $p<0.05$). Cramer's V (0.392, $p<0.05$) indicates a strong relationship between studied variables. When crosstab tables were examined, broadband is associated with higher income and no broadband is associated with lower income. (See Figure 3)

EDUCATION: There was significant association between adoption and EDUCATION (χ^2=60.326, df=3, $p<0.05$). Cramer's V (0.495, $p<0.05$) indicates a strong relationship between studied variables. When crosstab tables were examined, broadband is associated with more advanced education and no broadband is associated with less education. (See Figure 4)

ETHNICITY/RACE: There was not a significant association between adoption and ETHNICITY/RACE (χ^2= 7.541, df=3, $p>0.05$). Cramer's V (0.175, $p>0.05$) indicates a weak relationship between studied variables. When crosstab tables were examined, it was seen that White Non-Hispanic respondents are more likely broadband users versus no broadband. (See Figure 5)

GENDER: There was significant association between adoption and GENDER (χ^2=15.771, df=1, $p<0.05$). Cramer's V (0.252, $p<0.05$) indicates a moderate relationship between studied variables. When crosstab tables were examined, broadband was determined to be associated with gender. (See Figure 6)

AGE: There was significant association between adoption and AGE (χ^2=53.068, df= 5, $p<0.05$). Cramer's V (0.463, $p<0.05$) indicates a strong relationship between studied variables. When crosstab tables were examined, broadband is associated with younger ages and no broadband is associated with older ages. (See Figure 7)

METHODOLOGY FOR REGRESSION ANALYSES

Below are the results of the individual regression analyses on the weighted sample which was used to build the final regression model. The demographic variables were re-coded into dummy variables to be able to use the categorical variables as independent variables for the regression analysis. The dependent variable of broadband was determined by the respondents whom answered question MODEM by "DSL-enabled phone line, cable modem, wireless connection, fiber optic connection, or T-1 connection."

The results from the chi-squared tests were used as a guide as the regression model was created on the following five demographic variables and were also screened for multi-collinearity:

1. Income: less than $20,000; $20,000-$40,000; $40,000-$75,000; $75,000 and above; Refuse/Unknown.

2. Education: Less than High School; High School Graduate; Some College, College graduate or more, Refuse/Unknown.

3. Ethnicity/Race: White Non-Hispanic, African American Non-Hispanic, Hispanic, Other Non-Hispanic.

4. Gender: Male, Female

5. Age: 18-24; 25-34; 35-49; 50-64; 65+, Refuse/Unknown.

INCOME:

The R squared below is 0.150 and shows that about 15% of variance can be predicted by income.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.387[a]	.150	.136	.464

a. Predictors: (Constant), $75,000 and above, $40,000 to $75,000, Less than $20,000, $20,000 to $40,000

The ANOVA table below shows income as a predictor has the F value of 10.723 and is statistically significant.

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	9.224	4	2.306	10.723	.000[a]
	Residual	52.317	243	.215		
	Total	61.541	247			

a. Predictors: (Constant), $75,000 and above, $40,000 to $75,000, Less than $20,000, $20,000 to $40,000

b. Dependent Variable: Broadband

The income levels of Less than $20,000 and $20,000 to $40,000 have a negative Beta, which means this is a predictor of non-adoption but only $20,000 to $40,000 is statistically significant. The income range of $40,000 to $75,000 is statistically significant and is a predictor

of adoption. The income range of $75,000 and above is not statistically significant as a predictor of broadband adoption.

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	.573	.080		7.187	.000		
	Less than $20,000	-.153	.103	-.125	-1.493	.137	.501	1.996
	$20,000 to $40,000	-.243	.097	-.222	-2.514	.013	.450	2.222
	$40,000 to $75,000	.246	.105	.193	2.347	.020	.518	1.929
	$75,000 and above	.159	.106	.123	1.509	.133	.524	1.907

a. Dependent Variable: Broadband

EDUCATION:

The R squared is 0.253 and shows about a 25% variance in adoption can be predicted by education.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.503[a]	.253	.238	.436

a. Predictors: (Constant), Refused/Unknown, Less than High School, High School Grad, Some College, College Grad or more

The ANOVA table indicates that the education as a predictor has the F statistic of 16.437 and is statistically significant.

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	15.589	5	3.118	16.437	.000[a]
	Residual	45.953	242	.190		
	Total	61.541	247			

a. Predictors: (Constant), Refused/Unknown, Less than High School, High School Grad, Some College, College Grad or more

b. Dependent Variable: Broadband

The Coefficient table suggests that being a college graduate or higher is a strong predictor of adoption and is statistically significant.

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-6.301E-15	.268		.000	1.000		
	Less than High School	.297	.275	.235	1.079	.282	.065	15.337

High School Grad	.377	.274	.316	1.374	.171	.058	17.138
Some College	.487	.274	.422	1.780	.076	.055	18.237
College Grad or more	.893	.272	.835	3.278	.001	.048	21.050
Refused/Unknown	6.232E-15	.418	.000	.000	1.000	.594	1.685

a. Dependent Variable: Broadband

ETHNICITY/RACE:

The R square value is 0.042 which shows about a 4% of the variance in adoption can be predicted by ethnicity/race.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.206[a]	.042	.027	.492

a. Predictors: (Constant), Other Non-Hispanic, African American Non-Hispanic, Hispanic, White Non-Hispanic

The ANOVA table indicates that the education as a predictor has an F statistic of 2.691 and is statistically significant.

ANOVA[b]

Model	Sum of Squares	df	Mean Square	F	Sig.

1	Regression	2.609	4	.652	2.692	.032[a]
	Residual	58.932	243	.242		
	Total	61.541	247			

a. Predictors: (Constant), Other Non-Hispanic, African American Non-Hispanic, Hispanic, White Non-Hispanic

b. Dependent Variable: Broadband

The Coefficient Table below shows that African American Non-Hispanic and Other Non-Hispanic are statistically significant, but have negative Beta suggesting they are predictors of non adoption. The other two categories are not statistically significant and have negative Betas.

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	1.000	.266		3.759	.000		
	White Non-Hispanic	-.404	.269	-.400	-1.499	.135	.055	18.128
	African American Non-Hispanic	-.571	.278	-.415	-2.055	.041	.096	10.370
	Hispanic	-.456	.276	-.355	-1.653	.100	.085	11.722
	Other Non-Hispanic	-.697	.291	-.356	-2.392	.018	.178	5.614

a. Dependent Variable: Broadband

GENDER:

The R squared is 0.060 which shows 6% variance in adoption can be predicted by gender.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.245[a]	.060	.056	.483

a. Predictors: (Constant), GENDER

The ANOVA table indicates that the education as a predictor has the F statistic of 16.617 and is statistically significant.

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.890	1	3.890	16.617	.000[a]
	Residual	57.651	246	.234		
	Total	61.541	247			

a. Predictors: (Constant), GENDER

b. Dependent Variable: Broadband

The Coefficient table below shows that gender is statistically significant as a predictor of broadband adoption.

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.158	.100		1.581	.115		
	GENDER	.251	.062	.251	4.076	.000	1.000	1.000

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	.158	.100		1.581	.115		
	GENDER	.251	.062	.251	4.076	.000	1.000	1.000

a. Dependent Variable: Broadband

AGE:

The R squared is 0.217 which shows about a 21% variance in adoption can be predicted by age.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.466[a]	.217	.201	.446

a. Predictors: (Constant), 65 and above, 50-64, 35-49, 25-34, 18-24

The ANOVA table indicates that the education as a predictor has the F statistic of 13.407 and is statistically significant.

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	13.338	5	2.668	13.407	.000[a]
	Residual	48.203	242	.199		

Total	61.541	247			

a. Predictors: (Constant), 65 and above, 50-64, 35-49, 25-34, 18-24

b. Dependent Variable: Broadband

The Coefficient table below shows all age groups having negative beta which suggests a predictor of non-adoption but all are not statistically significant.

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.000	.423		2.363	.019		
	18-24	-.356	.427	-.318	-.835	.405	.022	44.757
	25-34	-.585	.427	-.503	-1.371	.172	.024	41.698
	35-49	-.084	.428	-.065	-.197	.844	.030	33.724
	50-64	-.472	.430	-.322	-1.097	.274	.037	26.692
	65 and above	-.808	.429	-.611	-1.885	.061	.031	32.537

a. Dependent Variable: Broadband

The Model

The results from above were used to create a regression model of broadband adoption. Independent predictor variables, including negative variables, used were: INCOME $20,000 to $40,000, and $40,000 to $75,000; EDUCATION college graduate or more; ETHNICITY/RACE

African American Non-Hispanic, and Other Non-Hispanic; and Gender. The model summary below shows R squared being 0.290 meaning that 29% of variance in broadband adoption can be explained by the independent predictor variables used.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.538[a]	.290	.272	.426

a. Predictors: (Constant), GENDER, African American Non-Hispanic, $40,000 to $75,000, Other Non-Hispanic, $20,000 to $40,000, College Grad or more

The ANOVA table show and F statistic of 16.397 and is statistically significant.

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	17.826	6	2.971	16.397	.000[a]
	Residual	43.716	241	.181		
	Total	61.541	247			

a. Predictors: (Constant), GENDER, African American Non-Hispanic, $40,000 to $75,000, Other Non-Hispanic, $20,000 to $40,000, College Grad or more

b. Dependent Variable: Broadband

The models Coefficient table shows that being a college graduate or more is statistically significant and has a t-statistics of 3.876 making it a predictor of adoption. Gender is also statistically significant as a predictor of adoption. The income range of $20,000 to $40,000 is statistically significant but as a predictor of non-adoption. The tolerances are all over 0.400 and

the small VIFs are suggesting that collinearity is not an issue in the model

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.228	.098		2.327	.021		
	$20,000 to $40,000	-.141	.065	-.129	-2.166	.031	.832	1.201
	$40,000 to $75,000	.119	.077	.093	1.542	.124	.810	1.235
	College Grad or higher	.410	.064	.384	6.361	.000	.809	1.235
	African American Non-Hispanic	-.023	.077	-.017	-.302	.763	.933	1.072
	Other Non-Hispanic	-.141	.116	-.072	-1.222	.223	.846	1.182
	GENDER	.142	.058	.142	2.455	.015	.877	1.141

a. Dependent Variable: Broadband

APPENDIX B

SURVEY QUESTIONS

Princeton Survey Research Associates International
for The Pew Internet & American Life Project
Spring Tracking 2009
Final Questionnaire
English Version
03/27/09
PIAL Spring 2009 Track FINAL QQ_0327.doc

Total n=2,250
National Tracking survey
n=1,690 landline RDD
n=560 cell phone RDD
Field Dates: March 26-April 23, 2009
FORM SPLIT A/B: 50-50
Job#: 29014
LANDLINE INTRO:
Hello, my name is _____ and I'm calling for Princeton Survey Research. We're conducting a survey about some important issues today, and would like to include you. May I please speak with the YOUNGEST MALE, age 18 or older, who is now at home? **(IF NO MALE, ASK:** May I please speak with the YOUNGEST FEMALE, age 18 or older, who is now at home?) **GO TO MAIN INTERVIEW**
CELL PHONE INTRO:
Hello, I am ___ calling for Princeton Survey Research. We are conducting a national survey of cell phone users. I know I am calling you on a cell phone. As a small token of our appreciation for your time, we will pay all eligible respondents $10 for participating in this survey.
This is not a sales call. **(IF R SAYS DRIVING/UNABLE TO TAKE CALL:** Thank you. We will try you another time…**)**
VOICE MAIL MESSAGE (LEAVE ONLY ONCE -- THE FIRST TIME A CALL GOES TO VOICEMAIL): I am calling for Princeton Survey Research. We are conducting a short national survey of cell phone users. This is NOT a sales call. We will try to reach you again.
SCREENING INTERVIEW:
S1. Are you under 18 years old, OR are you 18 or older?
1 Under 18
2 18 or older
9 Don't know/Refused
IF S1=2, CONTINUE WITH MAIN INTERVIEW
IF S1=1, 9, THANK AND TERMINATE: This survey is limited to adults age 18 and over. I won't take any more of your time…
READ TO ALL CELL PHONE
INTRODUCTION TO MAIN INTERVIEW: We're interested in learning more about people

with cell phones. If you are now driving a car or doing any activity requiring your full attention, I need to call you back later. The first question is…

INTERVIEWER:

If R says it is not a good time, try to arrange a time to call back. Offer the toll-free call-in number they can use to complete the survey before ending the conversation.

SEX **RECORD RESPONDENT SEX**

1 Male

2 Female

Start Timing Module 1

Q1 Overall, how would you rate the quality of life for you and your family today? Would you say it is… excellent, very good, good, fair or poor?

1 Excellent

2 Very good

3 Good

4 Fair

5 Poor

8 **(DO NOT READ)** Don't know

9 **(DO NOT READ)** Refused

NO Q2, Q3, Q4

Q5 Do you use a computer at your workplace, at school, at home, or anywhere else on at least an occasional basis? *{PIAL Trend}*

1 Yes

2 No

8 **(DO NOT READ)** Don't know

9 **(DO NOT READ)** Refused

Q6a Do you use the internet, at least occasionally? *{PIAL Trend}*

1 Yes

2 No

8 **(DO NOT READ)** Don't know

9 **(DO NOT READ)** Refused

Q6b Do you send or receive email, at least occasionally? *{PIAL Trend}*

1 Yes

2 No

8 **(DO NOT READ)** Don't know

9 **(DO NOT READ)** Refused

SKIP NON-USERS (Q6a=2-9 and Q6b=2-9) TO Q9

ASK ALL INTERNET USERS (Q6a=1 or Q6b=1):

Q7 Did you happen to use the internet YESTERDAY? *{PIAL Trend}*

1 Yes, used the internet yesterday

2 No, did not use the internet yesterday

8 **(DO NOT READ)** Don't know

9 **(DO NOT READ)** Refused

ASK ALL INTERNET USERS (Q6A=1 OR Q6B=1):

Q8 About how often do you use the internet or email from…? **[INSERT IN ORDER]** – several times a day, about once a day, 3-5 days a week, 1-2 days a week, every few weeks, less often or never? *{MODIFIED PIAL Trend}*

a. Home?

b. Work?

CATEGORIES

1 Several times a day
2 About once a day
3 3-5 days a week
4 1-2 days a week
5 Every few weeks
6 Less often
7 Never
8 **(DO NOT READ)** Don't know
9 **(DO NOT READ)** Refused

ASK ALL NON-INTERNET USERS: (Q6a=2-9 and Q6b=2-9)

Q9 Does **ANYONE** in your household use the internet from home or send and receive email from home? *{PIAL trend}*

1 Yes
2 No
8 **(DO NOT READ)** Don't know
9 **(DO NOT READ)** Refused

ASK IF NON-INTERNET USERS BUT INTERNET USER IN HH (Q9=1):

Q9b And who is it in your household that uses the internet from home? **(PRECODED OPEN-END; ACCEPT UP TO THREE RESPONSES.) (IF NECESSARY, PROMPT:** Anyone else?) *{PIAL trend}*

1 Spouse/Partner
2 Child/Children
3 Grandchild/Grandchildren/Other Younger Relative
4 Parent/Grandparent/Aunt/Uncle/Older Relative
5 Other member of household not related to Respondent
6 Other **(SPECIFY)**
8 **(DO NOT READ)** Don't know
9 **(DO NOT READ)** Refused

ASK ALL NON-INTERNET USERS: (Q6a=2-9 and Q6b=2-9)

Q9c Did you **EVER** at some point use the internet or email, but have since stopped for some reason? *{PIAL trend}*

1 Yes
2 No
8 **(DO NOT READ)** Don't know
9 **(DO NOT READ)** Refused

ASK ALL NON-INTERNET USERS: (Q6a=2-9 and Q6b=2-9)

Q9d Would you like to start using the internet and email **(IF Q9c=1:** again), or isn't that something you're interested in? *{PIAL trend}*

1 Yes, interested
2 No, not interested
8 **(DO NOT READ)** Don't know
9 **(DO NOT READ)** Refused

ASK ALL NON-INTERNET USERS: (Q6a=2-9 and Q6b=2-9)

Q9e What is the MAIN reason you don't use the internet or email? **(PRECODED OPEN-END)** *{PIAL trend}*

1 Don't have access
2 It is too difficult/frustrating
3 I'm just not interested
4 I think it's a waste of time
5 It's too expensive
6 I'm too busy/Just don't have the time
7 Worried about computer viruses
8 Worried about spyware
9 Worried about adware
10 Worried about spam
97 Other **(SPECIFY)**
98 **(DO NOT READ)** Don't know
99 **(DO NOT READ)** Refused

End Timing Module 1
Start Timing Module 2
ASK ALL:

Q10 As I read the following list of items, please tell me if you happen to have each one, or not. Do you have… **[INSERT ITEMS IN ORDER]**? *{Modified Gadgets 2007}*

a. A desktop computer
b. A laptop computer

IF LANDLINE SAMPLE, ASK Q10c

c. A cell phone… or a Blackberry or iPhone or other device that is also a cell phone *{Modified August 2008}*
d. A P-D-A or other personal data device
e. An electronic Book device or e-Book reader, such as a Kindle or Sony Digital Book
f. An iPod or other MP3 player
g. A game console like Xbox or Play Station

CATEGORIES
1 Yes
2 No
8 **(DO NOT READ)** Don't know
9 **(DO NOT READ)** Refused

IF CELL PHONE SAMPLE, Mark Q10c=1.

IF Have Laptop (Q10b=1) and Internet User (Q6a=1 or Q6b=1), ASK:

Q11 On your laptop computer, do you use **[INSERT IN ORDER]**? *{New}*
a. WiFi or wireless connection to access the internet **[IF NECESSARY, READ:** WiFi is a short-range wireless internet connection.**]**
b. Wireless broadband, such as an AirCard, to access the internet **[IF NECESSARY, READ:** Wireless broadband is a longer-range wireless connection, offered by many telephone companies and others.**]**

CATEGORIES
1 Yes
2 No
8 **(DO NOT READ)** Don't know
9 **(DO NOT READ)** Refused

IF LAPTOP WIRELESS USER (Q11a=1 or Q11b=1), ASK:
Q12 On your laptop computer, how often do you access the internet using a wireless connection of any kind – several times a day, about once a day, 3-5 days a week, 1-2 days a week, every few weeks, less often or never? *{New}*
1 Several times a day
2 About once a day
3 3-5 days a week
4 1-2 days a week
5 Every few weeks
6 Less often
7 Never
8 **(DO NOT READ)** Don't know
9 **(DO NOT READ)** Refused

IF LAPTOP WIRELESS USER (Q11a=1 or Q11b=1), ASK:
Q13 When you access the internet **[INSERT IN ORDER]**, do you mostly do this at home, at work, or someplace other than home or work? *{New}*

ASK Q13a if Q11a=1
a. Using WiFi on your laptop computer

ASK Q13b if Q11b=1
b. Using Wireless Broadband on your laptop computer

CATEGORIES
1 Mostly at home
2 Mostly at work
3 Mostly someplace other than home/work
4 **(VOL.)** Yes, some combo of home/work/other
8 **(DO NOT READ)** Don't know
9 **(DO NOT READ)** Refused

IF Have Desktop (Q10a=1) and Internet User (Q6a=1 or Q6b=1), ASK:
Q14 On your desktop computer, do you use wireless broadband, such as an AirCard, to access the internet? **[IF NECESSARY, READ:** Wireless broadband is a longer-range wireless connection, offered by many telephone companies and others. It is NOT Wi-Fi.**]**
1 Yes
2 No

8 **(DO NOT READ)** Don't know
9 **(DO NOT READ)** Refused

IF HAVE CELL PHONE (Q10c=1)

Q15 Please tell me if you ever use your cell phone or Blackberry or other device to do any of the following things. Do you ever use it to **[INSERT ITEMS. ALWAYS ASK a-b FIRST in order. ROTATE c-j.]**? (Next, What about using it to… **[INSERT ITEM]**?)
[IF YES, ASK: Did you happen to do this YESTERDAY, or not?**]** *{2007 Gadgets}*

a. Send or receive email
b. Send or receive text messages
c. Take a picture
d. Play music
e. Send or receive Instant Messages
f. Record a video
g. Watch video
h. Play a game
i. Access the internet
j. Get a map or directions to another location

CATEGORIES

1 Yes, did this yesterday
2 Yes, do this (but NOT yesterday)
3 No, do not do this/Have not done this
8 **(DO NOT READ)** Don't know
9 **(DO NOT READ)** Refused

IF cell phone accesses internet (Q15a=1,2 or Q15i=1,2), ASK:

Q16 Using your cell phone, how often do you access the internet – several times a day, about once a day, 3-5 days a week, 1-2 days a week, every few weeks, less often or never? *{New}*

1 Several times a day
2 About once a day
3 3-5 days a week
4 1-2 days a week
5 Every few weeks
6 Less often
7 Never
8 **(DO NOT READ)** Don't know
9 **(DO NOT READ)** Refused

IF cell phone accesses internet (Q15a=1,2 or Q15i=1,2), ASK:

Q17 When you access the internet using your cell phone, do you mostly do this at home, at work, or someplace other than home or work? *{New}*

1 Mostly at home
2 Mostly at work
3 Mostly someplace other than home/work
4 **(VOL.)** Yes, some combo of home/work/other
8 **(DO NOT READ)** Don't know
9 **(DO NOT READ)** Refused

IF HAS ANY GADGET (any item Q10d-g=1), ASK:

Q18 Thinking about these various devices… Do you EVER access the internet or email using **[INSERT IN ORDER]**? **[If YES, ASK**: Do you mostly do this at home, at work, or someplace other than home or work?**]** *{New}*

ASK Q18a if Q10d=1

a. Your P-D-A or other personal digital data device

ASK Q18b if Q10e=1

b. Your electronic Book device or e-Book

ASK Q18c if Q10f=1

c. An iPod or other MP3 player

ASK Q18d if Q10g=1

d. A game console like Xbox or Play Station

CATEGORIES

1 Yes, mostly at home
2 Yes, mostly at work
3 Yes, mostly someplace other than home/work
4 **(VOL.)** Yes, some combo of home/work/other
5 No, do not access internet with this device
8 **(DO NOT READ)** Don't know
9 **(DO NOT READ)** Refused

ASK IF LAPTOP WIRELESS USER (Q11a=1 or Q11b=1) OR CELL PHONE USER (Q10c=1)

Q19 Thinking now about how you get information and communicate with others using a laptop or cell phone when you are AWAY from home and work… How important is it that…**[INSERT ITEM IN ORDER]**? **[READ FOR FIRST ITEM, THEN AS NECESSARY:**…very important, somewhat important, not too important or not at all important?**]**

a. You can stay in touch easily with other people
b. You have easy access to information online
c. You can share or post content online

CATEGORIES

1 Very important
2 Somewhat important
3 Not too important
4 Not at all important
5 **(DO NOT READ)** Does not apply/Do not use away from Home/Work
8 **(DO NOT READ)** Don't know
9 **(DO NOT READ)** Refused

End Timing Module 2
Start Timing Module 3

ASK ALL INTERNET USERS WHO DID NOT USE THE INTERNET YESTERDAY (Q7=2-9):

WEB-A Next...Please tell me if you ever use the internet to do any of the following things. Do you ever use the internet to… **[ASK Act01 FIRST, THEN ROTATE ITEMS]**? *{PIAL trend}*

ASK ALL (11 ITEMS)
ACT01 Send or read email *{Fall Tracking 2008}*
ACT02 Get news online *{Post Election 2008}*
ACT03 Get financial information online, such as stock quotes or mortgage interest rates *{Fall 2008}*
ACT16 Buy or make a reservation online for a travel service, like an airline ticket, hotel room, or rental car *{August 2008}*
ACT21 Do any banking online *{Fall 2008}*
ACT28 Look for religious or spiritual information online *{February 2007}*
ACT49 Make a donation to a charity online *{Spring 2008}*
ACT82 Use online classified ads or sites like Craig's-list *{September 2007}*
ACT87 Use a social networking site like MySpace, Facebook or LinkedIn.com *{Post-Election 2008}*
ACT112 Use Twitter or another service to share updates about yourself or to see updates about others *{Fall 2008}*
Act113 Watch a television show or movie online *{new}*
ASK FORM A ONLY (6 ITEMS)
ACT13 Go online for no particular reason, just for fun or to pass the time *{Gadgets 2006}*
Act15 Buy a product online, such as books, music, toys or clothing
ACT19 Look online for information about a job *{Spring 2008}*
ACT23 Play a lottery or gamble online
ACT24 Buy or sell stocks, mutual funds or bonds online *{Fall 2008}*
ACT29 Participate in an online auction *{September 2007}*
ASK FORM B ONLY (6 ITEMS)
ACT08 Check weather reports and forecasts online *{Spring 2008}*
ACT11 Look online for news or information about politics
ACT52 Use an online search engine to help you find information on the Web *{Spring 2008}*
ACT73 Rate a product, service or person using an online rating system *{September 2007}*
ACT102 Watch a video on a video-sharing site like YouTube or GoogleVideo *{Spring 2008}*
Act114 Participate in a video call or teleconference *{new}*

CATEGORIES WEB-A
1 Yes, do this
2 No, do not do this
8 **(DO NOT READ)** Don't know
9 **(DO NOT READ)** Refused
ASK ALL INTERNET USERS WHO USED THE INTERNET YESTERDAY (Q7=1):
WEB-B Next...Please tell me if you ever use the internet to do any of the following things. Do you ever use the internet to… **[ASK Act01 FIRST, THEN ROTATE ITEMS]**? *{PIAL trend}*
[IF YES ASK: Did you happen to do this YESTERDAY, or not?**]**
ASK ALL (11 ITEMS)
ACT01 Send or read email *{Fall Tracking 2008}*
ACT02 Get news online *{Post Election 2008}*
ACT03 Get financial information online, such as stock quotes or mortgage interest rates *{Fall 2008}*

ACT16 Buy or make a reservation online for a travel service, like an airline ticket, hotel room, or rental car *{August 2008}*
ACT21 Do any banking online *{Fall 2008}*
ACT28 Look for religious or spiritual information online *{February 2007}*
ACT49 Make a donation to a charity online *{Spring 2008}*
ACT82 Use online classified ads or sites like Craig's-list *{September 2007}*
ACT87 Use a social networking site like MySpace, Facebook or LinkedIn.com *{Post-Election 2008}*
ACT112 Use Twitter or another service to share updates about yourself or to see updates about others *{Fall 2008}*
Act113 Watch a television show or movie online *{new}*
ASK FORM A ONLY (6 ITEMS)
ACT13 Go online for no particular reason, just for fun or to pass the time *{Gadgets 2006}*
Act15 Buy a product online, such as books, music, toys or clothing
ACT19 Look online for information about a job *{Spring 2008}*
ACT23 Play a lottery or gamble online
ACT24 Buy or sell stocks, mutual funds or bonds online *{Fall 2008}*
ACT29 Participate in an online auction *{September 2007}*
ASK FORM B ONLY (6 ITEMS)
ACT08 Check weather reports and forecasts online *{Spring 2008}*
ACT11 Look online for news or information about politics
ACT52 Use an online search engine to help you find information on the Web *{Spring 2008}*
ACT73 Rate a product, service or person using an online rating system *{September 2007}*
ACT102 Watch a video on a video-sharing site like YouTube or GoogleVideo *{Spring 2008}*
Act114 Participate in a video call or teleconference *{new}*

CATEGORIES WEB-B
1 Yes, did this yesterday
2 Yes, do this (but NOT yesterday)
3 No, do not do this
8 **(DO NOT READ)** Don't know
9 **(DO NOT READ)** Refused
ASK IF WEBA Act113=1 or WEBB Act113=1,2
Q20 You mentioned you have watched a TV show or movie online. Have you ever connected your computer to a TV so you can watch video from the internet on the TV?
1 Yes, have done this
2 No, have not done this
8 **(DO NOT READ)** Don't know
9 **(DO NOT READ)** Refused
End Timing Module 3

Start Timing Module 4
ROTATE Q21 /Q22
ASK ALL:
Now thinking about the nation's economy…

Q21 How would you rate economic conditions in this country today… excellent, good, only fair, or poor? *{PRC Jan 2009}*

1 Excellent
2 Good
3 Only fair
4 Poor
8 **(DO NOT READ)** Don't know
9 **(DO NOT READ)** Refused

ASK ALL:

Now thinking about your own personal finances...

Q22 How would you rate your own personal financial situation? Would you say you are in excellent shape, good shape, only fair shape or poor shape financially? *{PRC Jan 2009}*

1 Excellent shape
2 Good shape
3 Only fair shape
4 Poor shape
8 **(DO NOT READ)** Don't know
9 **(DO NOT READ)** Refused

ASK ALL:

EMPL Are you now employed full-time, part-time, retired, or are you not employed for pay? *{PIAL trend}*

1 Employed full-time
2 Employed part-time
3 Retired
4 Not employed for pay
5 **(VOL.)** Disabled
6 **(VOL.)** Student
7 **(VOL.)** Other
9 **(DO NOT READ)** Refused

ASK ALL:

OWNRENT Do you own or rent your home? *{PRC Trend}*

1 Own
2 Rent
3 **(VOL.)** Other arrangement
8 **(DO NOT READ)** Don't know
9 **(DO NOT READ)** Refused

ASK ALL:

Q23 For each of the following, please tell me whether or not it is something that happened to you in the past 12 months. Have you **[INSERT ITEM IN ORDER] [IF NECESSARY:** in the past 12 months?**]**?

a. Been laid off or lost your job *{PSRAI}*
b. Seen your investments lose more than half their value *{modified PSRAI}*

ASK IF EMPL=1,2:

c. Had a cut in pay, reduction in hours, or loss of benefits at work *{PSRAI}*

ASK Q23d IF OWNRENT=1
d. Seen the value of your home drop by one-third or more *{new}*

CATEGORIES
1 Yes
2 No
3 **(VOL.)** Does not apply to me
8 **(DO NOT READ)** Don't know
9 **(DO NOT READ)** Refused

ASK ALL:
Q24 Thinking about your personal finances, have you done any of the following in the past 12 months? (First,) Have you **[INSERT ITEM; RANDOMIZE] [IF NECESSARY:** in the past 12 months**]**, or not? *{modified PRC Jan 2009}*
a. Cancelled a landline phone at home to save money
ASK 24b if Cell phone user (Q10c=1)
b. Cancelled your cell phone service or cut back to a cheaper plan
ASK 24c if Internet user (Q6a=1 or Q6b=1)
c. Cancelled or cut back on your internet service
d. Cancelled or cut back on cable TV services

CATEGORIES
1 Yes
2 No
3 **(VOL.)** Does not apply to me
8 **(DO NOT READ)** Don't know
9 **(DO NOT READ)** Refused

ASK ALL
Q25 I'd like to ask how you are dealing with the PERSONAL impact of the nation's economic problems. In the past twelve months, did you use any of the following sources to get information and advice about **your financial situation or your job situation**? Did you **[INSERT ITEM. ALWAYS ASK Q25a FIRST; RANDOMIZE Q25b-e. ALWAYS ASK Q25f LAST]** when you needed information or advice about YOUR financial or job situation? **[**Next, did you… **[INSERT] [IF NECESSARY:** …when you needed information or advice about YOUR financial or job situation**]**?**]**
a. Ask friends and family members
b. Ask a financial professional such as a broker or accountant
c. Use the internet
d. Use newspapers, magazines and books
e. Use television and radio
f. Use another source not mentioned already **(SPECIFY)**

CATEGORIES
1 Yes, I used that source
2 No, I did not use that source

8 **(DO NOT READ)** Don't know
9 **(DO NOT READ)** Refused

ASK IF Q25c<>1 and INTERNET USERS (Q6a=1 or Q6b=1):

Q26 In addition to the sources you just mentioned, do you ever use the internet to look for information or help with your financial or job situation?

1 Yes
2 No
8 **(DO NOT READ)** Don't know
9 **(DO NOT READ)** Refused

ASK ALL

Q27 Now I'd like to ask about how you are getting information about the NATION'S ECONOMIC PROBLEMS in general. In the past twelve months, did you use any of the following sources to get information, news and analysis about the nation's economic problems and the debates over how to fix the economy? Did you **[INSERT ITEM. ALWAYS ASK Q27a FIRST; RANDOMIZE Q27b-e. ALWAYS ASK Q27f LAST]** when you needed information, news and analysis about the nation's economic problems and the efforts to fix them? **[**Next, did you… **[INSERT]] [IF NECESSARY:** …when you needed information about the nation's economic problems and the efforts to fix them?**]**?

a. Ask friends and family members
b. Ask a financial professional such as a broker or accountant
c. Use the internet
d. Use newspapers, magazines and books
e. Use television and radio
f. Use another source not mentioned already **(SPECIFY)**

CATEGORIES

1 Yes, I used that source
2 No, I did not use that source
8 **(DO NOT READ)** Don't know
9 **(DO NOT READ)** Refused

ASK IF Q27c<>1 and INTERNET USERS (Q6a=1 or Q6b=1):

Q28 In addition to the sources you just mentioned, do you ever use the internet to look for information, news and analysis about the nation's economic problems and the efforts to fix them?

1 Yes
2 No
8 **(DO NOT READ)** Don't know
9 **(DO NOT READ)** Refused

ASK ALL INTERNET USERS (Q6a=1 or Q6b=1):

Q29 Thinking about all the ways you can use the internet to keep up with the news about the nation's economy… or to deal with your own financial situation… or to share your own thoughts about what is happening… About how often do you go online and do something related to the economy or your own situation… several times a day, about once a day, every few days, once a week, less often or never?

1 Several times a day
2 About once a day

3 Every few days
4 Once a week
5 Less often
6 Never
8 **(DO NOT READ)** Don't know
9 **(DO NOT READ)** Refused

DEFINE ONLINE ECONOMIC USERS
(Q29=1,2,3,4,5) or
WEB A/B Act03 or Act21=Yes or
Q25c=1 or Q26=1 or Q27c=1 or Q28=1

End Timing Module 4
Start Timing Module 5
ASK FORM A ONLY
ASK IF Online Economic Users
Q30 In the last 12 months, have you been going online to check information about the economy and your finances MORE OFTEN, LESS OFTEN or about as often as you have been doing in the past?
1 More often
2 Less often
3 About as often as in the past
8 **(DO NOT READ)** Don't know
9 **(DO NOT READ)** Refused
ASK FORM A ONLY
ASK IF Online Economic Users
Q31 Now, we'd like to ask if you've looked for information and help ONLINE about various economic and financial issues. Specifically, in the last 12 months, have you looked online for… **[INSERT FIRST ITEM]**? **[IF NECESSARY:** In the last 12 months,**]** Have you looked online for… **[INSERT NEXT ITEM: RANDOMIZE]**? *{new}*
[ASK a-c IN ORDER, then RANDOMIZE d-k.]
a. Help and information about how to spend less on everyday necessities such as food and clothing
b. Advice about how to protect your personal finances in this difficult economy
c. Information to help you understand the nation's economic problems
d. Information about the value of your house
e. Information about jobs that might be available
f. Information about unemployment or other government benefits
g. Information about getting a loan, such as an auto loan
h. Information about ways to earn more money, including taking a 2nd job
i. Information about how to improve your skills to qualify for a better job
j. Information about filing for bankruptcy
k. Rankings or reviews online of financial companies or professionals

CATEGORIES

1 Yes, have done this
2 No, have not done this
3 **(VOL.)** Does not apply to me
8 **(DO NOT READ)** Don't know
9 **(DO NOT READ)** Refused

ASK FORM A ONLY
ASK IF Online Economic Users

Q32 In the last 12 months, have you gone online to… **[INSERT FIRST ITEM]**? **[IF NECESSARY:** In the last 12 months,**]** Have you gone online to… **[INSERT IN ORDER]**? *{new}*

a. Sell personal items through auction sites such as E-Bay or online classified sites like Craigslist?
b. Find and use online coupons to save money on something you needed to buy
c. Find the lowest price available for something you needed to buy

CATEGORIES
1 Yes, have done this
2 No, have not done this
3 **(VOL.)** Does not apply to me
8 **(DO NOT READ)** Don't know
9 **(DO NOT READ)** Refused

ASK FORM A ONLY
ASK IF Online Economic Users

Q33 I'm going to read a list of things you may or may not have ever done online related to economic issues or personal finances. Just tell me if you happened to have done each one, or not, in the last 12 months. (First,) have you … **[INSERT ITEM; RANDOMIZE]** in the last 12 months? (Next,) in the last 12 months, have you… **[INSERT ITEM]**? *{New, Fall Tracking model}*

a. Signed up to receive online updates about general economic news or personal financial issues
b. Shared photos, videos or audio files online about economic or financial issues
c. Tagged or categorized online content about economic or financial issues

CATEGORIES
1 Yes
2 No
8 **(DO NOT READ)** Don't know
9 **(DO NOT READ)** Refused

ASK FORM A ONLY
ASK IF Online Economic Users

Q34 Have you ever posted comments, queries or information about the economy or personal finances in any of these places online? **[INSERT ITEM; RANDOMIZE]**? **[READ FOR FIRST ITEM, THEN AS NECESSARY:** Have you ever posted there about general economic or personal financial matters?**]** (Next,) how about…**[INSERT ITEM]**? *{New, Fall Tracking model}*

a. In an online discussion, a listserv, or other online group forum

b. On a blog

ASK c IF SOCIAL NETWORKING SITE USERS (ACT87a=1 or ACT87b=1,2):

c. On a social networking site such as Facebook, MySpace or LinkedIn

d. On a website of any kind, such as a financial site or news site that allows comments and discussion

ASK e IF TWITTER USERS (ACT112a=1 or ACT112b=1,2):

e. On Twitter or other status updates

CATEGORIES

1 Yes
2 No
8 **(DO NOT READ)** Don't know
9 **(DO NOT READ)** Refused

ASK FORM A ONLY

ASK SOCIAL NETWORKING SITE USERS (ACT87a=1 or ACT87b=1,2):

Q35 Thinking about what you have done on social networking sites like Facebook and MySpace, have you… **[INSERT ITEM; ROTATE]**? (Next,) have you…**[INSERT ITEM]**?

a. Started or joined a finance-related group on a social networking site
b. Followed your friends' personal financial experiences on a social networking site
c. Shared your own financial experiences on a social networking site
d. Contacted others through the site about the possibility of a new job
e. Discussed the possibility on a social networking site that you or others might lose their jobs

CATEGORIES

1 Yes
2 No
8 **(DO NOT READ)** Don't know
9 **(DO NOT READ)** Refused

ASK FORM A ONLY

ASK IF Online Economic Users

Q36 What impact, if any, has the information and advice you found online had on your personal finances and decisions? (First,) has what you found online had a MAJOR impact, a MINOR impact or no impact at all on… **[INSERT; ROTATE]**? How much of an impact has what you found online had on **[INSERT] [IF NECESSARY:** - a MAJOR impact, a MINOR impact or no impact at all**]**? *{new}*

a. Helping you cut back on everyday expenses such as food, gas and clothing
b. Helping you decide whether to change jobs
c. Helping you decide whether to move to a new city or town
d. Helping you upgrade your job skills
e. Helping you decide whether to start a new business

CATEGORIES

1 Major impact
2 Minor impact
3 No impact at all

8 **(DO NOT READ)** Don't know
9 **(DO NOT READ)** Refused

ASK FORM A ONLY
ASK IF Online Economic Users

Q37 Now, I'd like to ask if you've used the internet to relax and to help get your mind off all the economic and financial problems. Specifically, in the last 12 months, have you gone online to do any of these things to help you relax? First, have you… **[INSERT ITEM]** to help you relax? **[IF NECESSARY:** In the last 12 months,**]** Have you… **[INSERT NEXT ITEM: RANDOMIZE]** to help you relax? *{new}*

a. played an online game
b. watched videos online, which includes short video clips or a entire movie
c. chatted with friends on a social networking site, a listserv or online group
d. listened to music online
e. created or posted content online, such as a picture, video or blog post

CATEGORIES
1 Yes, have done this
2 No, have not done this
3 **(VOL.)** Does not apply to me
8 **(DO NOT READ)** Don't know
9 **(DO NOT READ)** Refused

End Timing Module 5
Start Timing Module 6
ASK IF Online Economic Users

Q38 Now thinking about all the information, news and advice you have seen online about the economy and finances … Overall, has what you learned online improved your understanding of the nation's financial crisis, left you more confused or has it made no difference?
1 Improved your understanding
2 Left you more confused
3 Made no difference
4 **(VOL.)** A combination
8 **(DO NOT READ)** Don't know
9 **(DO NOT READ)** Refused

ASK IF Online Economic Users

Q39 Still thinking about what you have learned online… has what you learned online made you more CONFIDENT… or more WORRIED about… **[INSERT IN ORDER]** or has it made no difference? (Next,) has what you learned online made you more confident or more worried about… **[INSERT]** or has it made no difference?
a. The nation's economic future
b. The stability of banks
c. Your family's financial future
d. Your own ability to make good decisions about your finances and career

CATEGORIES
1 More confident
2 More worried

3 Made no difference
4 **(VOL.)** A combination
8 **(DO NOT READ)** Don't know
9 **(DO NOT READ)** Refused

End Timing Module 6

ASK IF USE INTERNET AT HOME (Q8a=1-6):

MODEM At home, do you connect to the internet through a dial-up telephone line, or do you have some other type of connection, such as a DSL-enabled phone line, a cable TV modem, a wireless connection, a fiber optic connection such as FIOS (F-EYE-os) or a T-1? *{modified PIAL Trend}*

1 Dial-up telephone line
2 DSL-enabled phone line
3 Cable modem
4 Wireless connection (either AirCard, "land-based" or "satellite")
5 Fiber optic connection
6 T-1 connection
7 Other **(SPECIFY, MAKE SURE NOT ONE OF ABOVE)**
8 **(DO NOT READ)** Don't know
9 **(DO NOT READ)** Refused

Start Timing Module 7

ASK FORM B ONLY

Network Do you happen to have a computer network that links your computers at home together, whether through network cables or a wireless network?

1 Yes, through cables
2 Yes, wireless
3 No network
8 **(DO NOT READ)** Don't know
9 **(DO NOT READ)** Refused

ASK FORM B ONLY

IF HAVE BB AT HOME (MODEM=2-6):

Q40 Thinking about your high-speed internet service at home, do you subscribe to a basic broadband service, or do you pay extra for a premium service that promises faster speed? *{Spring 2008 Tracking}*

1 Subscribe to basic service
2 Subscribe to premium service at higher price
8 **(DO NOT READ)** Don't know
9 **(DO NOT READ)** Refused

ASK FORM B ONLY

ASK IF HAVE BB AT HOME (MODEM=2-6):

Q41 Do you know if there is more than one company or other provider of high-speed or broadband internet service in your area? *{Modified December Tracking 2005}*

1 Yes
2 No
8 **(DO NOT READ)** Don't know
9 **(DO NOT READ)** Refused

ASK FORM B ONLY
ASK IF 2+ BB PROVIDERS IN AREA (Q41=1):
Q42 How many broadband internet providers are there in your area? **[IF NECESSARY:** Just your best guess is fine.**]** *{NEW}*
2-7 **[ENTER EXACT NUMBER]**
8 **(DO NOT READ)** Don't know
9 **(DO NOT READ)** Refused
ASK FORM B ONLY
ASK ALL R except MODEM=2,3,5,6
Q43 Do you happen to know whether high-speed internet service is available in your neighborhood from a telephone company, a cable company or any other company? *{Spring 2008 Tracking}*
1 Yes
2 No
8 **(DO NOT READ)** Don't know
9 **(DO NOT READ)** Refused
ASK FORM B ONLY
ASK HAVE INTERNET AT HOME (Q8A=1-6):
Q44 To the nearest dollar, about how much do you pay each month for internet access at home? If your internet access is combined with television or other services, I would like to know just the amount you pay for internet service. *{Spring 2008 Tracking}*
_____ **(ENTER AMOUNT, IN DOLLARS; RANGE 1-996)**
997 Nothing/Do not pay/Get access through work or school
998 Don't know
999 Refused
ASK FORM B ONLY
ASK IF Wi-Fi or Wireless Broadband users (Q11a=1 OR Q11b=1)
Q45 Do you pay an extra monthly fee for internet access when you are on the go, such as a monthly fee for wireless broadband through an Aircard, or a monthly data charge on your cell phone? *{New}*

1 Yes
2 No
8 **(DO NOT READ)** Don't know
9 **(DO NOT READ)** Refused
ASK IF HAVE BB AT HOME (MODEM=2-6):Q46Having a high-speed or broadband internet connection is important to some people, but not to others, when it comes to keeping up-to-date. How important do you think a high-speed internet connection is for each of the following? (First,) **[INSERT ITEM; RANDOMIZE]**? How about **[INSERT ITEM]**? **[READ FOR FIRST ITEM, THEN AS NECESSARY:** Do you think high-speed or broadband internet connection is very important, somewhat important, not too important or not important at all to this?**]**
a. Finding out what is going on in your community
b. Contributing to economic growth in your community
c. Communicating with government officials about issues

d. Sharing your views with others about key issues
e. Communicating with health care or medical providers

CATEGORIES

1 Very important
2 Somewhat important
3 Not too important
4 Not important at all
8 **(DO NOT READ)** Don't know
9 **(DO NOT READ)** Refused

ASK FORM B ONLY
IF HAVE DIAL-UP AT HOME (MODEM=1):

Q47 Would you LIKE to have a faster, "broadband" connection, or isn't that something you're interested in? *{Spring 2008 Tracking}*

1 Yes, interested
2 No, not interested
8 **(DO NOT READ)** Don't know
9 **(DO NOT READ)** Refused

ASK FORM B ONLY
IF HAVE DIAL-UP AT HOME (MODEM=1):

Q48 What would it take to get you to switch to broadband? **(PRE-CODED OPEN-END. ACCEPT UP TO TWO RESPONSES)** *{Spring 2008 Tracking}*

1 The price has to come down/be more affordable/Cheaper
2 It would have to become available where I live
3 Someone else will pay for it
4 When my children get older
5 When my cable/telephone company offers it where I live
6 Nothing will convince me to get broadband
8 Other **(SPECIFY)**
98 Don't know
99 Refused

End Timing Module 7

ASK FORM A ONLY

VOTE01 Now thinking BACK to the 2008 presidential election when Barack Obama ran against John McCain… A lot of people tell us they didn't get a chance to vote in the 2008 presidential election. How about you... did things come up that kept you from voting, or did you happen to vote?

1 Yes, voted
2 No, did not vote
8 **(DO NOT READ)** Don't know/Can't remember
9 **(DO NOT READ)** Refused

ASK FORM A ONLY
IF respondent voted in the 2008 presidential election (Vote01=1), ASK:

VOTE02 In the 2008 presidential election, did you happen to vote for **[ROTATE:** (John McCain,) / (Barack Obama,)**]** or for someone else?

1 John McCain

2 Barack Obama
3 **(VOL.)** Other
8 **(DO NOT READ)** Don't know/Can't remember
9 **(DO NOT READ)** Refused

DEMOGRAPHICS
Start Timing Module 8
(READ) A few last questions for statistical purposes only…
ASK ALL:
AGE What is your age?

_____ years **[RECORD EXACT AGE 18-96]**
97 97 or older
98 Don't know
99 Refused

ASK ALL:
MAR Are you currently married, living with a partner, divorced, separated, widowed, or have you never been married?
1 Married
2 Living with a partner
3 Divorced
4 Separated
5 Widowed
6 Never been married
7 Single **(VOL.)**
8 **(DO NOT READ)** Don't know
9 **(DO NOT READ)** Refused

ASK ALL:
PAR Are you the parent or guardian of any children under age 18 now living in your household?

1 Yes
2 No
8 **(DO NOT READ)** Don't know
9 **(DO NOT READ)** Refused

ASK ALL:
EDUC What is the last grade or class you completed in school? **(DO NOT READ, BUT CAN PROBE FOR CLARITY IF NEEDED).**

1 None, or grades 1-8
2 High school incomplete (grades 9-11)
3 High school graduate (grade 12 or GED certificate)
4 Technical, trade or vocational school AFTER high school
5 Some college, no 4-year degree (includes associate degree)
6 College graduate (B.S., B.A., or other 4-year degree)
7 Post-graduate training/professional school after college (toward a Masters/Ph.D., Law or

Medical school)
8 **(DO NOT READ)** Don't know
9 **(DO NOT READ)** Refused

ASK ALL:
HISP Are you, yourself, of Hispanic or Latino origin or descent, such as Mexican, Puerto Rican, Cuban, or some other Latin American background?

1 Yes
2 No
8 **(DO NOT READ)** Don't know
9 **(DO NOT READ)** Refused

ASK ALL:
RACE What is your race? Are you white, black, Asian, or some other race? **IF R SAYS HISPANIC OR LATINO, PROBE**: Do you consider yourself a WHITE (Hispanic/Latino) or a BLACK (Hispanic/Latino)? **IF R DOES NOT SAY WHITE, BLACK OR ONE OF THE RACE CATEGORIES LISTED, RECORD AS "OTHER" (CODE 6)**

1 White
2 Black or African-American
3 Asian or Pacific Islander
4 Mixed race
5 Native American/American Indian
6 Other **(SPECIFY)**
8 **(DO NOT READ)** Don't know
9 **(DO NOT READ)** Refused

ASK ALL:
INC Last year, that is in 2008, what was your total family income from all sources, before taxes? Just stop me when I get to the right category… **[READ 1-9]**

1 Less than $10,000
2 $10,000 to under $20,000
3 $20,000 to under $30,000
4 $30,000 to under $40,000
5 $40,000 to under $50,000
6 $50,000 to under $75,000
7 $75,000 to under $100,000
8 $100,000 to under $150,000
9 $150,000 or more
98 **(DO NOT READ)** Don't know
99 **(DO NOT READ)** Refused

ASK IF DUAL REACHED ON LANDLINE PHONE (LANDLINE SAMPLE AND Q10c=1):
L2. Of all the telephone calls that you receive, do you get **[READ AND ROTATE OPTIONS 1 AND 3—KEEP 2 ALWAYS IN THE MIDDLE]**?

1 All or almost all calls on a cell phone

2 Some on a cell phone and some on a regular home phone
3 All or almost all calls on a regular home phone
8 **(DO NOT READ)** Don't know
9 **(DO NOT READ)** Refused

ASK ALL CELL PHONE SAMPLE:
C1. Now thinking about your telephone use… Is there at least one telephone INSIDE your home that is currently working and is not a cell phone?
1 Yes, home telephone
2 No home telephone
8 **(DO NOT READ)** Don't know
9 **(DO NOT READ)** Refused
ASK IF DUAL REACHED ON CELL PHONE (C1=1):
C2. Of all the telephone calls that you receive, do you get **[READ AND ROTATE OPTIONS 1 AND 3—KEEP 2 ALWAYS IN THE MIDDLE]**?
1 All or almost all calls on a cell phone
2 Some on a cell phone and some on a regular home phone
3 All or almost all calls on a regular home phone
8 **(DO NOT READ)** Don't know
9 **(DO NOT READ)** Refused
ASK ALL:
ZIPCODE What is your zip code?

_____ **ENTER ZIPCODE**
99999 Don't know/Refused
End Timing Module 8
ASK CELL PHONE SAMPLE ONLY:
MONEY10 That's the end of the interview. We'd like to send you $10 for your time. Can I please have your full name and a mailing address where we can send you the money?
[INTERVIEWER NOTE: If R does not want to give full name, explain we only need it to send the $10 out to them personally.**]**
1 **[ENTER FULL NAME] –** INTERVIEWER: PLEASE VERIFY SPELLING
2 **[ENTER MAILING ADDRESS]**
3 **[City]**
4 **[State]**
5 **[Confirm Zip code]**
9 Respondent does not want the money **(VOL.)**
THANK RESPONDENT: That concludes our interview. The results of this survey are going to be used by a non-profit research organization called the Pew Internet & American Life Project, which is looking at the impact of the internet on people's lives. A report on this survey will be issued by the project in a few months and you can find the results at its web site, which is www.pewinternet.org [w-w-w dot pew internet dot org]. Thanks again for your time. Have a nice day/evening.

VITA

Graduate School
Southern Illinois University

Jonathan A. Cape

jcape42@gmail.com

Southern Illinois University Carbondale
Bachelor of Science, Law Enforcement and Justice Administration and Political Science, August 2003

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BROADBAND ADOPTION IN ILLINOIS

Major Professor: Dr. Ira A. Altman