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# Perspectives on Technology Change and the Marketing of Real Estate

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*The University of Southern Mississippi*

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The University of Southern Mississippi

**Perspectives on Technology Change and the Marketing of Real Estate**

Sarah Stetelman

A Thesis

Submitted to the Honors College of  
The University of Southern Mississippi  
in Partial Fulfillment  
of the Requirements for the Degree of  
Bachelor of Business Administration  
in the Department of Finance, Real Estate, and Legal Studies

May 2012

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**Abstract:**

Over the last ten years, technology has drastically changed the way people work, communicate, and receive information. Real estate brokers, like many other businesses, have found themselves falling behind the technology curve and are struggling to quickly incorporate social networking and Smartphone technologies into their marketing plans. Using data from the National Association of Realtors annual home buying and selling survey, this study examines how home buyers use technology to assist in their home search process. In addition, this study compares how homebuyers are using technology to how effective local real estate brokers perceive technology to be in marketing real estate.

## **Chapter I: The Problem**

Every year, many new devices and technological advances are made. These changes in the way the world operates also affect the business world. From different types of communication to the variety of ways to purchase products, business professionals must keep up with the new technology trends in order to succeed. The changes in the way business tasks are completed do not stop at products; there are many different ways to market and advertise on the Internet for a variety of demographics. According to Mark Heschmeyer (2010), a Costar National Real Estate analyst, many social networking Websites are not yet promoted for the professional world, but in the future social networking will be an easier, more convenient way to do business. The widespread acceptability of social networks will only encourage professionals to start operating business in a new way. Whether on blogs or Facebook, business is taking off in a different direction, and business owners need to observe the change in order to improve their performance as a whole.

There has not been a great amount of research on the change of technology in the real estate market. In the past, studies have been made in order to see what devices draw in the most customers and help business performance (Colwell 1995), but the results are from several years ago. Furthermore, there is a lack of research on the technology changes and the effects on customers or clients and real estate agents. If proper research is not done to educate real estate agents and businesses on the proper ways to operate in business from technology advances, they will find themselves behind the times.

Although technology and its effects have not been studied much in the real estate market, these facts do not mean that changes are not already being made. Cell phones ring constantly, consumers are always searching for new, good buys via the Internet, and new innovations are being made to detect problems in real estate before they even occur (Randell 2009). This study seeks to provide information about the changes in technology in the years 2003 and 2009 for clients and real estate agents. The survey results used to compare the technology use and change of the methods used to find residential real estate are from the Home Buyer and Seller Survey conducted by the National Association of Realtors. The purpose of this study is to find new information about the use of technology and the changes that have been made in the years 2003 and 2009. The information gathered for this study will show the direct effects of technology and real estate method changes on customers or clients and real estate agents.

As mentioned previously, there have not been many studies conducted on the changes of technology and its effects on the real estate market. The valuable contribution to knowledge that this study offers is a new outlook on technology for the real estate market. Realtors need to understand where their clients are getting their information and which outlets are the most effective for different age groups.

The National Association of Realtors conducts the Home Buyer and Seller Survey. This quantitative survey is sent out annually to home sellers and buyers and asks questions applicable to buyers only, sellers only, and both buyers and sellers. For this study, the 2003 and 2009 survey results will be used. The 2003 survey contained 82 questions, and the 2009 survey contained 116 questions. There is a particular section about the use of technology on each survey. The technology sections of years 2003 and

2009 were compared. Furthermore, there was a separate survey made based off of the National Association of Realtors Home Buyer and Seller Survey for real estate agents. This second survey examined Realtor's thoughts as to where their clients and customers get information about residential real estate property. The results from these three surveys are used to compare marketing methods over time.

Due to the lack of research done in the technology and real estate fields, the information from this study will benefit future buyers, sellers, and brokers of real estate. It can be implied from the basic advances in technology and social networking Websites in the past ten years that there has been an increase in the use of technology by clients and real estate agents. This information alone will help businesses learn what needs to be done in order to target the correct market and succeed in the real estate industry.

In summary, this study focuses on the changes of technology in the real estate market for buyers, sellers, and real estate agents. This thesis will primarily address the following research questions: "What has been the impact of technology as it relates to both real estate clients and agents?" More specifically, was there a change in methods used that can be measured from the year 2003 to 2009? The following chapters will include a review of the literature (Page 8) and methodology (Page 15) used to conduct this study, an analysis of results from the three surveys, and finally some concluding remarks.



## **Chapter 2: Review of the Literature**

Over the past few decades, research has been done on real estate, real estate investments, and the changes in the real estate market. However, technology is a relatively new term used in the real estate market. Technology can be defined as “the branch of knowledge that deals with the creation and use of technical means and their interrelation with life, society, and the environment, drawing upon such subjects as industrial arts, engineering, applied science, and pure science.” (Smith 2004).

Technology has a great effect on business as a whole, specifically real estate. There has not been much research on technology in the field of real estate. Furthermore, the following paragraphs include the few studies relating to technology advances in the real estate industry.

### **Earlier Technology Use in Real Estate**

Achayra, Albert, and Zimmerman (2010) conducted a study on the influence of email marketing on real estate agent performance. The problem that the researchers addressed was how new advances in communication and information technologies, particularly by customers, are revolutionizing the way real estate transactions are conducted. Many clients are now using innovative information tools such as PDAs (Personal Digital Assistant), email, MLS (Multiple Listing Service), and the Internet to search for available properties, evaluate property features, locate nearby amenities, and compare market prices. This study found that the empirical results supported the hypothesis that an agent’s perception and attitude toward information and technology affects their decision to use email marketing. Therefore, if the real estate agents had a

positive attitude toward technology, then they would use email. In addition to attitude, the results showed that firm size and agent's business experience play important roles in determining their choice of marketing tools. In other words, those real estate agents in larger firms were more likely to use email. Older generations usually do have a fear about switching to a more advanced, unknown way of doing business. The main concern with such a technology savvy world is that personal communication is lost. However, with the option of technology, real estate agents can now target both markets of technology users and non-technology users.

Smith (2004) hypothesized that real estate agents are now using technology as a leveraging device to redefine everything from operations to tenant's experience. A technology-enabled business, however, does change the rules of competition in every industry including real estate and business. Smith made several arguments in his study such as the following: 1. Businesses are now providing Internet networks that give real time and round-the-clock diagnostics. 2. New changes can optimize performance and anticipate problems before different systems fail. 3. Businesses need to ask several internal questions in order to decide what technology would be right for them.

Ford, Rutherford, and Yavas (2005) examined the effect of price and marketing time on listings of properties on the Internet in addition to listing the same properties on the Multiple Listing Service (MLS). The researchers found that larger properties, builder owned houses, listings by agents compared to brokers, agents with more than five years of experiences compared to agents with 3-5 years of experience, and properties participating in a tour of homes and houses listed by an agent that works for a franchise were more likely to list on the Internet. Vacant properties, tenant occupied properties,

houses with land greater than one acre, houses listed by new agents, and newer properties were less likely to be listed on the Internet. These results indicate that Internet listings remain on the market about 11% longer than houses not listed on the Internet and sell at a price premium of 1.93%. These results, while statistically significant, are relatively small. The 11% indicates about 6 extra days for marketing time, and the 1.93% premium on the price is approximately \$2900 for the average house. The findings indicate that clients are probably best served by having their properties listed on the Internet in addition to listing on the MLS. Furthermore, both of the above studies indicate that technology is changing the real estate market at a fast pace, and in order for buyers and sellers to keep up, properties need to be listed in as many ways as possible.

### **Social Networking: A Possible Future**

Social networking is a trend that has really taken off in the last decade. Social networking has grown to be a part of many different parts of real estate; however, the current form of social networking is not professional enough to replace business transactions. Researchers do think, however, that social networking websites will be capable of advanced business transactions in the future (Heschmeyer 2010). Heschmeyer compared the present day business world to the movie *The Social Network*. Several other social networking websites such as Twitter were also analyzed. Many interviews were done to get opinions about social networking from many business professionals. Furthermore, a survey was conducted about the information provided by various social networking websites for the general public, but the choice on the survey did not include email, so these results could be skewed. Heschmeyer found that many social networking

websites are not about the professional world; but, in the future, social networking will be an easier and more convenient way to do business. The widespread acceptability of social networks will only encourage professionals to start operating their business in a new way. In the end, the main purpose of various social networking websites is to build contacts and keep in touch with friends. However, there are already more professional networking devices available such as LinkedIn. On a different note, there are many problems with a technology-based business world. It can be difficult to act professionally on social networking websites. It is difficult to maintain social skills required in face-to-face business deals, and older generations might not be satisfied with a completely new way of operating business (Heschmeyer 2010).

Blake, Bond, Seiler, and Seiler (1999) examined the uses of websites for executive real estate marketing. Since many products are now available on the Internet, and the real estate world is not excluded, brokers do need to keep up with the demands of the technologically advanced buyers and sellers. Their study researched the various brokerage websites in order to gather listing information. In the end, the study found that many firms either have or intend to create a website in the future. Also, the information that was presented on each website increased each year in order to make the firm have a competitive advantage. This study was performed in 1999, and the conclusion has been seen to be true. Now, it is rare to see a brokerage firm without a website that does not contain a great deal of information about each property. It can be implied that this trend will continue to increase as the demand for quick buys on the Internet continues to increase.

## **Technology and Sellers**

Colwell and Yavas (1995) looked at the different marketing systems for various properties and how there is a direct relationship with the selling price of a property. There was evidence that using the MLS decreased the selling price of a property. The researchers did find that more research needed to be done in order to prove that the MLS either is or is not the only reason that a price decrease occurred when buying or selling. Advertisements in newspapers, magazines, and other outlets of marketing are still needed in order to find the perfect match between buyer and seller. This study was conducted many years ago, and now use of the MLS is much more ubiquitous. When MLS systems were first in use, it was a great expense, but now that most firms use the MLS, there is a great deal of time and money that can be saved from participating in the MLS (Randell 2009).

Whenever a seller decides to put a house on the market, they have the choice to use technological advances that affect the selling price and the time that the property is on the market. Nearly 20 years ago, one of these innovations was a lockbox on the front door for protection purposes and to increase showings with less communication time. Benjamin and Chinloy (1995) found that about 60% of all the sellers adapted to a lockbox. This simple switch led many new homeowners to adapt to increased security and technology. Accordingly, the homeowners that made the switch saw a 9.6% increase from the asking price. If this study was performed again today, it would be ideal to compare the different technology that was affecting real estate 15 years ago with today's technology that affects real estate. Any innovation can be adapted into the economy; however, in the end, it is up to the consumer whether to accept or reject the new

technology.

Zumpano, Johnson, and Anderson (2003) conducted a very relevant study that examined the factors that influence the use of the Internet as part of the home buying process and the resulting effect on the efficacy of buyer search. They found that the use of the Internet as a search tool did not reduce buyer search time; instead, the Internet encourages buyers to search more intensively. With the Internet, properties are much easier to learn about and research, and the Internet allows buyers to visit more properties without an increase in search duration. These findings suggest that broker's role as market intermediaries is changing. As long as brokers remain in the search loop, they will continue to earn a commission; however, if they lose control of the listings that appear on the Internet, the situation could change.

Although there is a great deal of research in the real estate market, it is quite rare to find current research done on technology in the real estate field. The articles that are published relating to the changes in technology are outdated and many conflict with current trends. However, these studies can be used to compare past and present results in technology. Furthermore, brokerage firms need to understand where their customers are finding information about real estate. This information alone can revolutionize the way that real estate agents market to different people.

The literature found in the technology real estate field is outdated, but, at the same time, helpful. The surveys used in this research study are from 2003 and 2009. For the most part, the sections that ask the technology questions did not even exist on the surveys several years ago. In the 20 years since the introduction of the lockbox, technology has changed the way people access information and do business. Thus, an updated view of

the use of technology in the real estate field is needed.

### **Research Questions**

To find the outlet that the market is using to browse, purchase, and sell property will be beneficial to brokers. This study asked: 1. Are there any measurable changes in the methods used to find residential real estate? 2. Did the use of technology increase in the home buying process? 3. Did demographics play any role in the increase or decrease of each method used? In order to determine the main outlets used, results from a survey of all homebuyers and sellers conducted by the National Association of Realtors were compared between 2003 and 2009. Furthermore, an additional survey was created to see where brokers and real estate agents thought their buyers and sellers were looking for the information about real estate properties and companies. It can be hypothesized that the change in technology from the years of 2003 to 2009 has increased by a measurable percent. Also, at the rate that inventions are discovered and new products are made, it can be assumed, that this trend will continue for many years to come. The following chapter will examine the methodology used for this research project.

### **Chapter 3: Methodology**

Technology use in the business field is becoming more common. The real estate market is now using different methods such as technology to improve the buying and selling process of property. This advancement could change the way that real estate brokers operate on a day-to-day level all the way to long term planning.

#### **The National Association of Realtor's Survey**

In order to find out about the change of the use of technology for buyers and sellers between the years 2003 and 2009, the National Association of Realtors annual survey was examined. The NAR survey asked more than one hundred questions. This survey was administered to anyone that bought or sold property in the past year. The NAR survey consisted of questions about the buyer and seller, about the process the buyer and seller went through to purchase or sell the property, and the different steps that they buyer and seller went through for each action of the buying and selling process. There are several questions that asked about the buying and selling process. Furthermore, there was a section in the NAR survey for the different technology methods that each individual could use in order to buy or sell a home. A large portion of additional technology-based questions were derived from the buyer or seller method of finding out about the property and how effective each method was. The other questions examined pertained to traditional methods such as yard signs and newspapers and how effective the buyers and sellers thought these methods were. In Hattiesburg, brokers in the local area answered a 22- question survey that had similar questions such as the National Association of Realtors survey. This survey contained demographic questions and



questions that examined the brokers' opinions on various traditional and modern methods for marketing real estate.

### **The Real Estate Agent Survey**

The second survey that was targeted to brokers asked similar questions as the NAR survey, but the questions were based on what the agent thought the majority of buyers and sellers did, not the agent's actions. This study was analytical: after gathering the information from all of the surveys, regression analysis was performed to determine how every demographic utilized technology in the buying and selling process.

### **Research Elements**

Not just anyone could be a participant in this study. The participants in this study were anyone nationwide that bought or sold a home and answered the National Association of Realtors annual survey in the years of 2003 and 2009 and the local real estate agents that answered the survey created based on the questions in the National Association of Realtors survey in the technology and demographic sections.

In order to interpret the data to arrive at the results of this study, the units of analysis, research variables, and research instruments need to be discussed. One unit of analysis was one answered survey from a buyer, seller, or real estate agent. The research variables in this study are attributes such as the percentage of people saying that they are or are not using technology to buy or to sell property and how these results have changed over time. The crucial research instruments that were used were the surveys made by the National Association of Realtors and the survey made for the real estate agents based on the technology section of the previously mentioned survey.

## **The Data**

The National Association of Realtors had already collected the data from the surveys that they sent out. Qualtrics survey software administered the real estate agent's survey and automatically collected and graphed the data as each survey was answered. Once the collection of data from the survey was collected, regression analysis was performed in order to determine the technology opinions real estate agents perceived buyers and sellers to have.

## **Validity**

There are some factors that affect the validity to this study. First of all, the National Association of Realtors survey was reliable because it has been the same questions on each survey for many years. Therefore, the buyers and sellers in 2003 were asked similar questions to the buyers and sellers in 2009. Furthermore, this study was nationwide, so there was a larger population to make sure the information was normally distributed. However, the survey that was created for the real estate brokers could have skewed results. Since this survey was done online, people that are already technologically savvy are more likely to choose to respond to the survey. The results could be biased because the survey design may favor respondents who are more familiar with or place a higher value on technology. Furthermore, the survey that was made was distributed to only states in the southern region; it was not nationwide like the National Association of Realtor's survey.

The following chapters examine the results after reviewing each survey and reporting and interpreting the data.

## Chapter 4: Results

The results from the National Association of Realtors 2003 and 2009 survey, as well as, the survey administered to licensed realtors were both put into a computer software program called Stata. This software ran multiple regression analysis on the surveys, so that accurate conclusions could be drawn.

### 2003 Survey Data Results

The 2003 survey examined the responses of 3,704 observations. In 2003, technology started to take an advanced turn. This was the time that social media Web sites such as Facebook were becoming popular. The survey that the National Association of Realtors distributed the year of 2003 was slightly simpler than the survey of 2009, because there were not any questions about social media Web sites.

**Table 1** presents the definitions of each dummy variable for the following tables. **Table 2** displays the survey question: “What actions did you take as a result of accessing real estate information on the Internet? (Check all that apply).” **Table 2** shows that after viewing real estate information online, respondents mainly follow up by driving by or touring properties. **Table 3** indicates the results for the following survey question, “Did you use any of the following real estate Web sites in your home search? (Check all that apply).” **Table 3** shows each possible real estate Web site that the participants from the survey could have visited. MLS-based Web sites and local agent/company Web sites are the most common sources of information. **Figure 1** charts the information from the survey question, “How did you first learn that the home you recently purchased was for sale? (Check all that apply).” **Figure 1** is a pie chart that displays the percentages from each place where the survey respondent first learned about the property. Logit regression

analysis used in **Table 4** depicts the use of the Internet while searching for a property. It can be inferred that: suburban buyers, single females, couples, all income levels, and all age groups were more likely to use the Internet when searching for a property.

**Table 5** through **Table 10** indicates the usefulness of different actions that were taken when searching for a property by using ordered logit regression analysis. The following tables answer the survey question, “Please rate the usefulness of the following information sources in your home search.” **Table 5** displays the usefulness of a yard sign. According to the data in **Table 5**, yard signs were more beneficial for buyers in small towns, buyers with one or two children, and for buyers in all age groups. The usefulness of a real estate agent was examined in **Table 6**. Nothing came back as significant in the data. This is likely due to the fact that there was not enough variation in the responses that people gave. **Table 7** presents the usefulness of television. The results show that television is more useful to small town buyers, buyers with two children, buyers under the age of 35, and buyers of all income levels. Television was most useful for higher income buyers. In **Table 8**, the usefulness of newspapers is presented. According to the table, married couples and higher income buyers found newspaper advertisements to be more valuable. **Table 9** presents the usefulness of home magazines. Younger buyers, specifically those under the age of 35, found home magazines more applicable. **Table 10** shows the usefulness of the Internet. Single females, married couples, unmarried couples, buyers under the age of 35, and people with all income levels found the Internet more valuable. Small town buyers with children may know more about their small search area and rely more on traditional marketing methods. Younger buyers rely more on the Internet, and this technology should be pursued as this group grows in size.

**Table 11** through **Table 16** presents the results from the survey questions, “How useful were each of the following when searching for homes online?” The next six tables use ordered logit regression analysis to determine the usefulness of various real estate tools. **Table 11** displays the usefulness of detailed property information. Detailed property information was more valuable to suburban buyers, single females, married couples, unmarried couples, buyers with an income level over \$105,000, and for all age groups, but most useful to buyers under the age of 35. **Table 12** displays the usefulness of interactive maps. Interactive maps were found to be more useful to suburban buyers, single female buyers, married couples, all age group buyers and all income level buyers, but most useful to unmarried couples. **Table 13** presents the results of the usefulness of photos. Photos were found to be more useful to suburban buyers, single female buyers, married couples, unmarried couples, for buyers with an income level above \$105,000, and for all age group buyers, but most useful to buyers under the age of 35. **Table 14** shows the usefulness of virtual tours. The results display that virtual tours were more valuable for single female buyers, married couples, unmarried couples, all income level buyers, and for all age group buyers, but most useful to buyers under the age of 35 or with an income level over \$105,000. **Table 15** presents the usefulness of community information. It can be inferred that community information was more useful to suburban buyers, all age groups buyers, and all income level buyers. Last, **Table 16** indicates the usefulness of real estate agent contact information. Real estate agent contact information was useful to all age groups but most useful to buyers under the age of 35 and buyers with income levels over \$105,000. Overall, higher income buyers searching for a suburban home find online property information to be the most useful. Properties

appealing to this demographic should include as many of these marketing tools as possible.

**Table 1. Variable Names and Definitions for the 2003 NAR Survey**

| <u>Variable</u>  | <u>Definition</u>  |
|------------------|--|
| FIRST            | A dummy variable equal to 1 if it were the first home purchase for the respondent.                           |
| NEW              | A dummy variable equal to 1 if the property was new.   |
| SMALL TOWN       | A dummy variable equal to 1 if the location of the property was in a small town.                             |
| RURAL            | A dummy variable equal to 1 if the location of the property was in a rural area.                             |
| URBAN            | A dummy variable equal to 1 if the location of the property was in an urban area.                            |
| SUBURB           | A dummy variable equal to 1 if the location of the property was in a suburb.                                 |
| RESORT           | A dummy variable equal to 1 if the location of the property was in a resort.                                 |
| YES              | A dummy variable equal to 1 if the respondent used the Internet to find the property.                        |
| PROPERTIES       | A dummy variable equal to 1 if the respondent used properties for sale while on the Internet.                |
| GENERAL INFO     | A dummy variable equal to 1 if the respondent used general information about the area while on the Internet. |
| COMPANY          | A dummy variable equal to 1 if the respondent used a real estate company while on the Internet.              |
| AGENT            | A dummy variable equal to 1 if the respondent used a real estate agent while on the Internet.                |
| SINGLE MALE      | A dummy variable equal to 1 if the respondent is a single man.   |
| SINGLE FEMALE    | A dummy variable equal to 1 if the respondent is a single female.  |
| MARRIED COUPLE   | A dummy variable equal to 1 if the respondent is a married couple.   |
| UNMARRIED COUPLE | A dummy variable equal to 1 if the respondent is an unmarried couple.  |
| ONE              | A dummy variable equal to 1 if the respondent has 1 child.   |
| TWO              | A dummy variable equal to 1 if the respondent has 2 children.  |

|                          |  |
|--------------------------|--|
| THREE OR MORE            | A dummy variable equal to 1 if the respondent has 3 or more children.                  |
| AGE UNDER 35             | A dummy variable equal to 1 if the respondent is under the age of 35.                  |
| AGE 35-55                | A dummy variable equal to 1 if the respondent is aged 35-55.                           |
| AGE OVER 55              | A dummy variable equal to 1 if the respondent is age 55 or above.                      |
| BLACK                    | A dummy variable equal to 1 if the respondent is black.                                |
| ASIAN                    | A dummy variable equal to 1 if the respondent is Asian.                                |
| WHITE                    | A dummy variable equal to 1 if the respondent is white.                                |
| HISPANIC                 | A dummy variable equal to 1 if the respondent is Hispanic.                             |
| INCOME UNDER 55          | A dummy variable equal to 1 if the household income is less than \$55,000.             |
| INCOME BETWEEN<br>55-105 | A dummy variable equal to 1 if the household income is between \$55,000 and \$105,000. |
| INCOME OVER 105          | A dummy variable equal to 1 if the household income is at least \$150,000.             |

**Table 2: Actions Taken as a Result of Accessing Real Estate Information on the Internet**

| <u>Possible Actions</u>                   | <u>Participants</u> | <u>Percentage of Total</u> |
|---|---------------------|----------------------------|
| Found the agent used to search/buy a home | 448                 | 12%                        |
| Walked through a home viewed online       | 1202                | 32%                        |
| Drove by/viewed a home                    | 1939                | 52%                        |
| Pre-qualified for a mortgage online       | 159                 | 4%                         |
| Applied for a mortgage online             | 128                 | 3%                         |
| Found a mortgage lender online            | 88                  | 2%                         |

Note: Table 2 summarizes the responses to the survey question: "What actions did you take as a result for accessing real estate information on the Internet? (Check all that apply)"

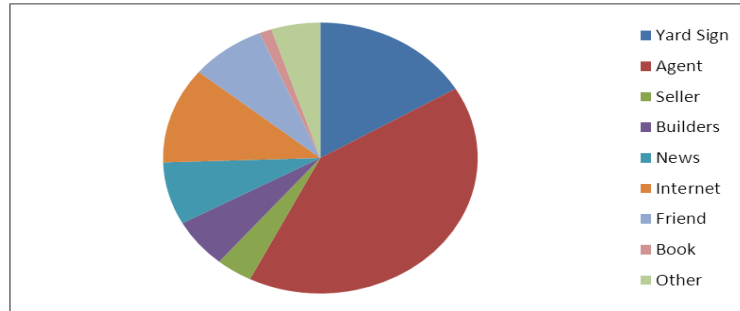
**Table 3: Search Home Actions**

| <u>Possible Action</u> | <u>Participants</u> | <u>Percentage of</u> |
|------------------------|---------------------|----------------------|
|------------------------|---------------------|----------------------|

|                                | <u>Total</u> |     |
|--------------------------------|--------------|-----|
| Realtor.com                    | 1317         | 35% |
| Houseandhome.com               | 66           | 2%  |
| Homesekers.com                 | 202          | 5%  |
| Local newspaper website        | 508          | 14% |
| Real estate agent website      | 741          | 20% |
| Real estate company website    | 1020         | 28% |
| Real estate magazine website   | 114          | 3%  |
| Multiple Listing Service (MLS) | 983          | 27% |
| Other                          | 206          | 6%  |

Table 3 shows a chart for the following survey question, “Did you use any of the following real estate Web sites in your home search? (Check all that apply).”

**Figure 1: Percentage Places Where the Respondent First Learned About the Property.**



Note: Figure 1 summarizes the responses to the survey question: “How did you first learn that the home you recently purchased was for sale? (Check all that apply)”

**Table 4: Empirical Results (Using the Internet for Home Search)**

r-squared value: 0.0758  
number of observations: 3704

| <u>Variable</u> | <u>coeff.</u> | <u>z stat</u> |
|-----------------|---------------|---------------|
| FIRST           | 0.034         | 0.37          |
| SMALL TOWN      | 0.155         | 0.75          |
| RURAL           | 0.135         | 0.6           |
| URBAN           | 0.182         | 0.89          |
| SUBURB          | 0.519         | 2.67          |



|                        |        |       |
|------------------------|--------|-------|
| SINGLE MALE            | 0.020  | 0.1   |
| SINGLE FEMALE          | 0.426  | 2.41  |
| MARRIED COUPLE         | 0.444  | 2.58  |
| UNMARRIED COUPLE       | 0.680  | 3.09  |
| ONECHILD               | -0.115 | -1.02 |
| TWOCHILDREN            | 0.002  | 0.02  |
| THREE OR MORE CHILDREN | -0.184 | -1.1  |
| AGE UNDER 35           | 0.988  | 8.82  |
| AGE BETWEEN 35-55      | 1.616  | 12.66 |
| INCOME BETWEEN 55-105  | 0.471  | 5.28  |
| INCOME OVER 105        | 0.682  | 5.59  |

Note: The independent variable for Table 4 is Using the Internet for Home Search, and the variable descriptions can be found in Table 1.

**Table 5: Empirical Results (Usefulness of a Yard Sign)**

r-squared value: 0.0101  
number of observations: 3703

| <u>Variable</u>        | <u>coeff.</u> | <u>z-stat</u> |
|------------------------|---------------|---------------|
| FIRST                  | -1.101        | -0.81         |
| NEW                    | -0.058        | -0.44         |
| SMALL TOWN             | 0.385         | 1.83          |
| RURAL                  | 0.181         | 0.82          |
| URBAN                  | 0.335         | 1.62          |
| SUBURB                 | 0.207         | 1.03          |
| SINGLE MALE            | -0.282        | -1.63         |
| SINGLE FEMALE          | -0.067        | -1.41         |
| MARRIED COUPLE         | -0.015        | -0.1          |
| UNMARRIED COUPLE       | 0.119         | 0.65          |
| ONECHILD               | 0.194         | 2.24          |
| TWOCHILDREN            | 0.252         | 2.63          |
| THREE OR MORE CHILDREN | 0.172         | 1.38          |
| AGE UNDER 35           | 0.631         | 5.95          |
| AGE BETWEEN 35-55      | 0.542         | 5.33          |
| INCOME BETWEEN 55-105  | 0.039         | 0.55          |
| INCOME OVER 105        | -0.055        | -0.58         |

Note: The independent variable for Table 5 is Usefulness Yard Sign, and the variable descriptions can be found in Table 1

**Table 6: Empirical Results (Usefulness of a Real Estate Agent)**

r-squared value: 0.0019  
 number of observations: 3703

| <u>Variable</u>        | <u>coeff.</u> | <u>z-stat</u> |
|------------------------|---------------|---------------|
| FIRST                  | 0.043         | 0.31          |
| NEW                    | 0.061         | 0.45          |
| SMALL TOWN             | 0.178         | 0.85          |
| RURAL                  | -0.349        | -0.16         |
| URBAN                  | 0.202         | 0.98          |
| SUBURB                 | 0.126         | 0.64          |
| SINGLE MALE            | -0.065        | -0.37         |
| SINGLE FEMALE          | 0.106         | 0.67          |
| MARRIED COUPLE         | -0.055        | -0.36         |
| UNMARRIED COUPLE       | -0.176        | -1            |
| ONECHILD               | -0.022        | -0.25         |
| TWOCHILDREN            | 0.075         | 0.75          |
| THREE OR MORE CHILDREN | -0.136        | -0.99         |
| AGE UNDER 35           | -0.046        | -0.4          |
| AGE BETWEEN 35-55      | 0.013         | 0.12          |
| INCOME BETWEEN 55-105  | 0.031         | 0.4           |
| INCOME OVER 105        | -0.032        | -0.31         |

Note: The independent variable for Table 6 is Usefulness of a Real Estate Agent, and the variable descriptions can be found in Table 1.

**Table 7: Empirical Results (Usefulness of Television)**

r-squared value: 0.0229  
 number of observations: 3703

| <u>Variable</u> | <u>coeff.</u> | <u>z-stat</u> |
|-----------------|---------------|---------------|
| FIRST           | 0.248         | 1.38          |
| NEW             | -0.063        | -0.36         |
| SMALL TOWN      | 0.717         | 2.26          |
| RURAL           | 0.308         | 0.92          |
| URBAN           | 0.511         | 1.61          |
| SUBURB          | 0.647         | 2.1           |

|                        |        |       |
|------------------------|--------|-------|
| SINGLE MALE            | 0.204  | 0.88  |
| SINGLE FEMALE          | -0.122 | -0.56 |
| MARRIED COUPLE         | 0.090  | 0.43  |
| UNMARRIED COUPLE       | -0.202 | -0.81 |
| ONECHILD               | 0.111  | 0.93  |
| TWOCHILDREN            | 0.293  | 2.33  |
| THREE OR MORE CHILDREN | 0.192  | 1.12  |
| AGE UNDER 35           | 0.479  | 3.2   |
| AGE BETWEEN 35-55      | 0.205  | 1.44  |
| INCOME BETWEEN 55-105  | 0.212  | 2.15  |
| INCOME OVER 105        | 0.409  | 3.19  |

Note: The independent variable for Table 7 is Usefulness of Television, and the variable descriptions can be found in Table 1.

**Table 8: Empirical Results (Usefulness of Newspaper Advertisements)**

r-squared value: 0.0140  
number of observations: 3703

| <u>Variable</u>        | <u>coeff.</u> | <u>z-stat</u> |
|------------------------|---------------|---------------|
| FIRST                  | 0.160         | 1.23          |
| NEW                    | 0.008         | 0.06          |
| SMALL TOWN             | 0.172         | 0.83          |
| RURAL                  | 0.007         | 0.03          |
| URBAN                  | 0.102         | 0.5           |
| SUBURB                 | 0.189         | 0.96          |
| SINGLE MALE            | 0.147         | 0.84          |
| SINGLE FEMALE          | 0.120         | 0.74          |
| MARRIED COUPLE         | 0.301         | 1.96          |
| UNMARRIED COUPLE       | 0.193         | 1.06          |
| ONECHILD               | 0.050         | 0.57          |
| TWOCHILDREN            | 0.119         | 1.19          |
| THREE OR MORE CHILDREN | 0.212         | 1.48          |
| AGE UNDER 35           | 0.168         | 1.544         |
| AGE BETWEEN 35-55      | 0.153         | 1.5           |
| INCOME BETWEEN 55-105  | 0.172         | 2.35          |
| INCOME OVER 105        | 0.200         | 2.06          |

Note: The independent variable for Table 8 is Usefulness of Newspaper Advertisements, and the variable descriptions can be found in Table 1.

**Table 9: Empirical Results (Usefulness of Home Book or Magazine)**

r-squared value: 0.0052  
 number of observations: 3703

| <u>Variable</u>        | <u>coeff.</u> | <u>z-stat</u> |
|------------------------|---------------|---------------|
| FIRST                  | -0.083        | -0.54         |
| NEW                    | 0.153         | 1.03          |
| SMALL TOWN             | 0.310         | 1.32          |
| RURAL                  | 0.197         | 0.79          |
| URBAN                  | -0.055        | -0.23         |
| SUBURB                 | 0.233         | 1.04          |
| SINGLE MALE            | -0.030        | -0.16         |
| SINGLE FEMALE          | -0.016        | -0.09         |
| MARRIED COUPLE         | 0.121         | 0.74          |
| UNMARRIED COUPLE       | -0.105        | -0.54         |
| ONECHILD               | 0.109         | 1.11          |
| TWOCHILDREN            | 0.131         | 1.21          |
| THREE OR MORE CHILDREN | 0.232         | 1.52          |
| AGE UNDER 35           | 0.604         | 4.74          |
| AGE BETWEEN 35-55      | 0.387         | 3.18          |
| INCOME BETWEEN 55-105  | 0.098         | 1.16          |
| INCOME OVER 105        | 0.179         | 1.62          |

Note: The independent variable for Table 9 is Usefulness of Home Book or Magazine, and the variable descriptions can be found in Table 1.

**Table 10: Empirical Results (Usefulness of the Internet)**

r-squared value: 0.0219  
 number of observations: 3703

| <u>Variable</u> | <u>coeff.</u> | <u>z-stat</u> |
|-----------------|---------------|---------------|
| FIRST           | 0.059         | 0.44          |
| NEW             | 0.068         | 0.53          |
| SMALL TOWN      | 0.041         | 0.2           |

|                        |        |       |
|------------------------|--------|-------|
| RURAL                  | 0.115  | 0.53  |
| URBAN                  | 0.085  | 0.43  |
| SUBURB                 | 0.270  | 1.42  |
| SINGLE MALE            | 0.190  | 1.12  |
| SINGLE FEMALE          | 0.282  | 1.88  |
| MARRIED COUPLE         | 0.435  | 2.99  |
| UNMARRIED COUPLE       | 0.524  | 3.01  |
| ONECHILD               | -0.037 | -0.42 |
| TWOCHILDREN            | 0.143  | 1.44  |
| THREE OR MORE CHILDREN | -0.131 | -0.96 |
| AGE UNDER 35           | 1.441  | 13.04 |
| AGE BETWEEN 35-55      | 1.020  | 9.83  |
| INCOME BETWEEN 55-105  | 0.304  | 4.06  |
| INCOME OVER 105        | 0.329  | 3.35  |

Note: The independent variable for Table 10 is Usefulness of the Internet, and the variable descriptions can be found in Table 1.

**Table 11: Empirical Results (Usefulness of Detailed Property Information)**

r-squared value: 0.0097  
number of observations: 3703

| <u>Variable</u>        | <u>coeff.</u> | <u>z-stat</u> |
|------------------------|---------------|---------------|
| FIRST                  | -0.220        | -1.53         |
| NEW                    | 0.202         | 1.47          |
| SMALL TOWN             | 0.148         | 0.75          |
| RURAL                  | 0.163         | 0.78          |
| URBAN                  | 0.254         | 1.31          |
| SUBURB                 | 0.470         | 2.55          |
| SINGLE MALE            | 0.137         | 0.76          |
| SINGLE FEMALE          | 0.427         | 2.6           |
| MARRIED COUPLE         | 0.447         | 2.81          |
| UNMARRIED COUPLE       | 0.565         | 2.99          |
| ONECHILD               | -0.003        | -0.03         |
| TWOCHILDREN            | 0.000         | 0             |
| THREE OR MORE CHILDREN | -0.201        | -1.48         |
| AGE UNDER 35           | 1.508         | 13.25         |
| AGE BETWEEN 35-55      | 1.075         | 10.2          |

|                       |       |      |
|-----------------------|-------|------|
| INCOME BETWEEN 55-105 | 0.342 | 4.46 |
| INCOME OVER 105       | 0.547 | 5.27 |

Note: The independent variable for Table 11 is Usefulness of Detailed Property Information, and the variable descriptions can be found in Table 1.

**Table 12: Empirical Results (Usefulness of Interactive Maps)**

r-squared value: 0.0374  
number of observations: 3703

| <u>Variable</u>        | <u>coeff.</u> | <u>z-stat</u> |
|------------------------|---------------|---------------|
| FIRST                  | 0.006         | 0.05          |
| NEW                    | 0.056         | 0.48          |
| SMALL TOWN             | 0.096         | 0.47          |
| RURAL                  | 0.181         | 0.84          |
| URBAN                  | 0.325         | 1.62          |
| SUBURB                 | 0.506         | 2.62          |
| SINGLE MALE            | 0.246         | 1.42          |
| SINGLE FEMALE          | 0.435         | 2.79          |
| MARRIED COUPLE         | 0.493         | 3.24          |
| UNMARRIED COUPLE       | 0.618         | 3.53          |
| ONECHILD               | 0.002         | 0.02          |
| TWOCHILDREN            | -0.102        | -1.05         |
| THREE OR MORE CHILDREN | -0.211        | -1.57         |
| AGE UNDER 35           | 1.412         | 12.18         |
| AGE BETWEEN 35-55      | 1.032         | 9.41          |
| INCOME BETWEEN 55-105  | 0.339         | 4.52          |
| INCOME OVER 105        | 0.441         | 4.51          |

Note: The independent variable for Table 12 is Usefulness of Interactive Maps, and the variable descriptions can be found in Table 1.

**Table 13: Empirical Results (Usefulness of Photos)**

| <u>Variable</u> | <u>coeff.</u> | <u>z-stat</u> |
|-----------------|---------------|---------------|
| FIRST           | -0.165        | -1.16         |

|                        |        |       |
|------------------------|--------|-------|
| NEW                    | 0.105  | 0.77  |
| SMALL TOWN             | 0.246  | 1.27  |
| RURAL                  | 0.227  | 1.1   |
| URBAN                  | 0.298  | 1.57  |
| SUBURB                 | 0.531  | 2.95  |
| SINGLE MALE            | 0.144  | 0.8   |
| SINGLE FEMALE          | 0.512  | 3.1   |
| MARRIED COUPLE         | 0.453  | 2.84  |
| UNMARRIED COUPLE       | 0.542  | 2.9   |
| ONECHILD               | -0.136 | -1.43 |
| TWOCHILDREN            | -0.061 | -0.58 |
| THREE OR MORE CHILDREN | -0.155 | -1.11 |
| AGE UNDER 35           | 1.654  | 14.07 |
| AGE BETWEEN 35-55      | 1.108  | 10.27 |
| INCOME BETWEEN 55-105  | 0.368  | 4.79  |
| INCOME OVER 105        | 0.609  | 5.87  |

Note: The independent variable for Table 13 is Usefulness of Photos, and the variable descriptions can be found in Table 1.

**Table 14: Empirical Results (Usefulness of Virtual Tours)**

r-squared value: 0.0146  
number of observations: 3703

| <u>Variable</u>        | <u>coeff.</u> | <u>z-stat</u> |
|------------------------|---------------|---------------|
| FIRST                  | 0.032         | 0.24          |
| NEW                    | -0.121        | -0.96         |
| SMALL TOWN             | 0.006         | 0.03          |
| RURAL                  | -0.057        | -0.27         |
| URBAN                  | 0.111         | 0.56          |
| SUBURB                 | 0.366         | 1.9           |
| SINGLE MALE            | 0.068         | 0.4           |
| SINGLE FEMALE          | 0.446         | 2.82          |
| MARRIED COUPLE         | 0.498         | 3.29          |
| UNMARRIED COUPLE       | 0.441         | 2.49          |
| ONECHILD               | -0.106        | -1.21         |
| TWOCHILDREN            | 0.076         | 0.77          |
| THREE OR MORE CHILDREN | -0.075        | -0.52         |
| AGE UNDER 35           | 1.309         | 11.5          |

|                       |       |      |
|-----------------------|-------|------|
| AGE BETWEEN 35-55     | 0.960 | 8.83 |
| INCOME BETWEEN 55-105 | 0.386 | 5.25 |
| INCOME OVER 105       | 0.624 | 6.32 |

Note: The independent variable for Table 14 is Usefulness of Virtual Tours, and the variable descriptions can be found in Table 1.

**Table 15: Empirical Results (Usefulness of Community Information)**

r-squared value: 0.0449  
number of observations: 3704

| <u>Variable</u>        | <u>coeff.</u> | <u>z-stat</u> |
|------------------------|---------------|---------------|
| FIRST                  | 0.151         | 1.09          |
| NEW                    | -0.008        | -0.06         |
| SMALL TOWN             | 0.172         | 0.86          |
| RURAL                  | 0.082         | 0.39          |
| URBAN                  | 0.205         | 1.04          |
| SUBURB                 | 0.453         | 2.41          |
| SINGLE MALE            | -0.085        | -0.48         |
| SINGLE FEMALE          | 0.160         | 0.96          |
| MARRIED COUPLE         | 0.258         | 1.59          |
| UNMARRIED COUPLE       | 0.188         | 1.1           |
| ONECHILD               | 0.056         | 0.61          |
| TWOCHILDREN            | 0.103         | 1.07          |
| THREE OR MORE CHILDREN | -0.042        | -0.32         |
| AGE UNDER 35           | 1.282         | 11.47         |
| AGE BETWEEN 35-55      | 0.860         | 8.11          |
| INCOME BETWEEN 55-105  | 0.338         | 4.64          |
| INCOME OVER 105        | 0.519         | 5.5           |

Note: The independent variable for Table 15 is Usefulness of Community Information, and the variable descriptions can be found in Table 1.

**Table 16: Empirical Results (Usefulness of Real Estate Agent Contact Info)**

r-squared value: 0.0360  
number of observations: 3704

| <u>Variable</u> | <u>coeff.</u> | <u>z-stat</u> |
|-----------------|---------------|---------------|
| FIRST           | 0.173         | 1.28          |
| NEW             | -0.047        | -0.36         |



|                        |        |       |
|------------------------|--------|-------|
| SMALL TOWN             | 0.199  | 0.96  |
| RURAL                  | 0.232  | 1.09  |
| URBAN                  | 0.195  | 0.96  |
| SUBURB                 | 0.377  | 1.93  |
| SINGLE MALE            | 0.042  | 0.24  |
| SINGLE FEMALE          | 0.164  | 0.99  |
| MARRIED COUPLE         | 0.162  | 1.02  |
| UNMARRIED COUPLE       | 0.165  | 0.91  |
| ONECHILD               | 0.028  | 0.32  |
| TWOCHILDREN            | 0.113  | 1.16  |
| THREE OR MORE CHILDREN | -0.150 | -1.14 |
| AGE UNDER 35           | 1.048  | 8.89  |
| AGE BETWEEN 35-55      | 0.803  | 7.24  |
| INCOME BETWEEN 55-105  | 0.063  | 0.83  |
| INCOME OVER 105        | 0.180  | 1.89  |

Note: The independent variable for Table 16 is Usefulness of Real Estate Agent Contact Information, and the variable descriptions can be found in Table 1.

## 2009 Survey Data Results

The 2009 survey examined 9,138 observations. There are more responses to this survey than the 2003 survey. Also, there is one particular question response that should be noted: the National Association of Realtors added a response of: “Social Networking Sites e.g. Facebook, Myspace, etc” to some of the questions in the survey.

**Table 17** presents variable names and definitions for this survey. **Table 18** is a logit regression analysis that looks at the results from the survey questions: “Did you use the Internet to search for your home.” The data found several trends in the responses. First of all, people buying new homes were less likely to use the Internet to search for homes. Next, people in small towns and urban areas were more likely to use the Internet when searching for a home. The more children a buyer had, the more likely they were to use the Internet to search for a property. The younger the buyer, the more likely they were to use the Internet to search for a home. Last, the higher the income level, the more likely a person was to use the Internet when searching for a home.

**Table 19** presents the responses to the survey question: “Did you find the Internet to be useful when searching for a home.” Logit regression in **Table 19** shows that people buying new homes were less likely to find the Internet to be useful in the home buying or selling process. People in small towns were more likely to find the Internet useful in the search for a home. The more children the buyer had, the more likely the buyer was to find the Internet useful. The younger the buyer and the higher the income level, the more likely they found the Internet useful.

**Table 20** through **Table 26** use ordered logit regression analysis to demonstrate the results to each part of the question that asks: “Please indicate how frequently you

used each of the following when searching for a home and rate its usefulness.” (Note: Yard Sign, Real Estate Agent, Television, Print Newspaper Advertisement, Home Book or Magazine, Open House, and Billboard were all choices that were ranked). **Table 20** displays the following information: first and new home buyers had less frequent use of yard signs; people in rural and suburban areas used yard signs more frequently. Buyers with no children used yard signs less frequently. The older the buyer, the more frequent the use of yard signs, and people with an income level under \$55,000 used yard signs more often than people with higher income levels. **Table 21** portrays the following conclusions: first of all, buyers of first homes and single females had more frequent use of real estate agents; people buying new homes and people living in suburban areas used agents less frequently. Blacks, Whites, and Hispanics used real estate agents more frequently than other ethnicities. **Table 22** found that buyers of new homes, people buying in small towns, urban areas, and suburbs use television advertisement more frequently. People with two or more children and younger buyers use television advertisement more often. African Americans and buyers with higher income levels used television advertisements more regularly. **Table 23** presents information that people that lived in rural and suburban areas, buyers between the ages of 35 and 50, and White people used newspapers advertisements more frequently; however, buyers with no children use newspaper advertisements less frequently. **Table 24** shows that buyers of new homes, buyers that live in rural and suburban areas, unmarried couples, younger buyers, and buyers with lower income levels used home books or magazines more regularly. Buyers without any children use home books or magazines less often. **Table 25** presents that buyers in urban areas, single female buyers, buyers with two or more

children, buyers above the age of 50, and Asians use open houses more often. Buyers with no children and buyers with lower income levels used open houses less regularly. **Table 26** displays data that buyers of new homes, buyers in small towns, urban and suburban areas, younger buyers, buyers with income levels above \$200,000 and Asian buyers use billboard advertisements more often. Overall, younger buyers with lower income, no children, and living outside urban areas are relying on traditional marketing methods.

**Table 27** through **Table 42** presents the results using ordered logit regression analysis to answer the survey questions: “How useful were each of the following when searching for homes online?” The following were the choices that were examined: detailed information about properties for sale, detailed information about recently sold properties, information about upcoming open houses, interactive maps, photos, virtual tours, neighborhood information, pending sales/contract status, and real estate agent contact information. In **Table 27**, it can be seen that buyers of first and new homes and buyers without any children found yard signs less useful. Buyers living in rural and suburban areas, buyers over the age of 50, buyers with lower income levels, and White buyers thought yard signs were more useful. **Table 28** displays data that buyers of new homes found real estate agents less useful. Buyers in small towns, single female buyers, younger buyers, buyers with income levels over \$200,000 and all ethnicities found real estate agents beneficial. **Table 29** presents information that buyers of new homes, buyers in all areas (small town, rural, urban, and suburban), single male buyers, married buyers, and unmarried buyers, and buyers under the age of 35 found television advertisements were more valuable. Asians and buyers with income levels over \$200,000 also found

television advertisements to be more beneficial. Buyers with no children found television advertisements less useful. **Table 30** presents data that buyers of new homes, buyers in all areas (small town, rural, urban, and suburban), buyers under the age of 35, buyers of all ethnic groups, and buyers with an income level above \$200,000 found newspaper advertisements more valuable. **Table 31** indicates that buyers of new homes, buyers in all areas (small town, rural, urban, and suburban), unmarried buyers, married buyers, single male buyers, and buyers under the age of 35 found home books or magazines most beneficial. Asians, White people, and buyers with income levels over \$100,000 found home books or magazines more useful. Buyers without any children found home books or magazines less useful. **Table 32** displays that buyers of new homes, buyers in small towns, rural, and suburban areas, single male buyers, and unmarried couples found open houses more beneficial. Younger buyers, Asians, and all income levels also found open houses most useful. Buyers without any children found open houses less valuable. **Table 33** reveals that buyers in small towns and urban areas, single female and male buyers, buyers with two or more children, buyers in all age groups, Asians buyers, and White buyers found billboards most beneficial. If the income level of the buyer was under \$100,000, then they found billboards less useful, but buyers with income levels over \$100,000 considered billboards very useful. Traditional marketing methods are still useful with some being better at targeting specific group than others.

In **Table 34** it can be inferred that buyers of new homes and buyers with income levels under \$55,000 found information online about properties for sale to be less useful. Buyers in small towns, all family status buyers, buyers with more children, buyers with income levels over \$100,000, and buyers under the age of 35 found online property

information more beneficial. **Table 35** presents information that buyers of new homes, buyers in suburban areas, and buyers with income levels under \$100,000 found information about recently sold properties to be less valuable. Buyers in small towns and urban areas, buyers with children, buyers under the age of 35, and Asian buyers found information about recently sold properties more beneficial. **Table 36** indicates that buyers of new homes, buyers from small towns, rural, and suburban areas, single male buyers, unmarried married, buyers under the age of 35, Asian buyers, and buyers of all income levels found open houses more effective. Buyers without any children found open houses less valuable. **Table 37** demonstrates that buyers of new homes, buyers with an income level under \$55,000 and buyers without any children found interactive maps to be less effective. Buyers in small towns and urban areas, all family status groups, buyers with children, and buyers with an income level over \$100,000 found interactive maps more useful. **Table 38** displays information that buyers of new homes, buyers with an income level under \$55,000 and buyers without any children found online photos less beneficial. Buyers in small towns, single male and single female buyers, and unmarried buyers found online photos more effective. In **Table 39**, it can be seen that buyers of new homes, buyers with an income level under \$55,000 and buyers without any children found virtual tours less valuable. Single male buyers, single female buyers, unmarried buyers, buyers under the age of 35, and Black and White buyers found virtual tours more useful. **Table 40** presents information that first home buyers, single male and female buyers, unmarried buyers, buyers with children, buyers under the age of 35, and African American buyers found online neighborhood information more valuable. Buyers without any children and buyers with an income level under \$55,000 found online neighborhood

information less beneficial. **Table 41** indicates that buyers of new homes found and buyers with an income level under \$55,000 found information about contract status less effective. Single male and female buyers, unmarried buyers, buyers with children, buyers under the age of 35, and buyers with an income level over \$100,000 found information about contract status more beneficial. Last, **Table 42** presents data that first time home buyers, all age group buyers, African American buyers, and buyers with an income level over \$55,000 found real estate agent contact information more effective. Buyers of new homes and buyers without any children found real estate agent contact information less valuable. As in the 2003 survey, younger buyers with children and higher income buyers find online property information to be the most useful. This population segment is most likely to adopt new technology, and ways delivering real estate information to this population should continue to adapt.

**Table 17: Variable Names and Definitions**

| <u>Variable</u> | <u>Definition</u>   |
|-----------------|---|
| FIRST           | A dummy variable equal to 1 if it were the first home purchase for the respondent.            |
| NEW             | A dummy variable equal to 1 if the property was new.  |
| SMALL TOWN      | A dummy variable equal to 1 if the location of the property was in a small town.              |
| RURAL           | A dummy variable equal to 1 if the location of the property was in a rural area.              |
| URBAN           | A dummy variable equal to 1 if the location of the property was in an urban area.             |
| SUBURB          | A dummy variable equal to 1 if the location of the property was in a suburb.                  |
| RESORT          | A dummy variable equal to 1 if the location of the property was in a resort.                  |
| YES             | A dummy variable equal to 1 if the respondent used the Internet to find the property.         |
| PROPERTIES      | A dummy variable equal to 1 if the respondent used properties for sale while on the Internet. |

|                  |  |
|------------------|--|
| GENERAL INFO     | A dummy variable equal to 1 if the respondent used general information about the area while on the Internet. |
| COMPANY          | A dummy variable equal to 1 if the respondent used a real estate company while on the Internet.              |
| AGENT            | A dummy variable equal to 1 if the respondent used a real estate agent while on the Internet.                |
| SINGLE MALE      | A dummy variable equal to 1 if the respondent is a single man.   |
| SINGLE FEMALE    | A dummy variable equal to 1 if the respondent is a single female.  |
| MARRIED COUPLE   | A dummy variable equal to 1 if the respondent is a married couple.   |
| UNMARRIED COUPLE | A dummy variable equal to 1 if the respondent is an unmarried couple.  |
| ONE              | A dummy variable equal to 1 if the respondent has 1 child.   |
| TWO              | A dummy variable equal to 1 if the respondent has 2 children.  |
| THREE OR MORE    | A dummy variable equal to 1 if the respondent has 3 or more children.  |
| AGE UNDER 35     | A dummy variable equal to 1 if the respondent is under the age of 35.  |
| AGE 35-50        | A dummy variable equal to 1 if the respondent is aged 35-50.   |
| AGE OVER 50      | A dummy variable equal to 1 if the respondent is age 50 or above.  |
| BLACK            | A dummy variable equal to 1 if the respondent is black.  |
| ASIAN            | A dummy variable equal to 1 if the respondent is Asian.  |
| WHITE            | A dummy variable equal to 1 if the respondent is white.  |
| HISPANIC         | A dummy variable equal to 1 if the respondent is Hispanic.   |
| INCOME UNDER 100 | A dummy variable equal to 1 if the household income is less than \$100,000.                                  |
| INCOME UNDER 200 | A dummy variable equal to 1 if the household income is less than \$200,000.                                  |

**Table 18: Empirical Results (Using the Internet to Search for Homes)**

| <u>Variable</u> | <u>coeff.</u> | <u>z-stat</u> |
|-----------------|---------------|---------------|
| FIRST           | 0.004         | 0.04          |
| NEW             | -0.439        | -4.88         |
| TOWN            | 0.644         | 3.95          |
| RURAL           | 0.153         | 0.89          |
| URBAN           | 0.387         | 2.18          |



|                   |        |       |
|-------------------|--------|-------|
| SUBURB            | 0.097  | 0.52  |
| SINGLE MALE       | 0.328  | 1.43  |
| SINGLE FEMALE     | 0.248  | 1.04  |
| MARRIED           | -0.142 | -0.57 |
| UNMARRIED         | 0.284  | 1.05  |
| NO CHILD          | -0.253 | -1.09 |
| 1 CHILD           | 0.559  | 2.65  |
| 2 CHILDREN        | 0.709  | 3.36  |
| AGE UNDER 35      | 1.715  | 15.15 |
| AGE BETWEEN 35-50 | 1.162  | 12.83 |
| BLACK             | -0.286 | -1.37 |
| ASIAN             | 0.204  | 0.76  |
| WHITE             | 0.162  | 0.93  |
| HISPANIC          | -0.301 | -1.38 |
| INCOME UNDER 100  | 0.508  | 6.21  |
| INCOME UNDER 200  | 0.806  | 7.68  |

Note: The independent variable for Table 18 is Using the Internet to Search for Homes, and the variable descriptions can be found in Table 17.

**Table 19: Empirical Results  
(Usefulness of the Internet When Searching For a Home)**

r-squared value: 0.1267

number of observations: 9138

| <u>Variable</u> | <u>coeff.</u> | <u>Z-stat</u> |
|-----------------|---------------|---------------|
| FIRST           | 0.015         | 0.17          |
| NEW             | -0.033        | -3.87         |
| TOWN            | 0.392         | 2.38          |
| RURAL           | -0.074        | -0.43         |
| URBAN           | 0.159         | 0.89          |
| SUBURB          | -0.209        | -1.14         |
| SINGLE MALE     | 0.224         | 1.02          |
| SINGLE FEMALE   | 0.201         | 0.89          |
| MARRIED         | -0.254        | -1.08         |
| UNMARRIED       | 0.172         | 0.68          |
| NO CHILD        | -0.201        | -0.92         |
| 1 CHILD         | 0.566         | 2.88          |

|                  |        |       |
|------------------|--------|-------|
| 2 CHILDREN       | 0.694  | 3.53  |
| AGEUNDER 35      | 1.609  | 15.23 |
| AGEBETWEEN 35-50 | 1.173  | 13.51 |
| BLACK            | -0.217 | -1.06 |
| ASIAN            | 0.275  | 1.04  |
| WHITE            | 0.180  | 1.04  |
| HISPANIC         | -0.202 | -0.92 |
| INCOMEUNDER 100  | 0.449  | 5.77  |
| INCOMEUNDER 200  | 0.647  | 6.65  |

Note: The independent variable for Table 19 is Usefulness of the Internet to When Searching for Homes, and the variable descriptions can be found in Table 17.

**Table 20: Empirical Results (Frequency of a Yard Sign)**

r-squared value: 0.0095

number of observations: 9138

| <u>Variable</u>   | <u>coeff.</u> | <u>z-stat</u> |
|-------------------|---------------|---------------|
| FIRST             | -0.145        | -2.94         |
| NEW               | -0.268        | -4.86         |
| TOWN              | 0.141         | 1.06          |
| RURAL             | 0.304         | 2.18          |
| URBAN             | 0.109         | 0.78          |
| SUBURB            | 0.358         | 2.48          |
| SINGLE MALE       | 0.035         | 0.21          |
| SINGLE FEMALE     | -0.095        | -0.54         |
| MARRIED           | -0.199        | -1.11         |
| UNMARRIED         | 0.085         | 0.47          |
| NO CHILD          | -0.795        | -3.87         |
| 1 CHILD           | -0.166        | -1.04         |
| 2 CHILDREN        | -0.030        | -0.19         |
| AGE UNDER 35      | 0.216         | 3.44          |
| AGE BETWEEN 35-50 | 0.275         | 4.67          |
| BLACK             | -0.080        | -0.59         |
| ASIAN             | -0.170        | -1.21         |
| WHITE             | 0.124         | 1.12          |
| HISPANIC          | 0.089         | -0.63         |
| INCOME UNDER 55   | 0.239         | 2.96          |

|                     |       |      |
|---------------------|-------|------|
| INCOME UNDER<br>100 | 0.094 | 1.29 |
| INCOME UNDER<br>200 | 0.036 | 0.48 |

Note: The independent variable for Table 20 is a Yard Sign, and the variable descriptions can be found in Table 17.

**Table 21: Empirical Results (Frequency of a Real Estate Agent)**

r-squared value: 0.0146  
number of observations: 9138

| <u>Variable</u>       | <u>coeff.</u> | <u>z-stat</u> |
|-----------------------|---------------|---------------|
| FIRST                 | 0.098         | 1.73          |
| NEW                   | -0.689        | -11.68        |
| TOWN                  | 0.158         | 1.16          |
| RURAL                 | -0.128        | -0.9          |
| URBAN                 | -0.001        | 0             |
| SUBURB                | -0.312        | -2.12         |
| SINGLE MALE           | 0.133         | 0.79          |
| SINGLE FEMALE         | 0.311         | 1.77          |
| MARRIED               | 0.151         | 0.83          |
| UNMARRIED             | 0.080         | 0.44          |
| NO CHILD              | -0.029        | -0.15         |
| 1 CHILD               | 0.185         | 1.12          |
| 2 CHILDREN            | 0.125         | 0.77          |
| AGE UNDER 35          | 0.105         | 1.56          |
| AGE BETWEEN 35-<br>50 | 0.074         | 1.19          |
| BLACK                 | 0.303         | 2.03          |
| ASIAN                 | 0.148         | 0.98          |
| WHITE                 | 0.334         | 2.84          |
| HISPANIC              | 0.512         | 3.27          |
| INCOMEUNDER 55        | -0.126        | -1.39         |
| INCOMEUNDER<br>100    | -0.070        | -0.83         |
| INCOMEUNDER<br>200    | 0.022         | 0.25          |

Note: The independent variable for Table 21 is a Real Estate Agent and the variable descriptions can be found in Table 17.

**Table 22: Empirical Results (Frequency of Television)**

| <u>Variable</u>   | <u>coeff.</u> | <u>z-stat</u> |
|-------------------|---------------|---------------|
| FIRST             | 0.115         | 1.44          |
| NEW               | 0.228         | 2.5           |
| TOWN              | 0.506         | 2.9           |
| RURAL             | 0.270         | 1.46          |
| URBAN             | 0.316         | 1.71          |
| SUBURB            | 0.792         | 4.01          |
| SINGLE MALE       | 0.091         | 0.35          |
| SINGLE FEMALE     | 0.091         | 0.34          |
| MARRIED           | 0.212         | 0.77          |
| UNMARRIED         | 0.330         | 1.22          |
| NO CHILD          | -0.236        | -0.9          |
| 1 CHILD           | 0.312         | 1.38          |
| 2 CHILDREN        | 0.473         | 2.1           |
| AGE UNDER 35      | 1.178         | 12.15         |
| AGE BETWEEN 35-50 | 0.968         | 10.52         |
| BLACK             | 0.716         | 2.95          |
| ASIAN             | 0.273         | 1.11          |
| WHITE             | 0.220         | 1.37          |
| HISPANIC          | 0.012         | 0.05          |
| INCOME UNDER 55   | 0.162         | 1.37          |
| INCOME UNDER 100  | 0.186         | 1.72          |
| INCOME UNDER 200  | 0.242         | 2.2           |

Note: The independent variable for Table 22 is Television, and the variable descriptions can be found in Table 17.

**Table 23: Empirical Results (Frequency of Newspaper Advertisements)**

r-squared value: 0.0086

number of observations: 9138

| <u>Variable</u> | <u>coeff.</u> | <u>z-stat</u> |
|-----------------|---------------|---------------|
| FIRST           | 0.033         | 0.64          |
| TOWN            | -0.029        | -0.2          |
| RURAL           | 0.351         | 2.3           |
| URBAN           | -0.032        | -0.21         |
| SUBURB          | 0.448         | 2.85          |
| SINGLE MALE     | -0.020        | -0.11         |

|                   |        |       |
|-------------------|--------|-------|
| SINGLE FEMALE     | -0.025 | -0.13 |
| MARRIED           | -0.003 | -0.02 |
| UNMARRIED         | 0.060  | 0.32  |
| NO CHILD          | -0.491 | -2.08 |
| 1 CHILD           | 0.011  | 0.06  |
| 2 CHILDREN        | 0.231  | 1.32  |
| AGE UNDER 35      | 0.008  | 0.13  |
| AGE BETWEEN 35-50 | 0.106  | 1.65  |
| BLACK             | 0.099  | 0.71  |
| ASIAN             | 0.103  | 0.72  |
| WHITE             | 0.286  | 2.63  |
| HISPANIC          | 0.048  | 0.34  |
| INCOME UNDER 55   | 0.087  | 0.97  |
| INCOME UNDER 100  | 0.036  | 0.43  |
| INCOME UNDER 200  | 0.015  | 0.18  |

Note: The independent variable for Table 23 is Newspaper Advertisements, and the variable descriptions can be found in Table 17.

**Table 24: Empirical Results (Frequency of Home Book or Magazine)**

r-squared value: 0.0162

number of observations: 9138

| <u>Variable</u>   | <u>coeff.</u> | <u>z-stat</u> |
|-------------------|---------------|---------------|
| FIRST             | -0.800        | -1.41         |
| NEW               | 0.148         | 2.29          |
| TOWN              | 0.195         | 1.21          |
| RURAL             | 0.347         | 2.04          |
| URBAN             | -0.009        | -0.05         |
| SUBURB            | 0.604         | 3.45          |
| SINGLE MALE       | 0.330         | 1.62          |
| SINGLE FEMALE     | 0.155         | 0.74          |
| MARRIED           | 0.116         | 0.54          |
| UNMARRIED         | 0.365         | 1.72          |
| NO CHILD          | -0.544        | -2.15         |
| 1 CHILD           | 0.082         | 0.41          |
| 2 CHILDREN        | 0.179         | 0.91          |
| AGE UNDER 35      | 0.520         | 7             |
| AGE BETWEEN 35-50 | 0.508         | 7.03          |

|                     |       |      |
|---------------------|-------|------|
| 50                  |       |      |
| BLACK               | 0.155 | 0.95 |
| ASIAN               | 0.183 | 1.09 |
| WHITE               | 0.158 | 1.25 |
| HISPANIC            | 0.077 | 0.48 |
| INCOME UNDER 55     | 0.290 | 2.97 |
| INCOME UNDER<br>100 | 0.286 | 3.2  |
| INCOME UNDER<br>200 | 0.197 | 2.19 |

Note: The independent variable for Table 24 is Home Book or Magazine, and the variable descriptions can be found in Table 17.

**Table 25: Empirical Results (Frequency of Open House)**

r-squared value: 0.0210  
number of observations: 9138

| <u>Variable</u>       | <u>coeff.</u> | <u>z-stat</u> |
|-----------------------|---------------|---------------|
| FIRST                 | -0.080        | -1.58         |
| NEW                   | 0.090         | 1.51          |
| TOWN                  | 0.163         | 1.14          |
| RURAL                 | 0.043         | 0.29          |
| URBAN                 | 0.407         | 2.74          |
| SUBURB                | -0.121        | -0.79         |
| SINGLE MALE           | 0.262         | 1.44          |
| SINGLE FEMALE         | 0.389         | 2.08          |
| MARRIED               | 0.094         | 0.49          |
| UNMARRIED             | 0.159         | 0.84          |
| NO CHILD              | -0.377        | -1.73         |
| 1 CHILD               | 0.127         | 0.77          |
| 2 CHILDREN            | 0.383         | 2.33          |
| AGE UNDER 35          | 0.351         | 5.46          |
| AGE BETWEEN 35-<br>50 | 0.419         | 6.92          |
| BLACK                 | -0.128        | -0.87         |
| ASIAN                 | 0.369         | 2.56          |
| WHITE                 | 0.023         | 0.2           |
| HISPANIC              | -0.141        | -0.96         |
| INCOME UNDER 55       | -0.545        | -6.27         |

|                     |        |      |
|---------------------|--------|------|
| INCOME UNDER<br>100 | -0.274 | -3.1 |
| INCOME UNDER<br>200 | 0.060  | 0.74 |

Note: The independent variable for Table 25 is Frequency of Open House, and the variable descriptions can be found in Table 17.

**Table 26: Empirical Results (Frequency of Billboard)**

r-squared value: 0.0608

number of observations: 9138

| <u>Variable</u>       | <u>coeff.</u> | <u>z-stat</u> |
|-----------------------|---------------|---------------|
| FIRST                 | 0.114         | 1.38          |
| NEW                   | 0.822         | 7.13          |
| TOWN                  | 0.550         | 3.01          |
| RURAL                 | 0.323         | 1.68          |
| URBAN                 | 0.326         | 1.69          |
| SUBURB                | 0.736         | 3.6           |
| SINGLE MALE           | 0.273         | 0.97          |
| SINGLE FEMALE         | 0.256         | 0.89          |
| MARRIED               | 0.318         | 1.07          |
| UNMARRIED             | 0.451         | 1.54          |
| NO CHILD              | -0.429        | -1.51         |
| 1 CHILD               | 0.309         | 1.19          |
| 2 CHILDREN            | 0.357         | 1.37          |
| AGE UNDER 35          | 1.245         | 12.19         |
| AGE BETWEEN 35-<br>50 | 0.942         | 9.92          |
| BLACK                 | 0.386         | 1.42          |
| ASIAN                 | 0.536         | 1.82          |
| WHITE                 | 0.092         | 0.49          |
| HISPANIC              | 0.057         | 0.22          |
| INCOME UNDER 55       | 0.119         | 0.95          |
| INCOME UNDER<br>100   | 0.148         | 1.29          |
| INCOME UNDER<br>200   | 0.293         | 2.47          |

Note: The independent variable for Table 26 is Frequency of Billboard, and the variable descriptions can be found in Table 17.

**Table 27: Empirical Results (Usefulness of Yard Sign)**

r-squared value: 0.0106

number of observations: 9138

| <u>Variable</u>   | <u>coeff.</u> | <u>z-stat</u> |
|-------------------|---------------|---------------|
| FIRST             | -0.102        | -2.07         |
| NEW               | -0.213        | -4.05         |
| TOWN              | 0.201         | 1.64          |
| RURAL             | 0.346         | 2.68          |
| URBAN             | 0.121         | 0.94          |
| SUBURB            | 0.295         | 2.19          |
| SINGLE MALE       | 0.120         | 0.7           |
| SINGLE FEMALE     | -0.013        | -0.08         |
| MARRIED           | -0.172        | -0.96         |
| UNMARRIED         | 0.142         | 0.79          |
| NO CHILD          | -0.509        | -2.73         |
| 1 CHILD           | -0.004        | -0.02         |
| 2 CHILDREN        | 0.101         | 0.68          |
| AGE UNDER 35      | 0.409         | 6.59          |
| AGE BETWEEN 35-50 | 0.413         | 7.08          |
| BLACK             | 0.091         | 0.68          |
| ASIAN             | 0.047         | 0.34          |
| WHITE             | 0.268         | 2.48          |
| HISPANIC          | 0.146         | 1.07          |
| INCOME UNDER 55   | 0.228         | 2.86          |
| INCOME UNDER 100  | 0.146         | 2.01          |
| INCOME UNDER 200  | 0.123         | 1.66          |

Note: The independent variable for Table 27 is Usefulness of Yard Sign, and the variable descriptions can be found in Table 17.

### **Table 28: Empirical Results (Usefulness of Real Estate Agent)**

r-squared value: 0.0176

number of observations: 9138

| <u>Variable</u> | <u>coeff.</u> | <u>z-stat</u> |
|-----------------|---------------|---------------|
| FIRST           | 0.026         | 0.45          |
| NEW             | -0.661        | -11.64        |
| TOWN            | 0.288         | 2.12          |
| RURAL           | -0.052        | -0.36         |



|                   |        |       |
|-------------------|--------|-------|
| URBAN             | 0.071  | 0.5   |
| SUBURB            | -0.157 | -1.07 |
| SINGLE MALE       | 0.207  | 1.21  |
| SINGLE FEMALE     | 0.330  | 1.86  |
| MARRIED           | 0.196  | 1.06  |
| UNMARRIED         | 0.161  | 0.87  |
| NO CHILD          | -0.251 | -1.28 |
| 1 CHILD           | 0.014  | 0.08  |
| 2 CHILDREN        | 0.014  | 0.09  |
| AGE UNDER 35      | 0.328  | 4.76  |
| AGE BETWEEN 35-50 | 0.140  | 2.24  |
| BLACK             | 0.222  | 1.43  |
| ASIAN             | 0.348  | 2.26  |
| WHITE             | 0.457  | 3.72  |
| HISPANIC          | 0.743  | 4.46  |
| INCOME UNDER 55   | -0.035 | -0.4  |
| INCOME UNDER 100  | 0.099  | 1.23  |
| INCOME UNDER 200  | 0.192  | 2.31  |

Note: The independent variable for Table 28 is Usefulness of a Real Estate Agent, and the variable descriptions can be found in Table 17.

**Table 29: Empirical Results (Usefulness of Television)**

| <u>Variable</u> | <u>coeff.</u> | <u>z-stat</u> |
|-----------------|---------------|---------------|
| FIRST           | -0.066        | -1.19         |
| NEW             | 2.227         | 26.63         |
| TOWN            | 0.660         | 4.64          |
| RURAL           | 0.329         | 2.22          |
| URBAN           | 0.270         | 1.85          |
| SUBURB          | 0.447         | 2.93          |
| SINGLE MALE     | 0.405         | 2.35          |
| SINGLE FEMALE   | 0.168         | 0.95          |
| MARRIED         | 0.317         | 1.72          |
| UNMARRIED       | 0.409         | 2.23          |
| NO CHILD        | -0.368        | -1.72         |
| 1 CHILD         | -0.062        | -0.36         |
| 2 CHILDREN      | -0.065        | -0.38         |
| AGE UNDER 35    | 0.613         | 8.88          |
| AGE BETWEEN 35- | 0.448         | 6.81          |

50

|                     |       |      |
|---------------------|-------|------|
| BLACK               | 0.183 | 1.09 |
| ASIAN               | 0.447 | 2.5  |
| WHITE               | 0.050 | 0.39 |
| HISPANIC            | 0.184 | 1.12 |
| INCOME UNDER 55     | 0.024 | 0.26 |
| INCOME UNDER<br>100 | 0.208 | 2.4  |
| INCOME UNDER<br>200 | 0.294 | 3.26 |

Note: The independent variable for Table 29 is Usefulness of Television, and the variable descriptions can be found in Table 17.

### Table 30: Empirical Results (Usefulness of Newspaper Advertisement)

r-squared value: 0.0269

number of observations: 9138

| <u>Variable</u>       | <u>coeff.</u> | <u>z-stat</u> |
|-----------------------|---------------|---------------|
| FIRST                 | 0.094         | 1.52          |
| NEW                   | 0.309         | 4.23          |
| TOWN                  | 0.548         | 4             |
| RURAL                 | 0.348         | 2.39          |
| URBAN                 | 0.404         | 2.78          |
| SUBURB                | 0.580         | 3.76          |
| SINGLE MALE           | 0.194         | 1             |
| SINGLE FEMALE         | -0.020        | -0.1          |
| MARRIED               | 0.179         | 0.87          |
| UNMARRIED             | 0.267         | 1.27          |
| NO CHILD              | -0.256        | -1.25         |
| 1 CHILD               | 0.050         | 0.3           |
| 2 CHILDREN            | 0.120         | 0.71          |
| AGE UNDER 35          | 0.732         | 9.98          |
| AGE BETWEEN 35-<br>50 | 0.578         | 8.49          |
| BLACK                 | 0.544         | 2.61          |
| ASIAN                 | 0.647         | 3.17          |
| WHITE                 | 0.270         | 1.95          |
| HISPANIC              | 0.320         | 1.7           |
| INCOME UNDER 55       | 0.164         | 1.73          |
| INCOME UNDER<br>100   | 0.223         | 2.57          |

|                     |       |      |
|---------------------|-------|------|
| INCOME UNDER<br>200 | 0.224 | 2.53 |
|---------------------|-------|------|

Note: The independent variable for Table 30 is Usefulness of Newspaper Advertisements, and the variable descriptions can be found in Table 17.

**Table 31: Empirical Results (Usefulness of Home Book or Magazine)**

r-squared value: 0.0311  
number of observations: 9138

| <u>Variable</u>       | <u>coeff.</u> | <u>z-stat</u> |
|-----------------------|---------------|---------------|
| FIRST                 | -0.042        | -0.66         |
| NEW                   | 0.193         | 2.61          |
| TOWN                  | 0.575         | 4.3           |
| RURAL                 | 0.335         | 2.36          |
| URBAN                 | 0.422         | 2.97          |
| SUBURB                | 0.471         | 3.12          |
| SINGLE MALE           | 0.483         | 2.7           |
| SINGLE FEMALE         | 0.135         | 0.73          |
| MARRIED               | 0.347         | 1.81          |
| UNMARRIED             | 0.445         | 2.29          |
| NO CHILD              | -0.450        | -2.18         |
| 1 CHILD               | 0.014         | 0.08          |
| 2 CHILDREN            | -0.112        | -0.63         |
| AGE UNDER 35          | 0.861         | 11.49         |
| AGE BETWEEN 35-<br>50 | 0.666         | 9.38          |
| BLACK                 | 0.167         | 0.88          |
| ASIAN                 | 0.481         | 2.24          |
| WHITE                 | 0.317         | 2.15          |
| HISPANIC              | 0.103         | 0.55          |
| INCOME UNDER 55       | -0.054        | -0.53         |
| INCOME UNDER<br>100   | 0.105         | 1.09          |
| INCOME UNDER<br>200   | 0.192         | 1.88          |

Note: The independent variable for Table 31 is Usefulness of Home Book or Magazines, and the variable descriptions can be found in Table 17.

**Table 32: Empirical Results (Usefulness of Open House)**

| <u>Variable</u>   | <u>coeff.</u> | <u>z-stat</u> |
|-------------------|---------------|---------------|
| FIRST             | 0.037         | 0.71          |
| NEW               | 0.146         | 2.47          |
| TOWN              | 0.339         | 2.38          |
| RURAL             | 0.353         | 2.34          |
| URBAN             | 0.126         | 0.85          |
| SUBURB            | 0.608         | 3.85          |
| SINGLE MALE       | 0.384         | 2.2           |
| SINGLE FEMALE     | 0.168         | 0.93          |
| MARRIED           | 0.151         | 0.82          |
| UNMARRIED         | 0.411         | 2.2           |
| NO CHILD          | -0.488        | -2.4          |
| 1 CHILD           | -0.122        | -0.74         |
| 2 CHILDREN        | -0.068        | -0.41         |
| AGE UNDER 35      | 0.500         | 7.69          |
| AGE BETWEEN 35-50 | 0.454         | 7.21          |
| BLACK             | 0.160         | 1             |
| ASIAN             | 0.332         | 2.07          |
| WHITE             | 0.161         | 1.3           |
| HISPANIC          | 0.156         | 1.01          |
| INCOME UNDER 55   | 0.164         | 1.94          |
| INCOME UNDER 100  | 0.221         | 2.82          |
| INCOME UNDER 200  | 0.164         | 2.06          |

Note: The independent variable for Table 32 is Usefulness of Open Houses, and the variable descriptions can be found in Table 17.

### **Table 33: Empirical Results (Usefulness of Billboard)**

r-squared value: 0.0173

number of observations: 9138

| <u>Variable</u> | <u>coeff.</u> | <u>z-stat</u> |
|-----------------|---------------|---------------|
| FIRST           | -0.055        | -1.13         |
| NEW             | 0.057         | 1.02          |
| TOWN            | 0.275         | 2.17          |
| RURAL           | 0.151         | 1.13          |
| URBAN           | 0.416         | 3.11          |

|                   |        |       |
|-------------------|--------|-------|
| SUBURB            | 0.045  | 0.33  |
| SINGLE MALE       | 0.296  | 1.84  |
| SINGLE FEMALE     | 0.345  | 2.09  |
| MARRIED           | 0.133  | 0.78  |
| UNMARRIED         | 0.207  | 1.21  |
| NO CHILD          | -0.152 | -0.81 |
| 1 CHILD           | 0.088  | 0.61  |
| 2 CHILDREN        | 0.316  | 2.22  |
| AGE UNDER 35      | 0.465  | 7.72  |
| AGE BETWEEN 35-50 | 0.427  | 7.48  |
| BLACK             | 0.037  | 0.26  |
| ASIAN             | 0.559  | 3.88  |
| WHITE             | 0.228  | 2.02  |
| HISPANIC          | 0.122  | 0.88  |
| INCOME UNDER 55   | -0.441 | -5.45 |
| INCOME UNDER 100  | -0.152 | -2.02 |
| INCOME UNDER 200  | 0.088  | 1.14  |

Note: The independent variable for Table 33 is Usefulness of Billboards, and the variable descriptions can be found in Table 17.

**Table 34: Empirical Results  
(Usefulness of Online Information About Properties For Sale)**

r-squared value: 0.0628  
number of observations: 9138

| <u>Variable</u> | <u>coeff.</u> | <u>z-stat</u> |
|-----------------|---------------|---------------|
| FIRST           | -0.052        | -0.78         |
| NEW             | -0.500        | -7.77         |
| TOWN            | 0.345         | 2.66          |
| RURAL           | 0.059         | 0.43          |
| URBAN           | 0.192         | 1.38          |
| SUBURB          | -0.028        | -0.19         |
| SINGLE MALE     | 0.559         | 3.29          |
| SINGLE FEMALE   | 0.730         | 4.09          |
| MARRIED         | 0.370         | 2.01          |
| UNMARRIED       | 0.690         | 3.62          |
| NO CHILD        | -0.212        | -1.04         |

|                   |        |       |
|-------------------|--------|-------|
| 1 CHILD           | 0.360  | 2.12  |
| 2 CHILDREN        | 0.457  | 2.7   |
| AGE UNDER 35      | 1.214  | 15.95 |
| AGE BETWEEN 35-50 | 0.835  | 12.68 |
| BLACK             | 0.106  | 0.66  |
| ASIAN             | 0.241  | 1.33  |
| WHITE             | 0.209  | 1.63  |
| HISPANIC          | 0.022  | 0.13  |
| INCOME UNDER 55   | -0.526 | -5.39 |
| INCOME UNDER 100  | 0.059  | 0.64  |
| INCOME UNDER 200  | 0.224  | 2.29  |

Note: The independent variable for Table 34 is Usefulness of Online Information about Properties for Sale, and the variable descriptions can be found in Table 17.

**Table 35: Empirical Results (Usefulness of Recently Sold Properties)**

r-squared value: 0.0317  
number of observations: 9138

| <u>Variable</u>   | <u>coeff.</u> | <u>z-stat</u> |
|-------------------|---------------|---------------|
| FIRST             | -0.441        | -0.89         |
| NEW               | -0.412        | -7.55         |
| TOWN              | 0.273         | 2.37          |
| RURAL             | -0.027        | -0.22         |
| URBAN             | 0.288         | 2.37          |
| SUBURB            | -0.247        | -1.93         |
| SINGLE MALE       | 0.181         | 1.1           |
| SINGLE FEMALE     | 0.101         | 0.59          |
| MARRIED           | 0.247         | 1.42          |
| UNMARRIED         | 0.271         | 1.56          |
| NO CHILD          | -0.070        | -0.37         |
| 1 CHILD           | 0.394         | 2.64          |
| 2 CHILDREN        | 0.337         | 2.27          |
| AGE UNDER 35      | 0.676         | 11.07         |
| AGE BETWEEN 35-50 | 0.596         | 10.59         |
| BLACK             | 0.157         | 1.09          |

|                     |        |       |
|---------------------|--------|-------|
| ASIAN               | 0.750  | 5.03  |
| WHITE               | -0.137 | -1.21 |
| HISPANIC            | 0.216  | 1.58  |
| INCOME UNDER 55     | -0.692 | -8.46 |
| INCOME UNDER<br>100 | -0.291 | -3.77 |
| INCOME UNDER<br>200 | 0.073  | 0.92  |

Note: The independent variable for Table 35 is Usefulness of Recently Sold Properties and the variable descriptions can be found in Table 17.

**Table 36: Empirical Results (Usefulness of Upcoming Open Houses)**

r-squared value: 0.0252  
number of observations: 9138

| <u>Variable</u>       | <u>coeff.</u> | <u>z-stat</u> |
|-----------------------|---------------|---------------|
| FIRST                 | -0.034        | -0.71         |
| NEW                   | -0.095        | -1.73         |
| TOWN                  | 0.275         | 2.55          |
| RURAL                 | 0.165         | 1.44          |
| URBAN                 | 0.430         | 3.74          |
| SUBURB                | 0.073         | -0.6          |
| SINGLE MALE           | 0.182         | 1.15          |
| SINGLE FEMALE         | 0.354         | 2.18          |
| MARRIED               | 0.080         | 0.48          |
| UNMARRIED             | 0.181         | 1.08          |
| NO CHILD              | -0.202        | -10.7         |
| 1 CHILD               | 0.332         | 2.17          |
| 2 CHILDREN            | 0.477         | 3.11          |
| AGE UNDER 35          | 0.652         | 10.91         |
| AGE BETWEEN 35-<br>50 | 0.592         | 10.84         |
| BLACK                 | 0.233         | 1.72          |
| ASIAN                 | 0.560         | 4.19          |
| WHITE                 | 0.073         | 0.69          |
| HISPANIC              | 0.139         | 1.05          |
| INCOME UNDER 55       | -0.542        | -7.01         |
| INCOME UNDER<br>100   | -0.169        | -2.37         |

|                     |       |     |
|---------------------|-------|-----|
| INCOME UNDER<br>200 | 0.196 | 1.7 |
|---------------------|-------|-----|

Note: The independent variable for Table 36 is Usefulness of Upcoming Open Houses, and the variable descriptions can be found in Table 17.

**Table 37: Empirical Results (Usefulness of Interactive Maps)**

r-squared value: 0.0389  
number of observations: 9138

| <u>Variable</u>       | <u>coeff.</u> | <u>z-stat</u> |
|-----------------------|---------------|---------------|
| FIRST                 | 0.070         | 1.42          |
| NEW                   | -0.300        | -5.6          |
| TOWN                  | 0.397         | 3.33          |
| RURAL                 | -0.009        | -0.07         |
| URBAN                 | 0.258         | 2.08          |
| SUBURB                | -0.027        | -0.2          |
| SINGLE MALE           | 0.534         | 3.75          |
| SINGLE FEMALE         | 0.458         | 3.1           |
| MARRIED               | 0.473         | 3.07          |
| UNMARRIED             | 0.578         | 3.72          |
| NO CHILD              | -0.322        | -1.81         |
| 1 CHILD               | 0.387         | 2.69          |
| 2 CHILDREN            | 0.337         | 2.35          |
| AGE UNDER 35          | 1.014         | 16.61         |
| AGE BETWEEN 35-<br>50 | 0.798         | 14.25         |
| BLACK                 | -0.163        | -1.25         |
| ASIAN                 | 0.135         | 0.98          |
| WHITE                 | 0.048         | 0.46          |
| HISPANIC              | -0.002        | -0.02         |
| INCOME UNDER 55       | -0.315        | -4            |
| INCOME UNDER<br>100   | -0.044        | -0.6          |
| INCOME UNDER<br>200   | 0.174         | 2.32          |

Note: The independent variable for Table 37 is Usefulness of Interactive Maps, and the variable descriptions can be found in Table 17.

**Table 38: Empirical Results (Usefulness of Online Photos)**



r-squared value: 0.0733  
 number of observations: 9138

| <u>Variable</u>   | <u>coeff.</u> | <u>z-stat</u> |
|-------------------|---------------|---------------|
| FIRST             | -0.009        | -0.13         |
| NEW               | -0.409        | -6.12         |
| TOWN              | 0.410         | 3.05          |
| RURAL             | 0.080         | 0.56          |
| URBAN             | 0.216         | 1.5           |
| SUBURB            | 0.000         | 0             |
| SINGLE MALE       | 0.558         | 3.19          |
| SINGLE FEMALE     | 0.648         | 3.52          |
| MARRIED           | 0.211         | 1.11          |
| UNMARRIED         | 0.662         | 3.35          |
| NO CHILD          | -0.344        | -1.75         |
| 1 CHILD           | 0.401         | 3.01          |
| 2 CHILDREN        | 0.512         | 3.1           |
| AGE UNDER 35      | 1.348         | 17.13         |
| AGE BETWEEN 35-50 | 0.947         | 14.18         |
| BLACK             | 0.050         | 0.3           |
| ASIAN             | 0.015         | 0.08          |
| WHITE             | 0.155         | 1.13          |
| HISPANIC          | -0.206        | -1.2          |
| INCOME UNDER 55   | -0.545        | -5.37         |
| INCOME UNDER 100  | -0.017        | -0.18         |
| INCOME UNDER 200  | 0.128         | 1.26          |

Note: The independent variable for Table 38 is Usefulness of Online Photos, and the variable descriptions can be found in Table 17.

**Table 39: Empirical Results (Usefulness of Virtual Tours)**

r-squared value: 0.0335  
 number of observations: 9138

| <u>Variable</u> | <u>coeff.</u> | <u>z-stat</u> |
|-----------------|---------------|---------------|
| FIRST           | -0.047        | -0.87         |
| NEW             | -0.101        | -1.74         |
| TOWN            | 0.124         | 1.01          |
| RURAL           | -0.064        | -0.49         |

|                   |        |       |
|-------------------|--------|-------|
| URBAN             | -0.061 | -0.47 |
| SUBURB            | -0.075 | -0.55 |
| SINGLE MALE       | 0.574  | 3.75  |
| SINGLE FEMALE     | 0.656  | 4.11  |
| MARRIED           | 0.112  | 0.68  |
| UNMARRIED         | 0.593  | 3.59  |
| NO CHILD          | -0.366 | -1.91 |
| 1 CHILD           | 0.403  | 2.61  |
| 2 CHILDREN        | 0.319  | 2.09  |
| AGE UNDER 35      | 0.884  | 13.55 |
| AGE BETWEEN 35-50 | 0.652  | 11.13 |
| BLACK             | 0.457  | 3.14  |
| ASIAN             | 0.210  | 1.45  |
| WHITE             | 0.208  | 1.89  |
| HISPANIC          | 0.115  | 0.79  |
| INCOME UNDER 55   | -0.483 | -5.7  |
| INCOME UNDER 100  | -0.066 | -0.84 |
| INCOME UNDER 200  | 0.084  | 1.04  |

Note: The independent variable for Table 39 is Usefulness of Virtual Tours, and the variable descriptions can be found in Table 17.

**Table 40: Empirical Results (Usefulness of Online Neighborhood Information)**

r-squared value: 0.0350

number of observations: 9138

| <u>Variable</u> | <u>coeff.</u> | <u>z-stat</u> |
|-----------------|---------------|---------------|
| FIRST           | 0.018         | 0.36          |
| NEW             | -0.389        | -7.41         |
| TOWN            | 0.128         | 1.19          |
| RURAL           | -0.159        | -1.39         |
| URBAN           | -0.058        | -0.51         |
| SUBURB          | -0.148        | -1.2          |
| SINGLE MALE     | 0.256         | 1.77          |
| SINGLE FEMALE   | 0.316         | 2.09          |
| MARRIED         | 0.090         | 0.58          |
| UNMARRIED       | 0.344         | 2.19          |
| NO CHILD        | -0.205        | -1.18         |
| 1 CHILD         | 0.465         | 3.3           |

|                   |        |       |
|-------------------|--------|-------|
| 2 CHILDREN        | 0.418  | 2.98  |
| AGE UNDER 35      | 1.035  | 17.06 |
| AGE BETWEEN 35-50 | 0.738  | 13.4  |
| BLACK             | 0.192  | 1.4   |
| ASIAN             | 0.175  | 1.29  |
| WHITE             | -0.011 | -0.1  |
| HISPANIC          | 0.021  | 0.15  |
| INCOME UNDER 55   | -0.247 | -3.19 |
| INCOME UNDER 100  | 0.019  | 0.27  |
| INCOME UNDER 200  | 0.211  | 2.89  |

Note: The independent variable for Table 40 is Usefulness of Virtual Tours, and the variable descriptions can be found in Table 17.

**Table 41: Empirical Results (Usefulness of Contract Status)**

r-squared value:  
0.0338  
number of observations: 9138

| <u>Variable</u>   | <u>coeff.</u> | <u>z-stat</u> |
|-------------------|---------------|---------------|
| FIRST             | 0.018         | 0.36          |
| NEW               | -0.389        | -7.41         |
| TOWN              | 0.128         | 1.19          |
| RURAL             | -0.159        | -1.39         |
| URBAN             | -0.058        | -0.51         |
| SUBURB            | -0.148        | -1.2          |
| SINGLE MALE       | 0.256         | 1.77          |
| SINGLE FEMALE     | 0.316         | 2.09          |
| MARRIED           | 0.090         | 0.58          |
| UNMARRIED         | 0.344         | 2.19          |
| NO CHILD          | -0.205        | -1.18         |
| 1 CHILD           | 0.465         | 3.3           |
| 2 CHILDREN        | 0.418         | 2.98          |
| AGE UNDER 35      | 1.035         | 17.06         |
| AGE BETWEEN 35-50 | 0.738         | 13.4          |
| BLACK             | 0.192         | 1.4           |

|                     |        |       |
|---------------------|--------|-------|
| ASIAN               | 0.175  | 1.29  |
| WHITE               | -0.011 | -0.1  |
| HISPANIC            | 0.021  | 0.15  |
| INCOME UNDER 55     | -0.247 | -3.19 |
| INCOME UNDER<br>100 | 0.019  | 0.27  |
| INCOME UNDER<br>200 | 0.211  | 2.89  |

Note: The independent variable for Table 41 is Usefulness of Online Info about the Contract Status, and the variable descriptions can be found in Table 17.

**Table 42: Empirical Results (Usefulness of Real Estate Agent Contact Information)**

r-squared value: 0.0111

number of observations: 9138

| <u>Variable</u>       | <u>coeff.</u> | <u>z-stat</u> |
|-----------------------|---------------|---------------|
| FIRST                 | 0.152         | 3.11          |
| NEW                   | -0.310        | -5.78         |
| TOWN                  | -0.034        | -0.27         |
| RURAL                 | -0.051        | -0.38         |
| URBAN                 | -0.161        | -1.23         |
| SUBURB                | -0.041        | -0.29         |
| SINGLE MALE           | 0.051         | 0.3           |
| SINGLE FEMALE         | 0.088         | 0.51          |
| MARRIED               | -0.038        | -0.21         |
| UNMARRIED             | 0.211         | 1.19          |
| NO CHILD              | -0.335        | -1.75         |
| 1 CHILD               | 0.182         | 1.21          |
| 2 CHILDREN            | 0.223         | 1.49          |
| AGE UNDER 35          | 0.317         | 5.09          |
| AGE BETWEEN 35-<br>50 | 0.306         | 5.29          |
| BLACK                 | 0.341         | 2.38          |
| ASIAN                 | 0.180         | 1.32          |
| WHITE                 | -0.021        | -0.19         |
| HISPANIC              | 0.198         | 0.44          |
| INCOME UNDER 55       | 0.122         | 0.53          |
| INCOME UNDER 100      | 0.216         | 3             |
| INCOME UNDER 200      | 0.144         | 1.98          |

Note: The independent variable for Table 42 is Usefulness of Online Info about the Real Estate Agent Contact Information, and the variable descriptions can be found in Table 17

### **Real Estate Agent Survey**

The last survey that was examined was a survey specifically designed for licensed real estate agents in the United States. This survey asked similar questions as the National Association of Realtors survey, but in an opinion form for licensed real estate agents.

**Table 43** through **Table 55** presents the results from the real estate agent survey. **Table 43** displays the responses to the survey question, “What do you think your client/customer’s first step was when starting the home buying process? (Mark only one).” It can be inferred that the majority of the respondents thought that their client looked online to start the buying process. This underscores the importance of technology in real estate. **Table 44** presents a chart from the question, “Where do you think your clients/customers first learn about a home that was for sale? (Mark only one). Real estate agents said that yard signs, REALTOR.com, and video hosting Web sites were the most useful for the real estate agent’s clients to start the home buying process. It is interesting to note that yard signs are still so important, but agents seem to place more importance on video hosting sites even though buyers seem to rely more on agent Web sites. **Table 45** shows the result to the survey question, “Do you use the Internet to advertise or sell homes?” The majority of licensed real estate agents did, in fact, use the Internet to advertise or sell homes. **Table 46** indicates the results from the survey question, “How effective do you think the Internet is to advertise for real estate property?” It can be inferred based on the results that most of the licensed real estate agents do believe that the Internet is a very effective place to advertise for real estate property.

**Table 47** through **Table 49** examine the frequency at which real estate agents believe their clients use various home searching tools. **Table 47** answers the question from the real estate agent survey, “Which of the following do you think your clients/customers use most frequently when searching for a home? (Check all that apply).” The most popular answer was the Internet, followed by a yard sign, real estate agent, and home book or magazine. **Table 48** presents the responses from the survey question, “Which of the following do you think your clients/customers use occasionally when searching for a home? (Check all that apply).” For the most part, the real estate agents said that their clients use most of the listed tools occasionally, but the tools that were not used occasionally were the following: billboards, the Internet, and home builders. **Table 49** displays the results from the survey question, “Which of the following do you think your clients/customers use the least or not at all when searching for a home? (Check all that apply).” It can be inferred that real estate agents think that their clients use a relocation company, billboard, television, and homebuilders the least out of all the available tools. These results match well with what buyers and sellers report and indicated that agents have a good understanding of the most effective marketing methods. Agents, however, seem to emphasize home magazines to a greater extent than clients.

**Table 50** through **Table 52** presents the results for the survey questions that asked the real estate agents the usefulness of various real estate tools. **Table 50** presents the results to the survey question, “Which of the following do you think is most useful to your clients/customers when they are searching for a home? (Check all that apply).” Real estate agents believe that the Internet, real estate agents, and yard signs are the most useful tools for their clients when looking for a property. **Table 51** displays the responses

to the survey question, “Which of the following do you think is somewhat useful to your clients/customers when they are searching for a home? (Check all that apply).” It can be inferred from the data that the real estate agents said the tools that were somewhat useful are all the tools listed but relocation companies and billboards. **Table 52** reveals the answers to the survey questions, “Which of the following do you think is least useful to your clients/customers when they are searching for a home? (Check all that apply).” The top three results of the tools that were the least useful for the real estate agent’s clients were the following: relocation companies, television, and billboards. These results are similar to those reported by the home buyers and sellers.

**Table 53** presents the results to the following survey question, “Which of the following do you think your client/customer uses when searching for a home? (Check all that apply).” The most popular answers were REALTOR.com, the multiple listing service (MLS), and the real estate company Web site, as also reported by buyers and sellers.

**Table 54** displays the responses to the survey question, “Which of the following actions do you think your clients/customers take as a result of accessing real estate information on the Internet? (Check all that apply).” The majority of the all the responders said that their client did the following after accessing real estate information on the Internet: found the agent used to search for or buy a home, walked through a home viewed online, drove by or viewed the home, or requested more information. Home buyers, however, did not report finding an agent after searching online for information. The last table shows the result of the survey question, “Which of the following do you think is very useful for your client/customer when searching for homes online? (Check all that apply).” **Table 55** shows that the three most popular answers were the following: detailed information about

properties for sale, photos, and real estate agent contact information.

**Table 43: Client's First Step in the Buying Process**

| <u>Possible Actions</u>             | <u>Participants</u> | <u>Percentage Total</u> |
|-------------------------------------|---------------------|-------------------------|
| Looked Online for Info              | 11                  | 12.22%                  |
| Talked with a Friend or Relative    | 7                   | 7.78%                   |
| Looked Online                       | 56                  | 62.22%                  |
| Looked Online for Properties        | 0                   | 0.00%                   |
| Visited Open Houses                 | 5                   | 5.56%                   |
| Drove by Homes                      | 0                   | 0.00%                   |
| Contacted Home Seller               | 0                   | 0.00%                   |
| Contacted Builder                   | 2                   | 2.22%                   |
| Read Books About the Buying Process | 1                   | 1.11%                   |
| Attended a Home Buying Seminar      | 0                   | 0.00%                   |
| Looked in Newspapers                | 5                   | 5.56%                   |
| Contacted a Real Estate Agent       | 3                   | 3.33%                   |
| Other                               | 0                   | 0                       |
| Total                               | 90                  | 1                       |

Note: Table 43 illustrates the responses to the survey question, "What do you think your client/customer's first step was when starting the home buying process? (Mark all that apply)."

**Table 44: Location Where the Client First Learned the Property was For Sale**

| <u>Possible Actions</u>            | <u>Participants</u> | <u>Percentage Total</u> |
|------------------------------------|---------------------|-------------------------|
| Yard Sign                          | 20                  | 22.49%                  |
| Newspaper                          | 2                   | 2.25%                   |
| Home Builder                       | 1                   | 1.12%                   |
| Home Book                          | 5                   | 5.62%                   |
| Friend or Relative                 | 1                   | 1.12%                   |
| Directly from the Seller           | 0                   | 0.00%                   |
| Real Estate Agent                  | 4                   | 4.49%                   |
| REALTOR.com                        | 18                  | 20.22%                  |
| Real Estate Agent Web site         | 1                   | 1.12%                   |
| Real Estate Agent Company Web site | 4                   | 4.49%                   |
| MLS Web Site                       | 0                   | 0.00%                   |
| For-Sale-By-Owner Web Site         | 2                   | 2.25%                   |
| Other Web Sites (Yahoo, Google)    | 5                   | 5.62%                   |



|                             |    |         |
|-----------------------------|----|---------|
| Social Networking Web sites | 0  | 0.00%   |
| Video Hosting Web Site      | 26 | 29.21%  |
| Other                       | 0  | 0.00%   |
| Total                       | 89 | 100.00% |

Note: Table 44 illustrates responses from the survey questions that states, “Where do you think you client/customers first learn about a home that is for sale? (Mark only one).”

**Table 45: Use of the Internet to Buy or Sale Homes**

| <u>Possible Actions</u> | <u>Participants</u> | <u>Percentage Total</u> |
|-------------------------|---------------------|-------------------------|
| Yes, Frequently         | 82                  | 93.18%                  |
| Yes, Occasionally       | 5                   | 5.68%                   |
| Rarely or Never         | 1                   | 1.14%                   |
| Total                   | 88                  | 100.00%                 |

Note: Table 45 illustrates the responses to the survey questions, “Do you use the Internet to advertise or sell homes?”

**Table 46: Effectiveness of the Internet to Buy and Sale Homes**

| <u>Possible Actions</u> | <u>Participants</u> | <u>Percentage Total</u> |
|-------------------------|---------------------|-------------------------|
| Very                    | 79                  | 88.76%                  |
| Somewhat                | 10                  | 11.24%                  |
| Not at all              | 0                   | 0.00%                   |
| Total                   | 89                  | 100.00%                 |

Note: Table 46 shows the responses to the survey question, “How effective do you think the Internet is to advertise for Real Estate?”

**Table 47: Most Frequently used for Your Client When Searching for a Home**

| <u>Possible Actions</u> | <u>Participants</u> | <u>Percentage Total</u> |
|-------------------------|---------------------|-------------------------|
| Yard Sign               | 46                  | 51.69%                  |
| Real Estate Agent       | 53                  | 59.55%                  |
| Home Builder            | 3                   | 3.37%                   |
| Television              | 0                   | 0.00%                   |
| Newspaper               | 11                  | 12.36%                  |
| Relocation Company      | 4                   | 4.49%                   |
| Home Book or Magazine   | 29                  | 32.58%                  |
| Open House              | 6                   | 6.74%                   |
| Billboard               | 0                   | 0.00%                   |
| Internet                | 83                  | 93.26%                  |

Note: Table 47 illustrates the responses to the survey question, “Which of the following do you think your client/customers use most frequently when search for a home? (Check all that apply).”

**Table 48: Your Client Occasionally Used When Searching for a Home**

| <u>Possible Actions</u> | <u>Participants</u> | <u>Percentage Total</u> |
|-------------------------|---------------------|-------------------------|
|-------------------------|---------------------|-------------------------|

|                       |    |        |
|-----------------------|----|--------|
| Yard Sign             | 36 | 40.44% |
| Real Estate Agent     | 20 | 22.47% |
| Home Builder          | 16 | 17.97% |
| Television            | 27 | 30.33% |
| Newspaper             | 37 | 41.57% |
| Relocation Company    | 15 | 16.85% |
| Home Book or Magazine | 41 | 46.07% |
| Open House            | 29 | 32.58% |
| Billboard             | 11 | 12.36% |
| Internet              | 17 | 19.10% |

Note: Table 48 illustrates the responses to the survey question, “Which of the following do you think your client/customers use occasionally when search for a home? (Check all that apply).”

**Table 49: Your Client Used the Least When Searching for a Home**

| <u>Possible Actions</u> | <u>Participants</u> | <u>Percentage Total</u> |
|-------------------------|---------------------|-------------------------|
| Yard Sign               | 2                   | 2.24%                   |
| Real Estate Agent       | 1                   | 1.12%                   |
| Home Builder            | 33                  | 37.07%                  |
| Television              | 42                  | 47.19%                  |
| Newspaper               | 15                  | 16.85%                  |
| Relocation Company      | 44                  | 49.44%                  |
| Home Book or Magazine   | 7                   | 7.87%                   |
| Open House              | 22                  | 24.72%                  |
| Billboard               | 66                  | 74.16%                  |
| Internet                | 0                   | 0.00%                   |

Note: Table 49 illustrates the responses to the survey question, “Which of the following do you think your client/customers use the least or not at all when search for a home? (Check all that apply).”

**Table 50: Most Useful For Your Client When Searching for a Home**

| <u>Possible Actions</u> | <u>Participants</u> | <u>Percentage Total</u> |
|-------------------------|---------------------|-------------------------|
| Yard Sign               | 38                  | 42.69%                  |
| Real Estate Agent       | 76                  | 85.39%                  |
| Home Builder            | 5                   | 5.61%                   |
| Television              | 0                   | 0.00%                   |
| Newspaper               | 8                   | 8.98%                   |
| Relocation Company      | 1                   | 1.12%                   |
| Home Book or Magazine   | 18                  | 20.22%                  |
| Open House              | 6                   | 6.74%                   |
| Billboard               | 0                   | 0.00%                   |
| Internet                | 75                  | 84.27%                  |

Note: Table 50 illustrates the responses to the survey question, “Which of the following do you think is most useful to your clients/customers when they are searching for a home? (Check all that apply).”

**Table 51: Somewhat Useful for Your Client When Searching for a Home**

| <u>Possible Actions</u> | <u>Participants</u> | <u>Percentage Total</u> |
|-------------------------|---------------------|-------------------------|
| Yard Sign               | 32                  | 35.95%                  |
| Real Estate Agent       | 14                  | 15.73%                  |
| Home Builder            | 11                  | 12.36%                  |
| Television              | 15                  | 16.85%                  |
| Newspaper               | 33                  | 37.07%                  |
| Relocation Company      | 10                  | 11.24%                  |
| Home Book or Magazine   | 53                  | 59.55%                  |
| Open House              | 21                  | 23.59%                  |
| Billboard               | 5                   | 5.62%                   |
| Internet                | 18                  | 20.22%                  |

Note: Table 51 illustrates the responses to the survey question, “Which of the following do you think is somewhat useful to your clients/customers when they are searching for a home? (Check all that apply).”

**Table 52: Least Useful for Your Client When Searching for a Home**

| <u>Possible Actions</u> | <u>Participants</u> | <u>Percentage Total</u> |
|-------------------------|---------------------|-------------------------|
| Yard Sign               | 4                   | 4.49%                   |
| Real Estate Agent       | 0                   | 0.00%                   |
| Home Builder            | 24                  | 26.96%                  |
| Television              | 45                  | 50.56%                  |
| Newspaper               | 22                  | 24.72%                  |
| Relocation Company      | 40                  | 44.94%                  |
| Home Book or Magazine   | 12                  | 13.48%                  |
| Open House              | 27                  | 30.34%                  |
| Billboard               | 56                  | 62.92%                  |
| Internet                | 1                   | 1.12%                   |

Note: Exhibit 53 illustrates the responses to the survey question, “Which of the following do you think is least useful to your clients/customers when they are searching for a home? (Check all that apply).”

**Table 53: Websites Your Clients Use When Searching for a Home**

| <u>Possible Actions</u>         | <u>Participants</u> | <u>Percentage Total</u> |
|---------------------------------|---------------------|-------------------------|
| REALTOR.com                     | 74                  | 83.14%                  |
| Real Estate Agent Web site      | 50                  | 56.18%                  |
| Newspaper Website               | 15                  | 16.85%                  |
| Real Estate Magazine Web site   | 25                  | 20.09%                  |
| MLS Web site                    | 53                  | 59.55%                  |
| Real Estate Company Website     | 63                  | 70.79%                  |
| Other Web Sites (Yahoo, Google) | 52                  | 58.42%                  |
| For-Sale-By-Owner Web Site      | 29                  | 32.58%                  |
| Social Networking Web sites     | 18                  | 20.22%                  |
| Video Hosting Web Site          | 16                  | 17.98%                  |

Note: Table 53 illustrates the responses to the survey question, “Which of the following do you think your client/customer uses when searching for a home? (Check all that apply).”

**Table 54: Steps Your Client Takes as a Result of Accessing Real Estate Information Online**

| <u>Possible Actions</u>        | <u>Participants</u> | <u>Percentage Total</u> |
|--------------------------------|---------------------|-------------------------|
| Found the Agent                | 65                  | 73.03%                  |
| Walked Through Home Online     | 43                  | 48.31%                  |
| Drove By Home                  | 58                  | 65.16%                  |
| Contacted Builder              | 16                  | 17.98%                  |
| Pre-qualified for a Mortgage   | 21                  | 23.59%                  |
| Applied for a Mortgage Online  | 13                  | 14.61%                  |
| Found a Mortgage Lender Online | 16                  | 17.98%                  |
| Requested More Information     | 69                  | 77.53%                  |

Note: Table 54 illustrates the responses to the survey question, “Which of the following do you think your client/customers take as a result of accessing real estate information on the Internet? (Check all that apply).”

**Table 55: Very Useful for Your Client When Searching for a Home Online**

| <u>Possible Actions</u>                             | <u>Participants</u> | <u>Percentage Total</u> |
|---|---------------------|-------------------------|
| Detailed Information about the Properties for Sale  | 82                  | 92.13%                  |
| Detailed Information about Recently Sold Properties | 15                  | 16.85%                  |
| Information about Upcoming Open Houses              | 13                  | 14.61%                  |
| Interactive Maps                                    | 34                  | 38.20%                  |
| Photos  | 81                  | 91.01%                  |
| Virtual Tours                                       | 54                  | 60.67%                  |
| Neighborhood Information                            | 37                  | 41.57%                  |
| Pending Sales/Contract Status                       | 6                   | 6.74%                   |
| Real Estate Agent Contact Information               | 68                  | 76.40%                  |

Note: Table 55 illustrates the responses to the survey question, “Which of the following do you think is very useful for your client/customer when searching for homes online? (Check all that apply).”

## Chapter 5: The Conclusion

The purpose of this study was to determine the following: 1. Are there any measurable changes in the methods used to find residential real estate? 2. Did the use of technology increase in the home buying process? 3. Did demographics play any role in the increase or decrease of each method used? After performing many statistical tests from the National Association of Realtors 2003 and 2009 survey, along with, an independent real estate agent survey, these questions can now be answered.

The 2003 survey found that suburban buyers were more likely to use the Internet, single females and couples were more likely to use the Internet, and all income groups and age groups were significant and likely to use the Internet. This finding could be explained by many reasons. First of all, technology has adapted at a faster rate in suburban rather than rural areas. Next, single females, especially in today's society, may be more inclined to go to the Internet first to educate themselves about properties for sale and the home buying process. Also, couple's decisions and viewpoints can be made by a single individual in the relationship, meaning that women could have the same influence over the Internet. In 2003, generic use of the Internet was not quite in affect- Facebook had just been founded; therefore, it was not a matter of the income, but rather, a factor as to whether the individual was an early innovator or not. The younger the buyer, the more useful the Internet was, and the Internet was useful for all income levels. The younger generation was starting to become more accustomed with the Internet and using it more for day-to-day activities, but the older generation had not been forced to use or to learn about the Internet, making them think the Internet was slightly less useful than younger generations.

The usefulness for tools such as virtual tours and interactive maps, did appeal to single females and married couples the most, but the overall significance for 2003 was relatively low. This result could be because many real estate companies were not using tools such as virtual tours and interactive maps at this time. In 2003, the first place that most homebuyers learned about a property was the real estate agent. Real estate agents were where the people or businesses of potential homebuyers went to first, in order to learn as much information as possible before the transaction took place. Since not every ounce of information was available on the Internet at this time, real estate agents were very useful. People in 2003 were also using billboards and yard signs much more often than the Internet to find real estate properties. Overall, real estate agents and traditional forms of marketing were most useful in 2003.

In 2009, the results were a little bit different and had higher level significance for the questions involving the Internet. It should be noted, that there were more questions involving the Internet in the 2009 survey versus the 2003 survey. The result of homebuyers using the Internet to search for homes is the following: the availability of information online for new homes is still limited compared to existing homes. Next, buyers in small towns and urban areas became more likely to use the Internet when searching for a home. Obviously, the use of Internet spread between the years of 2003 to 2009, even to rural areas or small towns. Convenience is also key when noting that individuals in suburban areas and small towns did use the Internet: it was much easier and simpler to turn on the computer than to go all the way into town to view properties or talk to a real estate agent. The more children, the more likely a person is to use the Internet to search for a property. The more likely explanation is that parents with more

children have less time to spend in the home search and can benefit more from the convenience of the Internet. The younger the buyer, the more likely they are to use the Internet to search for a home. Again, the younger generation is more technologically savvy, resulting in their using the Internet for almost anything. Last, the higher the income level, the more likely a person is to use the Internet when searching for a home. This is likely due to the fact that they have higher opportunity costs and prefer to do research on the Internet before meeting with a real estate agent.

The following were the results of the people that used the Internet to find their home: people buying new homes were less likely to find the Internet to be useful in the home search. People in small towns were more likely to find the Internet useful in the search for a home. The speed and convenience was experienced most by people that did not have to travel to receive information. The more children, the more likely they were to find the Internet useful. The younger the buyer, the more likely they found Internet useful. Younger homebuyers, similarly in 2003, adapted at a much faster rate than older generations of homebuyers in using the Internet for things like buying or selling a house. Last, the higher the income, the more likely the individual found the Internet useful. Convenience is a major function of the Internet, especially to those with higher income levels.

The results for the questions involving the usefulness of real estate agents are as follows: buyers of new homes found real estate agents less useful in their search. Buyers of new homes may often be dealing directly with the developer of the property rather than the real estate agent. Next, buyers in small towns found real estate agents more useful: real estate agents are more useful when there is a smaller amount of land to know,

which allows them to be true experts in the area they serve, often living most of their lives in that town. Single females found real estate agents more useful; therefore, single women listened to real estate agents and used that information to buy or sell a property. The younger the buyer, the more useful they found the real estate agent to be. Experience is key when buying or selling a house, so older clients are more likely to “know the ropes” of the industry after a few transactions. Asians, Whites, and Hispanics all found agents to be useful. Of that group, Hispanics said that real estate agents were the most useful. Apparently, for cultures that are new to the United States or moving to the United States, real estate agents can be very helpful. Last, real estate agents were more useful to higher income buyers. As the famous saying goes, “You get what you pay for,” wealthy individuals could easily afford the extra expense of a real estate agent, and most likely found that the information real estate agents have the ability to offer is priceless. Also, agents may be going the extra mile to provide good service since the commission will be large if a sale is made. Since the use of the Internet had increased from the year 2003 to the year 2009, obviously, real estate companies were posting much more information on the Internet for potential clients and using tools such as interactive maps and virtual tours to appeal to all types of customers. During those six years, marketing of real estate moved towards these new technologies and away from more traditional sources such as billboards and yard signs.

The real estate agent survey shows that real estate agents find themselves to be significantly more useful for property buyers; however, these results contradict what was found in the 2003 and 2009 survey results. It can be inferred that real estate agents think that they are more useful than they actually are. As in the home buyer and seller surveys,



billboards, yard signs, and relocation companies were found to be the least useful of all the tools that were offered. The real estate agent survey, distributed in 2011, showed that technology had increased some even since the National Association of Realtor's survey. Since people are getting most of their information online, tools such as billboards, yard signs, and relocation companies are starting to become obsolete.

The hypothesis for this project was that the use of technology did increase in the real estate industry from the years 2003 to 2009. According to the survey results, a larger segment of the population used the Internet in the home search process in 2009. Buyers and sellers often used the Internet as a first point of contact with an agent or property. The survey for real estate agents also reflected this relationship. The users of the worldwide Internet increased more than 100% from the years of 2003 to 2009, which is a definite cause of the increase in the use of the Internet in the real estate industry (Internet Growth Statistics, 2011).

As far as accuracy goes, there were many possibilities for slight inaccuracies in this study. First of all, the National Association of Realtor's survey was issued by a national organization to thousands of people; therefore, there was a very accurate normal distribution. On the other hand, the real estate agent survey that was issued independently to real estate agent in a few different states did not have nearly as many respondents this could result in a lack of diversity and skewed distribution. Next, the excel program that was used to view all the survey results before plugging it into the Stata software program, had the ability to contain slight errors in formulas that could have altered the final statistics. Last, all charts and graphed were typed by hand, not copied and pasted from Stata. Therefore, there could have been human errors to the charts that explain the level

of significance for each questions.

The study exemplifies a great deal of worthiness. It is statistically accurate to say that technology in the real estate industry did increase from to 2003 to 2009. Also, the usefulness of tools such as yards signs and billboards has decreased since 2003. Further studies could be conducted to compare even earlier National Association of Realtor's surveys to even more recent surveys. If given the time and resources, a final real estate agent survey could be distributed nationwide.

Future trends and attitudes indicate that the real estate industry will continue to advance technologically. Realtors are starting to disseminate information to their clients though QR codes on advertising, downloadable apps, text messages, and email. Also, many professionals in the real estate market are using iPads or iPhones. As new inventions and ways of advertising advance even more, realtors will need to adapt to the trend in order to appeal to all potential clients.

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## Appendix A: National Association of Realtor 2003 Survey

1. Was this your first home purchase?
  - A. Yes
  - B. No
  
2. Was this property a new or previously owned house?
  - A. New
  - B. Previously Owned
  
3. Is the home you recently purchased your primary residence, a vacation home, or an investment property?
  - A. Primary residence
  - B. Vacation home
  - C. Investment property
  - D. Other
  
4. In addition to the home you just purchased, what other homes do you own?
  - A. None
  - B. Vacation home
  - C. Investment property
  - D. Your primary residence
  - E. Your previous home that you are trying to sell
  - F. Other
  
5. What was your living arrangement immediately before your recent home purchase?
  - A. Lived with parents/relatives/friends
  - B. Owned previous residence
  - C. Rented an apartment or house
  - D. Rented the home you ultimately purchased
  - E. Not applicable
  
6. Which factor most prompted you to make your recent housing purchase?
  - A. Desire to own a home of your own
  - B. Desire for more space/larger home
  - C. Desire to be closer to job, school, relatives, transit

- D. Retirement
- E. Desire for second home
- F. Desire for left space
- G. New job in another area or corporate relocation
- H. Other

7. What best describes the type of home you recently purchased?

- A. Detached single-family home
- B. Apartment/condo in building with 5 or more units
- C. Townhouse or row house
- D. Duplex/apartment/condo in 2-4 unit structure
- E. Other

8. Which best describes the location of the home you recently purchased?

- A. Small Town
- B. Rural
- C. Urban
- D. Suburb/subdivision
- E. Resort/recreation

9. What is the square footage of the home you purchased?

10. Where is this home located?

11. Which factors influenced you to choose the location where you recently purchased?

- A. Entertainment venues
- B. Health facilities
- C. Public transportation
- D. Neighborhood
- E. Planned community
- F. Close to job/school
- G. Close to friends/family
- H. Parks/recreation facilities
- I. Shopping centers
- J. Schools
- K. Other

12. In choosing the home that you purchased, did you compromise on any of the following?
- A. Neighborhood quality
  - B. Size of house
  - C. Panned expenditure
  - D. Distance from work/school
  - E. Lot size
  - F. Condition of house
  - G. None
  - H. Other
13. If money were not an issue, would you have preferred a new home or a previously-owned home?
- A. New home
  - B. Previously-owned home
14. How did you purchase this home?
- A. Real estate agent/broker
  - B. Foreclosure or trustee sale
  - C. Directly from previous owner whom you knew
  - D. Directly from previous owner whom you didn't know
  - E. Directly from the builder
  - F. Other
15. How many weeks did it take you to close your purchase from the time you signed a contract on the home?
- A. Under 2 weeks
  - B. 2-4 weeks
  - C. 5-6 weeks
  - D. 7-8 weeks
  - E. 9-12 weeks
  - F. 13-20 weeks
  - G. More than 20 weeks
16. How long did you actively search before you located the home you eventually purchased?

17. Including the home you purchased, how many homes did you walk through and examine before choosing your home?

- A. 1-4
- B. 5-9
- C. 10-14
- D. 15-19
- E. 20-24
- F. 24+

18. How did you first learn that the home you recently purchased was for sale?

- A. Yard sign
- B. Real estate agent
- C. Knew the seller
- D. Builders
- E. Newspapers
- F. Advertisement
- G. Internet
- H. Friend/neighbor/relative
- I. Home book or magazine
- J. Other

19. Please rate the usefulness of the following information sources in your home search.

Very useful    Somewhat useful    Not useful    Did not use

Yard sign

Real estate agent

Builder

Television

Newspaper Advertisement

Relocation company

Home book or magazine

Internet

Open house



20. Did you use the Internet to search for homes?

- A. Yes, frequently
- B. Yes, occasionally,
- C. No

21. When you searched for a home online, what were you looking for?

- A. Properties for sale
- B. General info about an area
- C. A real estate company
- D. A real estate agent

22. How useful were each of the following when searching for homes online?

Very useful    Somewhat useful    Not useful    Did not use

Detailed property information

Interactive maps

Photos

Virtual Tours

Neighborhood/community information

Real estate agent contact information

23. What actions did you take as a result of accessing real estate information on the Internet?

- A. Found the agent used to search/buy a home
- B. Walked through a home viewed online
- C. Drove by/viewed a home
- D. Pre-qualified for a mortgage online
- E. Applied for a mortgage online
- F. Found a mortgage lender online

24. Did you use any of the following real estate Web sites in your home search?

- A. REALTOR.com
- B. HouseandHome.com
- C. HomeSeekers.com
- D. Local newspaper Web site

- E. Real estate agent Web site
- F. Real estate company Web site
- G. Real estate magazine Web site
- H. Multiple Listing Service (MLS) Web site
- I. Other

## FINANCING YOUR HOME

25. What was the purchase price or the home you purchased and what was the original asking price?
26. Did you use a mortgage to finance your home purchase?
- A. Yes
  - B. No
27. What percentage of the purchase price did you finance?
- A. Less than 50%
  - B. 51-60%
  - C. 61-70%
  - D. 71-80%
  - E. 81-90%
  - F. 91-99%
  - G. Financed entire property price of the home
28. Which of the following were sources for your down payment?
- A. Savings
  - B. IRA
  - C. Sale of stocks/bonds
  - D. Equity from previous home
  - E. Pension fund/401k
  - F. Loan from friend/relative
  - G. Gift from friend/relative
  - H. Loan from financial institution
  - I. Inheritance
  - J. None
  - K. Other
29. Did you obtain your mortgage from the first lender who gave you a pre-approval?

- A. Yes
- B. No
- C. You did not receive pre-qualified

30. Did you use a mortgage broker or did you apply for a mortgage directly from the lender?

- A. Mortgage broker
- B. Lender
- C. Not Sure

31. Why did you choose your mortgage lender?

- A. Recommendation from real estate agent/broker
- B. Recommendation from family/friend
- C. Used loan officer/mortgage broker previously
- D. Used mortgage lender previously
- E. Bank with the same company
- F. Ability to meet a loan officer in person
- G. Lender offered a variety of loans
- H. Received special offer/incentives

32. From which company did you obtain your mortgage?

- A. Bank of America
- B. Countrywide
- C. Chase
- D. GMAC
- E. Wachovia
- F. Cendant
- G. Washington Mutual
- H. Wells Fargo
- I. Other

#### TITLE/FLOOD INSURANCE

33. If your closing was handled at a title company office, who chose the company you used?

- A. Seller
- B. Seller's agent
- C. You did
- D. Your agent chose
- E. Not handled at title company
- F. Other

34. Did you purchase an owner's title insurance policy when you purchased home?

- A. Yes, the seller paid
- B. Yes, I paid
- C. No, but I did purchase a lender's policy
- D. No policy was purchased
- E. Don't know/ not sure

35. What is the heist amount you would pay for a certificate indicating whether or not you need flood insurance?

- A. \$35
- B. \$25
- C. \$20
- D. No value to me

#### HOME IMPROVEMENTS

36. Are you planning any of the following home improvements or decorating projects in the near future for the home you purchased?

|                             | Yes, within 3 months | Yes, within 1 year | No |
|-----------------------------|----------------------|--------------------|----|
| Closet Organization/storage |                      |                    |    |
| Gardening/landscaping       |                      |                    |    |
| Interior design             |                      |                    |    |
| Interior/exterior painting  |                      |                    |    |
| Bathroom remodeling         |                      |                    |    |
| Kitchen remodeling          |                      |                    |    |
| Room remodeling             |                      |                    |    |

Window treatments

Other

37. Did any of these stores send you a “new mover” home improvement offer at your new address?

- A. Home Depot
- B. Lowe’s
- C. Sears
- D. Wal-Mart
- E. K-Mart
- F. Other

38. What high-tech amenities, if any, are you considering adding to your home?

- A. Home theater system
- B. Home wired for sound
- C. Solar heating
- D. Security system
- E. Home automation control panel
- F. High-speed Internet access
- G. Other

#### USING A REAL ESTATE AGENT WHEN PURCHASING A HOME

39. How many real estate agents did you contact before you selected one to help you buy your home?

- A. One
- B. Two
- C. Three
- D. Four
- E. Five or more

40. How many different real estate agents did you use in your home search?

- A. One
- B. Two

- C. Three
- D. Four
- E. Five or more

41. Before you contacted an agent, how long did you actively search for a home on your own?

42. Did you have a “buyer representation” arrangement with an agent, so the agent represented only you and not the seller?

- A. Yes, oral arrangement
- B. Yes, written arrangement
- C. No
- D. Don't know/not sure

43. How did you find the real estate agent you used to buy your home?

- A. Used agent previously to buy or sell a house
- B. Referred by a friend, neighbor, or relative
- C. Referred by another real estate broker
- D. Referred through you employer/relocation company
- E. Personal contact by agent
- F. Visited open house and met agent
- G. Direct mail
- H. Newspaper/Yellow Pages/ home book or magazine
- I. Advertising specialty
- J. Internet site
- K. For sale sign
- L. Walked into/called office and agent was on duty

44. Which one of the following factors was most important to you in choosing a real estate agent?

- A. Reputation of real estate agent
- B. Agent's association with a particular firm
- C. Agent's knowledge of the neighborhood
- D. Professional designation(s) held by agent
- E. Other

45. Rate the importance of the following qualities in a real estate agent and your satisfaction with your agent's performance.

|                               | How important in an agent? |          |     |
|-------------------------------|----------------------------|----------|-----|
|                               | Very                       | Somewhat | Not |
| Knowledge of purchase process |                            |          |     |
| Knowledge of market           |                            |          |     |
| Knowledge of area             |                            |          |     |
| Communication skills          |                            |          |     |
| Speed of response             |                            |          |     |
| People skills                 |                            |          |     |
| Technology skills             |                            |          |     |
| Negotiation skills            |                            |          |     |

|                               | Were you satisfied? |          |     |
|-------------------------------|---------------------|----------|-----|
|                               | Very                | Somewhat | Not |
| Knowledge of purchase process |                     |          |     |
| Knowledge of market           |                     |          |     |
| Knowledge of area             |                     |          |     |
| Communication skills          |                     |          |     |
| Speed of response             |                     |          |     |
| People skills                 |                     |          |     |
| Technology skills             |                     |          |     |
| Negotiation skills            |                     |          |     |

46. Which real estate company/companies did you utilize to buy your new home?

- A. Century 21
- B. Coldwell Banker
- C. ERA
- D. GMAC
- E. Re/Max

F. Other

47. Before you bought your current home, what did you most want your agent to do for you?

- A. Tell me how much home you could afford
- B. Tell me what comparable homes were selling for
- C. Help find and arrange financing
- D. Help me find the right home to purchase
- E. Help with the price negotiations
- F. Help with paperwork

48. At the time you initiated your home search, did your real estate agent ask you to sign a disclosure statement indicating whom he/she represented in the transaction?

- A. Yes, at first meeting
- B. Yes, when contract was written
- C. No
- D. Don't know/not sure

49. How was the real estate agent who represented you compensated?

- A. Paid by you, flat fee
- B. Paid by seller
- C. Paid by you, percentage of sales price
- D. Paid by both you and the seller
- E. Don't know/not sure
- F. Other

50. What benefits did your real estate professional provide in your recent home purchase?

- A. Provided better list of mortgage lenders
- B. Improved my knowledge of search areas
- C. Pointed out unnoticed features/faults
- D. Provided better list of service resources
- E. Negotiated better contract terms
- F. Expanded my search area
- G. Shortened my home search
- H. Helped me understand the process
- I. Narrowed my search area



- J. Negotiated a better price
- K. Negotiated better closing date
- L. None of the above

51. Would you use this real estate agent again or recommend this agent to others?

- A. Definitely
- B. Maybe
- C. Probably not
- D. Definitely not
- E. Don't know/ not sure

#### CHARACTERISTICS OF YOUR PREVIOUS HOME

52. When did you sell your previous home?

- A. 2003
- B. 2002
- C. 2001 or earlier
- D. Home has not yet sold

53. How many homes have you owned, including the one you just sold?

- A. One
- B. Two
- C. Three
- D. Four
- E. Five or more

54. What best describes the type of home you recently sold or are in the process of selling?

- A. Detached single-family home
- B. Townhouse/row house
- C. Duplex/apartment/condo 2-4 family structure
- D. Apartment/condo/in a building with 5 or more units
- E. Other

55. What best describes the location of this home?

- A. Small Town
- B. Rural
- C. Urban
- D. Suburb/subdivision
- E. Resort/recreation area

56. What was the square footage of your previous home?

57. How long did you own this home?

- A. Less than 1 year
- B. 1-2 years
- C. 3-4 years
- D. 5-6 years
- E. 7-10 years
- F. 10-15 years
- G. 15-20 years
- H. More than 20 years

58. How did you sell this home?

- A. Sold it using an agent/broker
- B. Sold it without ever using a real estate agent/broker
- C. First tried to sell it yourself, but then used an agent
- D. First listed with an agent, but then sold it yourself
- E. Sold it to a home buying company
- F. Other

59. Was the buyer a friend, family member, or acquaintance that you knew prior to the sale?

- A. Yes
- B. Not

60. How long was this home on the market?

- A. Less than 1 week
- B. 1-2 weeks
- C. 3-4 weeks
- D. 5-6 weeks
- E. 7-8 weeks
- F. 8-9 weeks
- G. 9-10 weeks
- H. 10-16 weeks

I. More than 16 weeks

61. What was the original asking price? What was the final selling price for this home?
62. What types of home improvements were made to your previous home before you sold it?
- A. Carpet cleaning
  - B. Closet organization/storage
  - C. Gardening/landscaping
  - D. Window treatments
  - E. Interior design
  - F. Bathroom remodeling
  - G. Kitchen remodeling
  - H. Interior/exterior painting
  - I. Room remodeling
  - J. Other

#### USING A REAL ESTATE AGENT WHEN SELLING YOUR HOME

63. How did you first find the real estate agent you used to sell your home?
- A. Used agent previously to buy or sell a home?
  - B. Referred by a friend, neighbor, or relative
  - C. Referred by another real estate broker
  - D. Referred through your employer/relocation company
  - E. Visited open house and met agent
  - F. Direct mail
  - G. Newspaper/Yellow Pages/home book or magazine
  - H. Advertising specialty
  - I. Internet site
  - J. For sale sign
  - K. Walked into/called office and agent was on duty
64. Which one of the following factors was the most important to you in choosing a real estate agent to sell your home?
- A. Reputation of real estate agent
  - B. Professional designations(s) held by real estate agent

- C. Agent's association with a particular firm
- D. Agent's knowledge of the neighborhood

65. Before you put your house on the market, what did you most want your agent to do for you?

- A. Tell me how to fix up my home to help sell it for more
- B. Help me to sell the house within my time frame
- C. Help me see homes available for me to purchase
- D. Help with paperwork/inspections/preparing for settlement
- E. Help me to price it competitively
- F. Help find a buyer for my home
- G. Help me with negotiate and dealing with buyers
- H. Other

66. How many real estate agents did you contact before you selected one to help you sell your home?

- A. One
- B. Two
- C. Three
- D. Four
- E. Five or more

67. Did you use this same real estate agent in your recent home purchase?

- A. Yes
- B. No

68. Would you use this real estate agent again or recommend this agent to others?

- A. Definitely
- B. Maybe
- C. Probably not
- D. Definitely not
- E. Don't know/not sure

69. Which real estate companies did you utilize to sell your previous home?

- A. Century 21
- B. Coldwell Banker
- C. ERA
- D. GMAC
- E. Prudential
- F. Re/Max
- G. Other

70. Which of the following did your real estate use to market your home?

- A. Open house
- B. Internet
- C. Real Estate magazine
- D. Television
- E. Direct mail
- F. Newspaper advertisement
- G. Yard sign
- H. Other

71. Did your agent discuss the benefits of listing your home with a multiple listing service (MLS)?

- A. Yes, the home was listed on MLS
- B. Yes, but the home was not listed on MLS
- C. No
- D. Don't know/don't remember

#### SELLING YOUR HOME YOURSELF

72. What was the most important reason for selling your home with a real estate agent?

- A. Did not want to deal with an agent
- B. Sold it to a relative/friend/neighbor
- C. Agent was unable to sell home
- D. Could not find agent to handle transaction
- E. Have your own real estate license
- F. Did not want to pay commission fee
- G. Buyers contacted me directly
- H. Other

73. Which of the following did you use to market your home to potential buyers?

- A. Open house
- B. Internet
- C. Yard sign
- D. Newspaper advertisement
- E. Television
- F. Friends/neighbors/relatives
- G. Direct mail
- H. For-Sale-By-Owner Magazine
- I. Other

74. Which of the following tasks was the most difficult for you in selling your home yourself?

- A. Getting the price right
- B. Selling within the length of time planned
- C. Having enough time to devote to all aspects of the sale
- D. Understanding and performing paperwork
- E. Preparing/fixing up home for sale
- F. Helping buyer obtain financing
- G. Attracting potential buyers
- H. Other

75. The next time you sell a home, do you plan to sell it yourself or use an agent?

- A. Sell yourself
- B. Use a real estate agent
- C. Don't know/not sure

#### ABOUT YOU

76. Which of the following best describes the adult composition of your household?

- A. Single male
- B. Single female
- C. Married couple
- D. Unmarried couple
- E. Other

77. How many adult wage earners reside in your household?

- A. One
- B. Two
- C. Three or more

78. How many children under the age of 18 reside in your household?

- A. One
- B. Two
- C. Three or more
- D. None

79. What is your age?

- A. 18-24
- B. 25-34
- C. 35-44
- D. 45-54
- E. 55-64
- F. 65-74
- G. 75 or older

80. Do you consider yourself to be...

- A. Black/African American
- B. Asian/Pacific Islander
- C. White
- D. Hispanic/Latino
- E. Other

81. Is English your primary language?

- A. Yes
- B. No

82. Please estimate your total household income from all sources in 2002.

- A. Less than \$25,000
- B. \$25,000 to \$34,999
- C. \$35,000 to \$44,999

- D. \$45,000 to \$54,999
- E. \$55,000 to \$64,999
- F. \$65,000 to \$74,999
- G. \$75,000 to \$84,999
- H. \$85,000 to \$99,999
- I. \$100,000 to \$124,999
- J. \$125,000 to \$149,999
- K. \$150,000 to \$174,999
- L. \$175,000 to \$199,999
- M. \$200,000 or more



## Appendix B: National Association of Realtor 2009 Survey

### SECTION A: ABOUT THE HOME YOU RECENTLY PURCHASED

- A1. Was this your first home purchase?      1. Yes      2. No
- A2. Was this property a new or previously owned home?      1. New      2. Previously owned
- A3. When was the home built that you have purchased?
- A4. Which of the following best describes the type of home you recently purchased? (Mark only one)
- 1. Cabin/cottage      5. Detached single-family home
  - 2. Duplex/apartment in 2 to 4 unit building      6. Mobile/manufactured home
  - 3. Apartment/condo in building with 5 or more units      7. Other
  - 4. Townhouse/row house
- A5. Is the home you recently purchased your primary residence (the home where you spend the majority of your time), a vacation home, or an investment property?
- 1. Primary residence      2. Vacation home      3. Investment property      4. Other
- A6. What is the square footage of the home you purchased?
- A7. Approximately how many miles is the home you purchased from your previous residence?
- 1. 5 miles or less      3. 11 to 15 miles      5. 21 to 50 miles      7. 101 to 500 miles      9. < 1,001 miles
  - 2. 6 to 10 miles      4. 16 to 20 miles      6. 51 to 100 miles      8. 501 to 1,000 miles      0. Not applicable
- A8. How would you describe the location of the home you recently purchased? (Mark only one)
- 1. Small town      2. Rural area      3. Urban area/Central city      4. Suburb
- A9. Where is the home you purchased located?      State:      Zip:
- A10. Including the home you recently purchased, how many homes do you currently own (not including any home you are in the process of selling)
- A11. In addition to the home you just purchased, what other homes do you own? (Mark all that apply)
- 1. None previous home      3. One or more investment properties      5. My
  - 2. One or more vacation homes      4. My primary residence      6. Other

A12. What was your living arrangement immediately before your recent home purchase? (Mark only one).

1. Lived with parents
2. Owned previous home
3. Rented an apartment or house
4. Rented the home I ultimately purchased
5. Not applicable

A13. Approximately how long do you expect to own this home?  
(If less than one year, please insert "0")                      Years:

A14. Which of the following prompted you to make your recent home purchase? (Mark only one)

1. Desire to own a home of my own
2. Establish household
3. Desire for smaller home
4. Desire for larger home
5. Desire for a newly built or custom-built home
6. Desire to be closer to job/school/transit
7. Desire for a home in a better area
8. Desire for a vacation home
9. Desire to be closer to family/friends/relatives
10. Purchased home for family member or relative
11. Changed in family situation
12. Greater number of homes on the market for sale
13. Affordability of homes
14. Job related relocation
15. Retirement
16. Financial Security
17. Tax benefits
18. First time buyer tax credit
19. Other

A15. Which of the following were most important to you when considering different neighborhoods in which to purchase a home?

1. Convenient to airport
2. Convenient to entertainment
3. Convenient to friends/family
4. Convenient to health facilities
5. Convenient to job
6. Convenient to parks
7. Convenient to public transportation

8. Convenient to schools
9. Convenient to shopping
10. Design of neighborhood
11. Home in a planned community
12. Quality of the neighborhood
13. Green community features
14. Quality of the school district
15. Overall affordability of homes
16. Availability of larger lots
17. Other

A16. When choosing the home you purchased, did you lower your expectations or compromise on any of the following? (Mark all that apply)

1. Size of home
2. Style of home
3. Price of home
4. Condition of home
5. Lot Size
6. Distance from job
7. Distance from school
8. Distance from friends or family
9. Quality of the schools
10. Quality of the neighborhood
11. None
12. Other

A17. How did you purchase this home? (Mark only one)

1. Through a real estate agent/broker
2. Foreclose or trustee sale
3. Directly from previous owner whom I knew
4. Directly from previous owner whom I did not know
5. Directly from builder
6. Auction
7. 1031 Exchange
8. Other

A18. During your recent home search process, did you consider buying a home that was in foreclosure? (Mark all that apply)

1. Yes, but I could not find a home I liked
2. Yes, but the process was too difficult/ complex
3. Yes but the home prices was too high
4. Yes, but financing options were not attractive
5. Yes, but home was in poor condition
6. Yes, but neighborhood was undesirable
7. No I did not consider buying a foreclosed home

8. Other

A19. How important were the following when you were searching for a home to purchase?

|                                      | Very Important | Somewhat Important |
|--------------------------------------|----------------|--------------------|
| Not Important                        |                |                    |
| Commuting Costs                      |                |                    |
| A home's heating/cooling costs       |                |                    |
| A home's energy efficient appliances |                |                    |
| A home's efficient use of light      |                |                    |
| Landscaping for energy conservation  |                |                    |
| Green community features             |                |                    |

A20. Do you have a home warranty/home protection plan that covers/repairs or replacement of the home's major systems and appliances?

1. Yes, First American
2. Yes, HMS
3. Yes, Old Republic
4. Yes, American Home Shield
5. Yes, AON
6. Yes, Buyer's 2-10
7. Yes, Fidelity
8. Yes, HWA
9. Yes HSA
10. Yes, National Home Warranty
11. Yes Global Home Warranty
12. Yes, Other
13. No

A21. Whose idea was it to have such a home warranty/ how did you come to have one?

1. Yours or your partner's idea
2. A friend's or family member's idea
3. Your real estate agent suggested it
4. It came with the house
5. Your real estate agent gave you one as a gift
6. You found out about home warranties online
7. You received a solicitation by mail
8. You were solicited by phone
9. Other

A22. When a system or appliance in your home breaks down, how do you resolve it/ how do you plan to resolve it?

1. Ask a neighbors or family members for a recommendation of a contractor
2. DIY: you, a family member or friend can make the repair
3. Look in the Yellow Pages for a contractor
4. Look in the classified section of the newspaper for a contractor

5. Search online for instruction on repair
6. Search such online sites as “Angies Lists” for a contractor
7. Call you home warranty company to request service
8. Other

A23. It is likely you will remodel in the next year?

1. No
2. Just cosmetic changes
3. Moderate redecorating or landscaping
4. Substantial makeover of home
5. Not sure

#### SECTION B: YOUR HOME SEARCH

B1. How long did you actively search before you located the home you eventually purchased?

B2. Including the home you purchased, how many homes did you walk through and examine before choosing your home?

B3. What was the first step you took when you started your home buying process?

1. Looked online for information about the home buying process
2. Talked with a friend or relative about the home buying process
3. Visited open houses
4. Drove by home/neighborhoods
5. Contacted a home seller directly
6. Contacted builder/visited builder models
7. Contacted a bank or mortgage broker
8. Read books or guides about the home buying process
9. Attended a home buying seminar
10. Looked in newspapers, magazines, or home buying guides for properties for sale
11. Contacted a real estate agent
12. Other

B4. Where did you first learn that they home you recently purchased was for sale?

1. Yard sign
2. Newspaper Advertisement
3. Home builder or their agent
4. Home book or magazine
5. Friend, relative, or neighbor
6. Directly from the sellers
7. Real estate agent
8. REALTOR.com
9. Real estate agent Web site
10. Real estate company Web site
11. Newspaper Web site

12. Real estate magazine Web site
13. Multiple Listing Service (MLS) Web site
14. For-sale-by-owner Web site
15. Other Web sites with real estate listings
16. Social networking Web sites
17. Video hosting Web sites

B5. Please indicate how frequently you used each of the following when searching for a home and rate its usefulness.

|                               | Frequently | Occasionally | Rarely or not at all |
|-------------------------------|------------|--------------|----------------------|
| Yard Sign                     |            |              |                      |
| Real estate agent             |            |              |                      |
| Home builder                  |            |              |                      |
| Television                    |            |              |                      |
| Print newspaper advertisement |            |              |                      |
| Relocation company            |            |              |                      |
| Home book or magazine         |            |              |                      |
| Open house                    |            |              |                      |
| Billboard                     |            |              |                      |

|                               | Very Useful | Somewhat Useful | Not Useful |
|-------------------------------|-------------|-----------------|------------|
| Yard Sign                     |             |                 |            |
| Real estate agent             |             |                 |            |
| Home builder                  |             |                 |            |
| Television                    |             |                 |            |
| Print newspaper advertisement |             |                 |            |
| Relocation company            |             |                 |            |
| Home book or magazine         |             |                 |            |
| Open house                    |             |                 |            |
| Billboard                     |             |                 |            |

B6. Did you use the Internet to search for homes?

1. Yes, frequently
2. Yes, occasionally

3. Rarely or never

B7. Did you use any of the following real estate Web sites in your home search?

1. REALTOR.com
2. Real estate agent Web site
3. Newspaper Web site
4. Real estate magazine Web site
5. Multiple Listing Service Web site
6. Real estate company Web site
7. Other Web sites with real estate listings
8. For-sale-by-owner Web site
9. Social networking Web sites
10. Video hosting web sites

B8. How useful were each of the following when searching for homes online?

Very Useful    Somewhat Useful    Not Useful    Did not use

Detailed information about properties for sale  
Detailed information about recently sold properties  
Information about upcoming open houses  
Interactive Maps  
Photos  
Virtual Tours  
Neighborhood information  
Pending sales/contract status  
Real estate agent contact information

B9. What actions did you take as a result of accessing real estate information on the Internet?

1. Found the agent used to search for or buy home
2. Walked through home viewed online
3. Drove by or viewed home
4. Contracted builder/developer
5. Pre-qualified for a mortgage online
6. Applied for a mortgage online
7. Found a mortgage lender online
8. Requested more information

B10. If you saw a home on the Internet and wanted more information did you:

1. Call the number listed on the property
2. Bring the property to the attention of your agent you already had
3. Email the agent who listed the property

B11. Overall, how useful did you find the Internet when searching for homes?

1. Very useful
2. Somewhat useful
3. Not useful

### SECTION C: FINANCING YOUR HOME

C1. What was the final purchase price of the home you recently purchased?

C2. What was the original asking price of the home you purchased?

C3. When did you close your home purchase transaction?

C4. What type of mortgage did you use to finance your home purchase?

1. Did not use a mortgage to finance my home purchase
2. Fixed-rate mortgage
3. Fixed-then adjustable-rate mortgage
4. Adjustable-rate mortgage
5. Don't know
6. Other

C5. What type of loan did you use?

1. FHA
2. VA



3. Conventional
4. Don't know
5. Other

C6. What percentage of the purchase price did you finance with one or more mortgage?

1. Less than 50%
2. 50% to 59%
3. 60% to 69%
4. 70% to 79%
5. 80% to 89%
6. 90% to 94%
7. 95% to 99%
8. 100%- I financed the entire purchase price with a mortgage(s). I made no down payment.

C7. When did you secure your mortgage?

C8. Did any mortgage lenders reject your application for a mortgage loan for your recent home purchase?

1. No
2. Yes If yes, how many?

C9. How difficult was your mortgage application and approval process?

1. Much more difficult than I had expected
2. Somewhat more difficult than I had expected
3. Not difficult/nothing beyond expected

C10. During the process of purchasing your home, did you have a purchase agreement that was cancelled, terminated, or fell-through?

1. No, did not have a purchase cancelled, terminated, or fall-through
2. Yes, agreed upon repairs were not made
3. Yes, discovered problems during the home inspection
4. Yes, could not obtain a mortgage

5. Yes, the home appraisal was too low
6. Yes, concerns over HOA/Condo documents
7. Yes, could not obtain a buyer for my previous home I needed to sell
8. Yes, home seller ended the transaction
9. Yes, I ended the transaction
10. Other

C11. Did you need to make any of the following sacrifices to be able to make your recent home purchase?

1. Cancelled vacation plans
2. Cut spending on luxury items
3. Cut spending on clothes
4. Cut spending on entertainment
5. Sold a vehicle or decided not to purchase a vehicle
6. Earned extra income through a second job
7. Other
8. Did not need to make any sacrifices

C12. Which of the following did you use for your down payment or to pay for your home if you did not use a mortgage?

1. Savings
2. Proceeds from sale of primary residence
3. Equity from primary residence I continue to own
4. Proceeds from sale of real estate other than primary residence
5. Sale of stocks or bonds
6. Gift from friend/relative
7. Loan from friend/relative
8. Loan from financial institution other than a mortgage
9. 401k/pension fund including a loan
10. Individual Retirement Account (IRA)
11. Inheritance
12. Loan or financial assistance through employer
13. Loan or financial assistance program from some other sources
14. Other
15. None- Made no down payment

C13. Do you consider your home purchase to be a good financial investment?

1. Yes, better than stocks
2. Yes, about as good as stocks
3. Yes, but not as good as stocks
4. No
5. Don't know

C14. Describe the primary reason for the timing of your recent home purchase?

1. I did not have much choice, I had to purchase when I did
2. It was the best time for me because of mortgage financing options available
3. It was the best time for me because of availability of homes for sale
4. It was the best time for me because of improved affordability of homes
5. It was just the right time for me, I was ready to buy a home
6. I wish I had waited
7. Other

C15. Were you aware of the first time home buyer tax credit?

1. Yes, from my real estate agent
2. Yes, from a real estate agent solicitation
3. Yes, from a TV/radio commercial
4. Yes, from newspaper/YV or radio newspaper program//news media Web sites
5. Yes, through a social media network
6. Yes, from a friend or family member
7. Yes, from a friend or family member who used the tax credit
8. No, was not aware of the tax credit
9. Other

C16. Was the availability of the first time home buyer tax credit a factor in the timing of your recent home purchase?

1. Yes
2. No

#### SECTION D: USING A REAL ESTATE AGENT WHEN PURCHASING A HOME

D1. How many real estate agents did you contact before you selected one to help you buy your home?

D2. Before you contacted an agent, how long did you actively search for a home on your own?

D3. Did you have a “buyer representation” arrangement with an agent so the agent represented only you and not the seller?

1. Yes, an oral arrangement
2. Yes, a written arrangement
3. No
4. Don't know

D4. How did you find the real estate agent you used to buy your home?

1. Used agent previously to buy or sell a home
2. Referred buy a friend, neighbor, or relative
3. Referred buy another real estate agent/broker
4. Referred though employer or relocation company
5. Personal contacts by agent
6. Visited an open house and met agent
7. Direct mail
8. Newspaper, Yellow Pages, or home book ad
9. Advertising specialty
10. Internet Web site
11. Saw contact information on For Sale/Open House sign
12. Walked into or called office and agent was on duty

D5. Was the real estate agent who assisted you in your home purchase a REALTOR, a member of the National Association of REALTORS?

1. Yes
2. No
3. Don't know

D6. If you bought your home through a real estate agent did you buy a home that:

1. An agent brought to your attention

2. You found and contacted the listing agent
3. You found and brought to the attention of an agent you were already working with
4. Other

D7. How many times did you visit your real estate agent's office during the home purchase process?

D8. How beneficial would it have been to you, if you could see how your real estate agent had been rated by previous home buyers and read their comments from previous clients?

1. Very beneficial
2. Beneficial
3. Not beneficial
4. Read comment, and was beneficial
5. Read comments, and was not beneficial

D9. Which on the following factors was most important to you when choosing a real estate agent?

1. Reputation of agent
2. Agent's association with a particular firm
3. Professional designations held by agent
4. Agent's knowledge of the neighborhood
5. Agent is friend or family member
6. Agent has caring personality/good listener
7. Agent is honest and trustworthy
8. Other

D10. Before you bought your current home, what did you most want your agent to do for you?

1. Tell me how much I could afford
2. Tell me how much comparable homes are selling for
3. Help me find and arrange financing
4. Help me find renters for my property
5. Help me find the right property to purchase
6. Help me with price negotiations
7. Help me negotiate the terms of sale
8. Help me with paperwork

9. Other

D11. Rate the importance of the following qualities in a real estate agent and your satisfaction with your agent's performance.

| Very Important                  | Somewhat Important | Not Important |
|---------------------------------|--------------------|---------------|
| Knowledge of purchase process   |                    |               |
| Knowledge of real estate market |                    |               |
| Knowledge of local area         |                    |               |
| Communication skills            |                    |               |
| Responsiveness                  |                    |               |
| People skills                   |                    |               |
| Skills with technology          |                    |               |
| Honesty and integrity           |                    |               |
| Negotiation skills              |                    |               |

| Very Satisfied                  | Somewhat Satisfied | Not Satisfied |
|---------------------------------|--------------------|---------------|
| Knowledge of purchase process   |                    |               |
| Knowledge of real estate market |                    |               |
| Knowledge of local area         |                    |               |
| Communication skills            |                    |               |
| Responsiveness                  |                    |               |
| People skills                   |                    |               |
| Skills with technology          |                    |               |
| Honesty and integrity           |                    |               |
| Negotiation skills              |                    |               |

D12. At the time you began working with a real estate agent, did your agent ask you to sign a disclosure statement indicating who he/she represented in the transaction?

1. Yes, at the first meeting
2. Yes, when contract was written
3. Yes, at some other time
4. No
5. Don't know

D13. Who paid the real estate agent who assisted you in your home purchase?

1. Paid by me (buyer)
2. Paid by seller
3. Paid by both me and seller
4. Other
5. Don't know

D14. How was the real estate agent who assisted you compensated?

1. Flat fee
2. Percent of sales price
3. Per task fee
4. Other
5. Don't know

D15. What benefits did your real estate agent provide in your recent home purchase?

1. Improved my knowledge of search area
2. Pointed out unnoticed features/faults with property
3. Helped me understand the process
4. Negotiated better sales contract terms
5. Expanded my search area
6. Narrowed my search area
7. Shortened my home search
8. Negotiated a better price
9. Provided better list of mortgage lenders
10. Provided a better list of service providers
11. None of the above
12. Other

D16. If an agent could email you monthly updates of price trends in your area, would you be more likely to use the agent again or refer people to them?

1. Yes
2. No

D17. How often have you heard from your agent after closing?

1. Have not had contact

2. Weekly
3. Monthly
4. A few times

D18. Would you use this real estate agent again or recommend the agent to others?

1. Definitely
2. Probably
3. Probably not
4. Definitely not
5. Don't know

## SECTION E: SELLING YOUR HOME

E1. When did you sell your previous home?

1. 2009
2. 2008
3. 2007 or earlier
4. Home has not yet sold and is currently vacant
5. Home has not yet sold, but currently renting to others
6. Do not plan to sell previous home
7. Did not own previous home

E2. Where was the home you sold or are in the process of selling located?

E3. When did you purchase the home you recently sold or are in the process of selling?

E4. When was the home built that you recently sold or are in the process of selling?

E5. What best describes the type of home you recently sold or are in the process of selling?

1. Cabin/cottage
2. Duplex/apartment in 2 to 4 unit building



3. Apartment/condo in a building with 5 or more units
4. Townhouse/row house
5. Detached single-family home
6. Mobile/manufactured home
7. Other

E6. What was the square footage of the home you sold or are in the process of selling?

E7. What best describes the location of the home you recently sold or are in the process of selling?

1. Small town
2. Rural area
3. Urban area/Central city
4. Suburb/Subdivision
5. Resort/Recreation area

E8. How long did you own the home you sold or are planning to sell?

E9. What is the main reason you sold, or are selling, your home?

1. I want to move closer to my current job
2. I cannot afford the mortgage and other expenses of owning this own
3. I want to move closer to friends or family
4. Home is too small
5. Home is too large
6. Neighborhood has become less desirable
7. Upkeep of home is too difficult due to health or financial limitations
8. Change in family situation
9. Moving due to retirement
10. Job relocation
11. To avoid possible foreclosure
12. Other

E10. What was the final selling prices of the home you recently sold?

E11. What was the original asking price?

E12. When you purchased the home you recently sold what was the purchase price?

E13. How urgently did you need to sell your home?

1. Very urgently, I need to sell my home as quickly as possible
2. Somewhat urgently, I had to sell my home but within a reasonable timeframe
3. Not urgently, I waited for the right offer for my home

E14. How many times did you reduce your asking price before your home sold?

E15. How long was your home on the market before it sold?

E16. Did you offer any incentives to attract buyers?

1. No
2. Assistance with closing costs
3. Assistance with condo association fees
4. Home warranty polices
5. Credit toward remodeling or repairs
6. Other incentives, such as a car, flat screen TV, etc.

E17. Was this a short sale?

1. Yes
2. No

E18. Was the buyer a friend, family member or acquaintance whom you knew prior to the sale?

E19. How did you sell this home?

1. Sold it using a real estate agent/broker
2. First tried to sell it myself, but then used an agent
3. Sold it to a home buying company
4. Sold it without ever using a real estate agent/broker

5. First listed with an agent, but then sold it myself
6. Other

E20. How satisfied were you with the process of selling your home?

1. Very satisfied
2. Somewhat satisfied
3. Somewhat dissatisfied
4. Very dissatisfied

#### SECTION F: USING A REAL ESTATE AGENT WHEN SELLING YOUR HOME

F1. How many real estate agents did you contact before you selected one to help you sell your home?

F2. Did you use the same real estate agent in your recent home purchase?

1. Yes
2. No

F3. How did you first find the real estate agent you used to sell your home?

1. Used agent previously to buy or sell a home
2. Referred by a friend, neighbor, or relative
3. Referred by another real estate agent/broker
4. Referred through employer or relocation company
5. Personal contacts by agent
6. Visited an open house and met agent
7. Direct mail
8. Newspaper, Yellow Pages, or home book ad
9. Advertising specialty
10. Internet Web site
11. Saw contact information on For Sale/Open House sign
12. Walked into or called office and agent was on duty

F4. Was the real estate agent who assisted you a REALTOR, a member of the National Association of REALTORS?

F5. How many times did you visit your real estate agent's office when selling your home?

F6. How beneficial would it have been to you, if you could see how your real estate agent had been rated by previous home buyers and read their comments?

1. Very beneficial
2. Beneficial
3. Not beneficial
4. Read comment, and was beneficial
5. Read comments, and was not beneficial

F7. Which on the following factors was most important to you when choosing a real estate agent to sell your home?

1. Reputation of agent
2. Agent's association with a particular firm
3. Professional designations held by agent
4. Agent's knowledge of the neighborhood
5. Agent is friend or family member
6. Agent has caring personality/good listener
7. Agent is honest and trustworthy
8. Other

F8. Before you put your home on the market, what did you most want your agent to do for you?

1. Tell me how much I could afford
2. Tell me how much comparable homes are selling for
3. Help me find and arrange financing
4. Help me find renters for my property
5. Help me find the right property to purchase
6. Help me with price negotiations
7. Help me negotiate the terms of sale
8. Help me with paperwork
9. Other

F9. Which of the following did your real estate agent use to market your home?

1. Open house
2. Listing on the Internet
3. Real estate magazine
4. Video
5. Television
6. Direct mail
7. Print newspaper advertisement
8. Yard sign
9. Other Web sites with real estate listings
10. Social networking Web sites
11. Video hosting Web sites
12. Other

F10. Was your home listed with a Multiple Listing Service (MLS)

1. Yes
2. No
3. Don't know

F11. How would you describe the level of service provided by your agent when selling your home?

1. My agent provided a broad range of services and managed most aspects of my home sale
2. My agent performed a limited set of services as I requested
3. My agent listed my home on the Multiple Listing Service or the Internet sites and performed few if any additional services

F12. Who paid the real estate agent that represented you?

1. Paid by me (seller)
2. Paid by buyer
3. Paid by both me and the buyer
4. Other
5. Don't know

F13. How was the real estate agent who represented you compensated?

1. Flat fee
2. Percent of sales price
3. Per task fee
4. Other
5. Don't know

F14. Which of the following statements best describes your experience with your agent when negotiating the commission rate or fee for selling your property?

1. Real estate agent initiated discussion of compensation
2. I brought up the topic and the real estate agent was willing to negotiate their commission or fee
3. I brought up the topic and the real estate agent was not willing to negotiate their commission or fee
4. I did know commissions and fees could be negotiated but did not bring up the topic
5. I did not know commissions or fees could be negotiated

F15. How often have you heard from your agent after closing?

1. Have not had contact
2. Weekly
3. Monthly
4. A few times

F16. Would you use this real estate agent again or recommend this agent to others?

1. Definitely
2. Probably
3. Probably not
4. Definitely not
5. Don't know

#### SECTION G: SELLING YOUR HOME YOURSELF

G1. What was the most important reason for selling your home without a real estate agent?

1. Did not want to deal with an agent

2. Did not want to pay a commission or fee
3. Could not find an agent to handle transaction
4. Have my own real estate license
5. Agent was unable to sell home
6. Sold it to a relative, friend, or neighbor
7. Buyers contacted me directly
8. Other

G2. Which of the following did you use to market your home to potential buyers?

1. Open house
2. Listing on the Internet
3. Yard sign
4. Video
5. Print newspaper advertisement
6. Television
7. Friends, relatives, or neighbors
8. Direct mail
9. For-sale-by-owner magazine
10. For-sale-by-owner Web site
11. Other Web sites with real estate listings
12. Social networking Web sites
13. Video hosting Web sites
14. None- Did not actively market home
15. Other

G3. Which of the following tasks was the most difficult for you in selling your home yourself?

1. Getting the price right
2. Selling within the length of time planned
3. Having enough time to devote to all aspects of the sale
4. Understanding and performing paperwork
5. Preparing or fixing up the home for sale
6. Helping buyer obtain financing
7. Attracting potential buyers
8. Other

G4. The next time you sell a home, do you plan to sell it yourself or use an agent?

1. Sell myself

2. Use a real estate agent
3. Don't know

## SECTION H: ABOUT YOU

H1. Which of the following best describes the composition of your household?

1. Single male
2. Single female
3. Married couple
4. Unmarried couple
5. Other

H2. How many children under the age of 18 reside in your household?

H3. How many income earners are there in your household?

1. None
2. One
3. Two
4. Three or more

H4. What is your age?

H5. Do you consider yourself to be...

1. Black/African American
2. Asian/Pacific Islander
3. White/Caucasian
4. Hispanic/Latino
5. Other

H6. Is English the primary language spoken in your household?



1. Yes
2. No

H7. Were you born in the United States?

1. Yes
2. No

H8. What was your total household income from all sources in 2008?

1. Less than \$25,000
2. \$25,000 to \$34,999
3. \$35,000 to \$44,999
4. \$45,000 to \$54,999
5. \$55,000 to \$64,999
6. \$65,000 to \$74,999
7. \$75,000 to \$84,999
8. \$85,000 to \$99,999
9. \$100,000 to \$124,999
10. \$125,000 to \$149,999
11. \$150,000 to \$174,999
12. \$175,000 to \$199,999
13. \$200,000 or more

## Appendix C: Real Estate Agent Survey

1. What do you think your client/customer's first step was when starting the home buying process? (mark only one)

1. Looked online for information about the home buying process
2. Talked with a friend or relative about the home buying process
3. Visited open houses
4. Drove by home/neighborhoods
5. Contacted a home seller directly
6. Contacted builder/visited builder models
7. Contacted a bank or mortgage broker
8. Read books or guides about the home buying process
9. Attended a home buying seminar
10. Looked in newspapers, magazines, or home buying guides for properties for sale
11. Contacted a real estate agent
12. Other

2. Where do you think your clients/customers first learn about a home was for sale? (mark only one)

1. Yard sign/open house sign
2. Print newspaper advertisement
3. Home builder or their agent
4. Home book or magazine
5. Friend, relative or neighbor
6. Directly from seller/knew the seller
7. Real Estate Agent
8. REALTOR.com
9. Real Estate Agent Web site
10. Real Estate company Web site
11. Newspaper Web site
12. Real Estate magazine Web site
13. Multiple Listing Service (MLS) Web site
14. For-sale-by-owner Web site
15. Other Web sites with real estate listing (e.g. Google, Yahoo)
16. Social Networking Web sites (e.g. Facebook, Twitter, etc.)
17. Video Hosting Web site (e.g. Youtube, etc.)
18. Other

3. Do you use the Internet to advertise or sell homes?

1. Yes, occasionally
2. Rarely or Never

4. How effective do you think the Internet is to advertise for Real Estate property?

1. Very
2. Somewhat
3. Not at all

5. Which of the following do you think your clients/customers use MOST FREQUENTLY when searching for a home (Check all that apply)

1. Yard Sign
2. Real Estate Agent
3. Home Builder
4. Television
5. Print Newspaper Advertisement
6. Relocation Company
7. Home Book or Magazine
8. Open House
9. Billboard
10. Internet

6. Which of the following do you think your clients/customers use OCCASIONALLY when searching for a home? (Check all that apply)

1. Yard Sign
2. Real Estate Agent
3. Home Builder
4. Television
5. Print Newspaper Advertisement
6. Relocation Company
7. Home Book or Magazine
8. Open House
9. Billboard
10. Internet

7. Which of the following do you think your clients/customers use the LEAST or NOT AT ALL when searching for a home? (Check all that apply)

1. Yard Sign
2. Real Estate Agent
3. Home Builder
4. Television
5. Print Newspaper Advertisement
6. Relocation Company

7. Home Book or Magazine
8. Open House
9. Billboard
10. Internet

8. What of the following do you think is MOST USEFUL to your clients/customers when they are searching for a home? (Check all that apply)

1. Yard Sign
2. Real Estate Agent
3. Home Builder
4. Television
5. Print Newspaper Advertisement
6. Relocation Company
7. Home Book or Magazine
8. Open House
9. Billboard
10. Internet

9. What of the following do you think is SOMEWHAT USEFUL to your clients/customers when they are searching for a home? (Check all that apply)

1. Yard Sign
2. Real Estate Agent
3. Home Builder
4. Television
5. Print Newspaper Advertisement
6. Relocation Company
7. Home Book or Magazine
8. Open House
9. Billboard
10. Internet

10. What of the following do you think is LEAST USEFUL to your clients/customers when they are searching for a home? (Check all that apply)

1. Yard Sign
2. Real Estate Agent
3. Home Builder
4. Television
5. Print Newspaper Advertisement
6. Relocation Company
7. Home Book or Magazine
8. Open House
9. Billboard
10. Internet

11. Which of the following do you think your client/customer uses when searching for a home?  
(Check all that apply)

1. REALTOR.com
2. Real Estate Agent Web site
3. Newspaper Web site
4. Real Estate magazine Web site
5. Multiple Listing Service (MLS) Web site
6. Real Estate company Web site
7. Other Web sites with real estate listing (e.g. Google, Yahoo)
8. For-sale-by-owner Web site
9. Social Networking Web sites (e.g. Facebook, Twitter, etc.)
10. Video Hosting Web site (e.g. Youtube, etc.)

12. Which of the following actions do you think your clients/customers take a result of accessing real estate information on the Internet? (Check all that apply)

1. Found the agent used to search for or buy a home
2. Walked through a home viewed online
3. Drove by or viewed home
4. Contacted builder/developer
5. Pre-qualified for a mortgage online
6. Applied for a mortgage online
7. Found a mortgage lender online
8. Requested more information

13. If your client/customer saw a home on the Internet and wanted more information, what do you think they did? (Check all that apply)

1. Call the number listed on the property
2. Bring the property to the attention of the agent they already had
3. Email the agent who listed the property

14. Overall, how useful do you find the Internet in the real estate market?

1. Very Useful
2. Somewhat Useful
3. Not Useful

15. Which of the following do you think is VERY USEFUL for your client/customer when searching for homes online? (Check all that apply)

1. Detailed information about the properties for sale

2. Information about upcoming open houses
3. Interactive Maps
4. Photos
5. Virtual Tours
6. Neighborhood Information
7. Pending sales/ contract status
8. Real estate agent contact information

16. Which of the following do you think is SOMEWHAT USEFUL for your client/customer when searching for homes online? (Check all that apply)

1. Detailed information about the properties for sale
2. Information about upcoming open houses
3. Interactive Maps
4. Photos
5. Virtual Tours
6. Neighborhood Information
7. Pending sales/ contract status
8. Real estate agent contact information

17. Which of the following do you think is NOT USEFUL for your client/customer when searching for homes online? (Check all that apply)

1. Detailed information about the properties for sale
2. Information about upcoming open houses
3. Interactive Maps
4. Photos
5. Virtual Tours
6. Neighborhood Information
7. Pending sales/ contract status
8. Real estate agent contact information

18. Which of the following do you think is NOT USED/NOT AVAILABLE for your client/customer when searching for homes online? (Check all that apply)

1. Detailed information about the properties for sale
2. Information about upcoming open houses
3. Interactive Maps
4. Photos
5. Virtual Tours
6. Neighborhood Information
7. Pending sales/ contract status
8. Real estate agent contact information

19. Which of the following best describes the composition of your household?

1. Single Male
2. Single Female
3. Married Couple
4. Unmarried Couple
5. Other

20. How many children under the age of 18 reside in your household?

1. 1
2. 2
3. 3
4. 4 or more

21. What is your age?

1. 18-25
2. 26-33
3. 34-41
4. 42-49
5. 50-57
6. 58-65
7. 66-73
8. 74 or older

22. What race do you consider yourself?

1. Black/ African American
2. Asian/Pacific Islander
3. White/Caucasian
4. Hispanic/Latino
5. Other

23. What state are you from?

