Is the Dream Still Alive? Tracking Homeownership Amid Changing Economic and Demographic Conditions

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To all those trying to obtain a small part of the American Dream.

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Abstract

The United States (U.S.) is undergoing three major trends, which are converging and changing the housing market. The first trend is housing inventory is constrained in much of the U.S. As a result, home prices have increased to an inflation-adjusted 49 percent from 2012 to 2017 (National Association of Realtors 2018b) and has become out of reach for many Americans as incomes have risen 14 percent in the same timeframe (U.S. Census Bureau 2018a). The second trend is the homeownership rate for those under the age of 35, Black/African American, and Hispanic/Latino adults has not rebounded since the Great Recession in the United States (U.S.). The third trend is the amount of student loan debt in the U.S. has increased about 70 percent from 2007 to 2017 (Chakrabarti et al. 2017) and is concentrated among those under the age of 35, Black/African Americans, and Hispanic/Latinos. This thesis explores the intersection of these trends through the application of quantitative and qualitative analysis. Through a Two-Stage Least Squares econometric approach, those with student debt, Black/African American, and Hispanic/Latino buyers purchase a lower priced home, even while controlling household income and home size purchased. These three populations are most at risk to be impacted by the reduction in housing inventory, increased home prices, and the increase in student loan debt. As these three populations face limited affordable housing inventory and student debt increases, the homeownership rate has declined. To understand how local economic and demographic factors play a role, the days on market, unemployment rate, the share of those over the age of 65, and share of those with Bachelor's degrees within the Metropolitan Statistical Area (MSA) are added into the model. Results from the econometrics are triangulated through focus groups conducted in cities across the U.S. Focus groups explored themes that were not able to be understood through econometrics, such as the idea that individuals may prefer to rent. The thesis contains policy recommendations based on the findings from the econometrics and focus groups.

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Introduction

The Global Financial Crisis and subsequent Great Recession occurred from 2007 through 2009. The United States (U.S.) housing wealth fell from $13,417 trillion to $6,036 trillion (Board of Governors of the Federal Reserve System 2018). This is a loss of $7.3 trillion in housing equity, which equates to a 55 percent loss. The U.S. has seen a drop in the homeownership rate since the Great Recession from a peak of 69.2 percent in 2004 to 63.9 percent in 2017. The homeownership rate today is similar to what it was forty years ago.

The drop in the homeownership rate has been most apparent for young adults and minorities. In 2004, the homeownership rate for adults under the age of 35 was 43.1 percent. In 2017, the homeownership rate for the same age group is just 35.3 percent. The homeownership rate for Black/African Americans has dropped from 49.1 percent in 2004 to 42.3 percent in 2017: the lowest share since before the Fair Housing Act started in 1968, which prohibited housing discrimination by race. In 2009, the share of Hispanic/Latino homeowners peaked at 48.4 percent and fell to 46.2 percent in 2017. Young adults in the U.S. are the most racially diverse generation, which means the drop in the homeownership rate has a concentrated impact (Choi et al. 2018). In recent quarters, there are signs of improvement in the homeownership rate of young adults and minorities, but the trend has been slow and inconsistent.

During the same period, student loan debt has increased rapidly in the aggregate amount of debt held to $1.41 trillion (Federal Reserve Bank of New York 2018). This thesis investigates the causes of the drop in the homeownership rate, how increasing home prices are a factor, which have priced out many Americans, and the role student loan debt plays in tenure choice. Specifically this thesis adopts both quantitative and qualitative methodologies, applying econometric analysis and focus groups. To do so, this thesis will address the following quantitative questions through descriptive statistics:

- What are the differences between first-time and repeat home buyers?
- How do home buyers differ within different geographic settings?
  - In Metropolitan Statistical Areas (MSAs) with higher or lower unemployment rates in comparison to the national unemployment rate?
  - In MSAs with higher or lower share of the population with Bachelor's Degrees than the national share?
  - In MSAs with higher or lower share of the population who are 65 years of age than the national share?

- o   In MSAs with low and high housing inventory?
- o   In MSAs with higher or lower home prices than the U.S.?

This thesis will also address the following quantitative questions through a Two-Stage Least Squares econometric analysis:

- •   What is the price of home that is purchased by varying buyer demographics?
- •   How does the home price differ for individuals with varying demographics and for those with student loan debt, when the housing characteristics and local MSA characteristics are controlled for?

The following qualitative questions will be addressed through focus groups:

- •   Do non-owners want to own a home in the future?
- •   Is student loan debt an inhibitor to homeownership, or was it before the entry to ownership?
- •   Is the purchase price impacted because of student loan debt or could it be in the future?
- •   What is the role of family in the home purchase process and are family able to help with education costs?
- •   Was financial education a factor in their educational pursuits?

There is indication from a number of surveys in the U.S. provides evidence that homeownership is the preferred tenure choice of non-owners (National Association of Realtors 2018a). While the desire to purchase a home is evident, the ability to move into homeownership is constrained. Exhibit 1 displays the homeownership rate from 1890 to 2017; the recessions overlapped the major changes that happened over the timeframe in relation to housing. The homeownership rate in 2017 was 63.9 percent, falling from a peak of 69.2 percent in 2004.

Exhibit 1: Homeownership Rate: 1890-2017
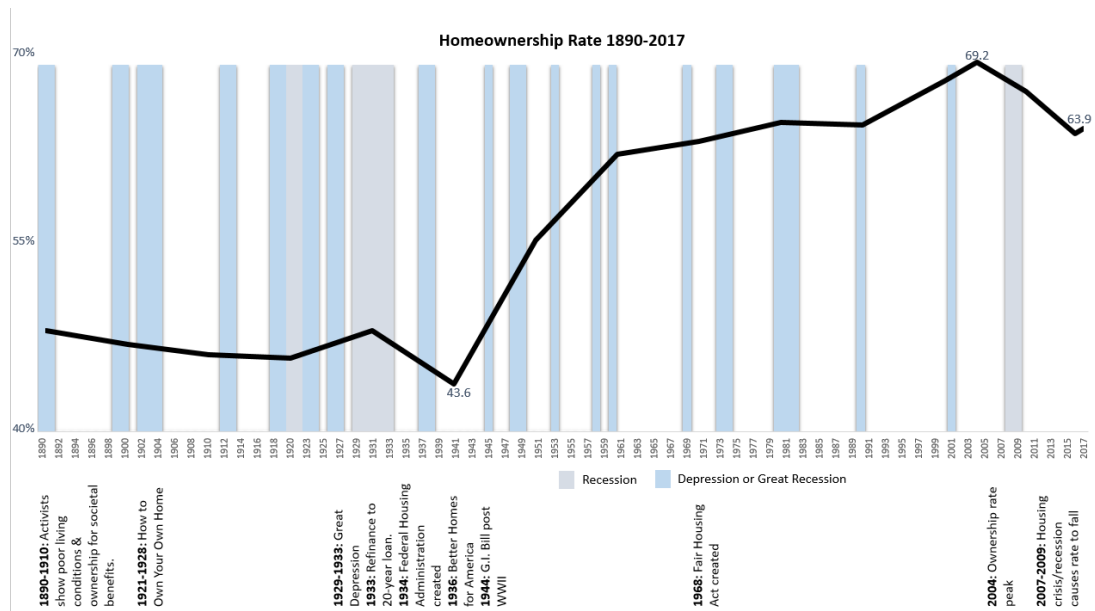
Source: U.S. Census Bureau, The National Bureau of Economic Research

The share of first-time home buyers has also declined. Historically 39 percent of primary residence home buyers were first-time buyers, and today that share is 33 percent (Lautz et al. 2018). First-time home buyers are typically younger and have lower incomes than repeat buyers in the housing market. While the demand for housing is apparent, the ability to enter homeownership is stifled.

One explanation for the decline in the homeownership rate is tight inventory, and the resulting rise in home prices. Prices have increased 79 months on a year-over-year basis (Dollinger 2018a), which is an inflation adjusted increase of 42 percent, from March of 2012 to September of 2018 (National Association of Realtors 2018b). This price escalation also signals a concern for first-time buyers, young home buyers, and minority buyers in the market. Per capita income has increased only 14 percent in comparison over the same timeframe (U.S. Census Bureau 2018a). Since the Great Recession, home building has not rebounded. In September of 2018, housing starts are at 1.201 million new units (U.S. Census Bureau and U.S. Department of Housing and Urban Development 2018). In comparison, in September 2005, housing starts were 2.151 million (Ibid.). Home builders attribute the low housing starts to factors outside of their control including high lumber costs, high land costs, scarce labor supply, and constrained housing regulations (Basile 2018). The supply of homes is not meeting the demand of Americans. In a balanced market, there would be 6.5 month's supply, which means, if no additional homes were listed on the market, all

homes would sell in 6.5 months' time (Gaines 2009). As per, the latest data available the month's supply of housing was just at 4.4 months (Dollinger 2018a).

One factor causing limited housing inventory is the increased tenure in home. Homeowners had historically sold their home after a median of six to seven years (Lautz et al. 2018). The typical tenure holding time before selling has increased to 9 years (Ibid.) Tenure has increased due to homeowners who lost equity during the recession and inability to sell for the amount of mortgage held. Potential sellers may also be reluctant to sell, as they have a low interest rate mortgage. One advantage to purchasing a home since the financial crisis has been historically low interest rates, which stay the same for the life of the 30-year mortgage. The typical mortgage 30-year fixed interest rate in 2017 was 3.99 percent, in comparison to the historical average of 8.10 percent since 1971 (Freddie Mac 2018). Supply constraints have increased the price of homes at a rapid pace, which this thesis will show have become out of reach for some demographics of aspiring home buyers.

During the same time period housing inventory has tightened and home prices have risen, the aggregate amount of student loan debt has increased from $0.24 trillion in the first quarter of 2003 to $1.41 trillion in the second quarter of 2018 (Federal Reserve Bank of New York 2018). (Exhibit 2). Student loan debt is now second only to mortgage debt in the U.S. economy. Recent graduates leave the university with approximately $34,000 in debt, an approximately 70 percent increase from 2007 (Chakrabarti et al. 2017). This debt is of particular concern as a borrower is unable to refinance the debt and the debt is not forgiven in bankruptcy (Jeszeck 2014). Once a borrower obtains the debt, it is held for the borrower's lifespan or until the borrower pays off the loan. There are recent surveys, which indicate this particular debt has held back housing consumers (Widmeyer Communications 2017, National Association of Realtors and American Student Assistance 2017). In one study of millennials who have student loan debt and are currently paying, the median amount of debt held was $41,200 while their median incomes were $38,800 (National Association of Realtors and American Student Assistance 2017). Assuming the borrower has additional rental costs, and bills, it is unlikely a borrower can save for a downpayment for a home. This is the age range that a typical first-time buyer would enter homeownership. Since 1981, the typical first-time buyer enters homeownership between the ages of 28 and 32 (Lautz et al. 2018).

Exhibit 2: Total Debt Balance and Its Composition: 2003Q1-2018Q2 (Trillions of Dollars)
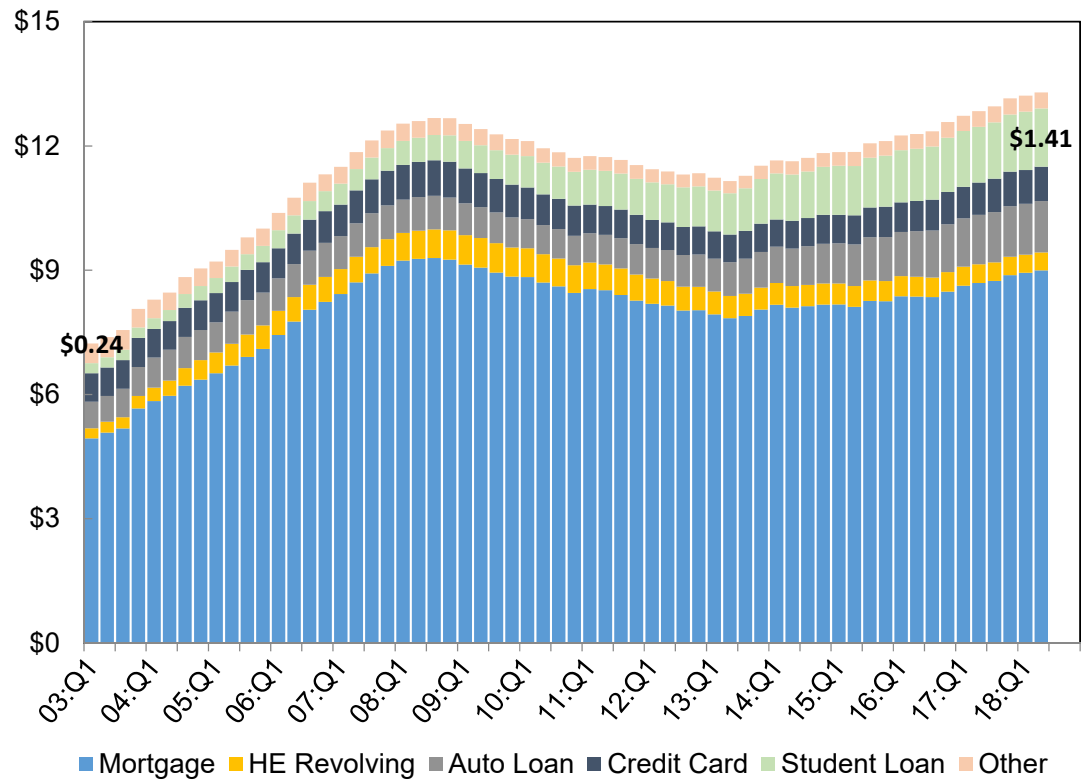
Student loan debt impacts all age groups, though the area of particular concern is the age group which holds the largest share of debt, those aged 30 to 39 (Federal Reserve Bank of New York Consumer Credit Panel / Equifax 2018). The same age group has seen a reduction in their homeownership rate and has a suppressed share of first-time buyers. For those ages 25 to 34, median incomes, in 2017 dollars, stayed flat from $35,020 in 2003 to $35,455 in 2017 (U.S. Census Bureau 2018b). Similarly, for those ages 35 to 44, median incomes, in 2017 dollars, increased marginally from $41,303 in 2017 to $42,823 in 2017 (Ibid.). This millennial age group becomes a greater concern for housing as it is the most racially and ethnically diverse generation America has had so far (Frey 2018). As both minority populations and young adults face homeownership headwinds, this effect is compounded among both. If the millennial generation and minorities are not only the most likely to be pushed to the sidelines of the housing market, what does the future hold for housing market and should society as a whole care?

Literature Overview

Historical Push Towards Homeownership

The overarching question appears when the homeownership rate is discussed—should society care? If the U.S. has a nation of renters instead of homeowners, why is that a problem if that is personal choice? Consumer surveys show renters do want to own homes (National Association of Realtors 2018a, Shahdad 2017), but if the transition to ownership does not happen, how is this a problem? It is crucial to understand the origins of the momentum behind the honored status of homeownership.

Historically, the U.S. revered homeownership through policies, which enforce the ideal of an ownership society (Strauss 1951, Veiller 1910, National Own Your Own Home Committee 1917, Vale 2007, Hayden 1982, Altman 1990, Jackson 1985). The root of supporting homeownership can be traced as far back as the first colonies in the U.S. However, it was not until 1890 that the Census Bureau began data collection on the homeownership rate in the U.S.

In the early years of the U.S., homeownership was restricted to high income Americans because using a mortgage to purchase a home held a negative stigma (Jackson 1985). While holding a mortgage was considered dishonorable to greater society, renting and living in overcrowded cities was still considered far more shameful (Riis 1971, Riis 2012). It was not until after World War 1 (around 1918) that it become publicly acceptable to hold a mortgage, but only because of the rise in home prices. However, if a home buyer used a mortgage during this time, it was not under attractive loan terms. Home buyers were often required to make a 50 percent downpayment, and they only paid interest on the loan, resulting in a balloon payment after a five to 10-year loan (Jackson 1985). Exhibit 1 shows that after these loans were available to consumers, the homeownership rate did increase.

By early the 1900s, the impetus of the homeownership push was to encourage a stable workforce. A workforce that was beholden to a mortgage and home is a workforce that could not strike against an employer (Hayden 1982, Jackson 1985). While a stable workforce is beneficial to factories, it was also advantageous to the U.S. government. In the 1920s, the federal government saw the benefit of homeownership as a way to combat the idea of socialism or communism (Hayden 1982). By creating a nation of steadfast workers who slept in a home they owned, it not only creates a secure economy, but also creates the love of ownership.

Throughout the 1920s, there was a growing multi-faceted propaganda movement, which pushed homeownership onto Americans through magazines, newspapers, billboards, club activities, and exhibits of model homes. The movement was established as a way to continue building homes as a way to stimulate growth out of a recession (Jackson 1985), but also to buy consumer goods to fill the home (Altman 1990). Increasing American's consumption was intended to increase labor in the country. See Appendix Item 1 for an example of propaganda used during the time period.

Unfortunately, following this push, the economy fell into the Great Depression in 1929. President Herbert Hoover was a staunch advocate for homeownership and attempted to use housing to lift the economy out of the Great Depression. The thought was housing would provide economic stimulus, through home sales and material products within the home. Though Hoover was ineffective, President Franklin D. Roosevelt pushed lawmakers to prevent foreclosures by creating a law that helped owners refinance their loans from five to 10 years into 20-year loan terms (Jackson 1985).

Between 1933 and 1959, there were a number of housing acts, which helped stimulate growth of homeownership and building: creation of the Federal Housing Administration (FHA), Lanham Act in 1940, Serviceman's Readjustment Act of 1944, and the Housing Act of 1949 (Jackson 1985, Schelkle 2012, Rohe and Watson 2007, Martinez 2000, Strauss 1951). Following World War II (1945) and the Korean War (1953), there was a shortage of decent housing in the U.S. As was seen 20 years earlier, housing was a way to create economic growth for the nation, stability of jobs through building, but also a way to combat the threat of communism (Kelly 2016, Jackson 1985). New construction was concentrated in the suburbs where land was available, and loan programs allowed home buyers to see a home and in one day close on the home (Jackson 1985, Kelly 2016, Checkoway 1980).

These homeownership acts, left out an important segment of the population: minorities. Neighborhoods were classified under FHA based on the minority population (Martinez 2000, Kelly 2016, Jackson 1985, Hoyt 1939). In 1968, the Fair Housing Act was passed to which banned rental and ownership discrimination based on "race, color, religion, sex, familial status, or national origin" (The United States Department of Justice 1968). Despite the Fair Housing Act, the homeownership rate of minority families lagged White/Caucasian families. While all of the previous housing acts had focused on middle class housing for jobs and economic stability, a new

paradigm was created in housing during the U.S. Presidential Administrations of George H.W. Bush, Bill Clinton, and George W. Bush administrations. All three presidential administrations wanted to increase the homeownership rate for low-income families and/or minority families. During the Clinton administration between 1997 and 2000, there was a deregulation of banking and loosening lending standards particularly to low-income, and minority families (Clark 2013, Bratt 2008). Under FHA loans created by Fannie Mae, a new stipulation required half of loans were to minorities (Clark 2013). This regulation, though well intended, opened the floodgates to subprime mortgages (a loan product offered to low credit borrowers who could not qualify for a conventional loan). The U.S. homeownership rate rose to a record high of 69 percent in 2004 (U.S. Census Bureau 2017). Potential borrowers who were not qualified to purchase homes suddenly were qualified. Minorities have higher shares of individuals with low credit scores compared to White/Caucasian individuals (Bhutta and Ringo 2016). This had an immediate impact on increasing minority buyers and owners. Even with these policy changes, the gap in minority homeownership remained, which some credit to segregation and unaffordable neighborhoods (Dawkins 2005).

As history often repeats itself in economics, the rapid increase in the number of eligible borrowers, increased the demand and price of homes. Not only did the newly eligible borrowers think homeownership was a good investment, this was a widely held view by all (Shiller 2015). The demand for homeownership and the drive to buy fed into a self-reinforcing feedback loop, in which buyers felt a pressure to buy now or they would be priced out of the housing market (Ibid.). Incomes were not rising to meet this rapid home price escalation. There was not enough supply for all buyers so prices rose rapidly. As a result, current homeowners suddenly had increased equity in their homes as new buyers entered the market, which helped to alleviate the financial concerns of stagnant wages and then led to a greater interest in purchasing a home among non-owners (Clark 2013). Shockingly, home prices increased 90 percent from 2000 to 2006 (Case 2008), which translated to a $100,000 increase nationally (Clark 2013). From 2000 to 2006 inflation adjusted per capita income increased by 0.7 percent (U.S. Census Bureau 2018a).

Rising prices created a commotion and sense that if a buyer did not purchase today, there would be no homes available (Shiller 2015). Home buyers readily took on precarious loan products that had balloon payment terms and zero downpayments as they were convinced the price of homes would continue to skyrocket (Ibid.). Once in a home, there was no better investment as home prices continued to increase at a rapid pace. However, this home buying fever was not based in

sound economic theory of supply and demand. The role of narratives and anxiety of missing out played a role in the frenzy of buying (Akerlof and Shiller 2010). Shiller and Akerlof (2010) discuss how the behavior turned more towards "animal spirits" than economic theory, as regret and the fear of missing out overtook logic. Buyers and potential buyers let intuition play a role in home prices and how prices could only increase (Ibid.). The role of not only examining the quantitative data, but also talking with potential home buyers through qualitative research becomes imperative in understanding behavior and decision-making.

When the housing crisis hit, these risky borrowers could not have predicted the crash that awaited them, nor could the economy, despite the past warning signs. As was seen in the 1920s, the market did crash. From 2006 to 2009, there was a decline in housing equity from $13,417 trillion to $6,036 trillion (Board of Governors of the Federal Reserve System 2018). This equates to a loss of $7.3 trillion in housing equity, a 55 percent loss. Borrowers who originated their loans in 2006 to 2007 had the highest historical default rates (Moulton 2013). The share of homeowners who had negative equity in their home doubled from 1999 to 2009 (Clark 2013). In 2009, six to 13 percent of White/Caucasian households and 15 to 20 percent of minority households had negative equity in their home (Ibid.).

Unfortunately, those who had the highest foreclosure rates during the crisis were those who were encouraged to purchase a home by lax lending standards—predominately Hispanic/Latino households and Black/African American households (Kochhar et al. 2009, Aguirre and Martinez 2014, Mayock and Malacrida 2016). Some of the concentration in the foreclosures to minority populations may be due to new loose lending guidelines (Clark 2013). Others credit the fact more expensive loan products were given to minorities (Kochhar et al. 2009), while others attribute the reason to predatory lending (Aguirre and Martinez 2014, Kuebler and Rugh 2013). It is likely a combination of all factors. Regardless of the reasons, in 2017, the homeownership rate for African Americans is 42.3 percent, and the Hispanic/Latino homeownership rate is 46.2 percent compared to 72.3 percent for White/Caucasians (Exhibit 3). The Black/African American homeownership rate dropped from a peak of 49.1 percent in 2004 and the Hispanic/Latino homeownership rate fell from 49.7 percent in 2007.

Exhibit 3: Homeownership Rates by Race and Ethnicity of Householder: 1994-2017
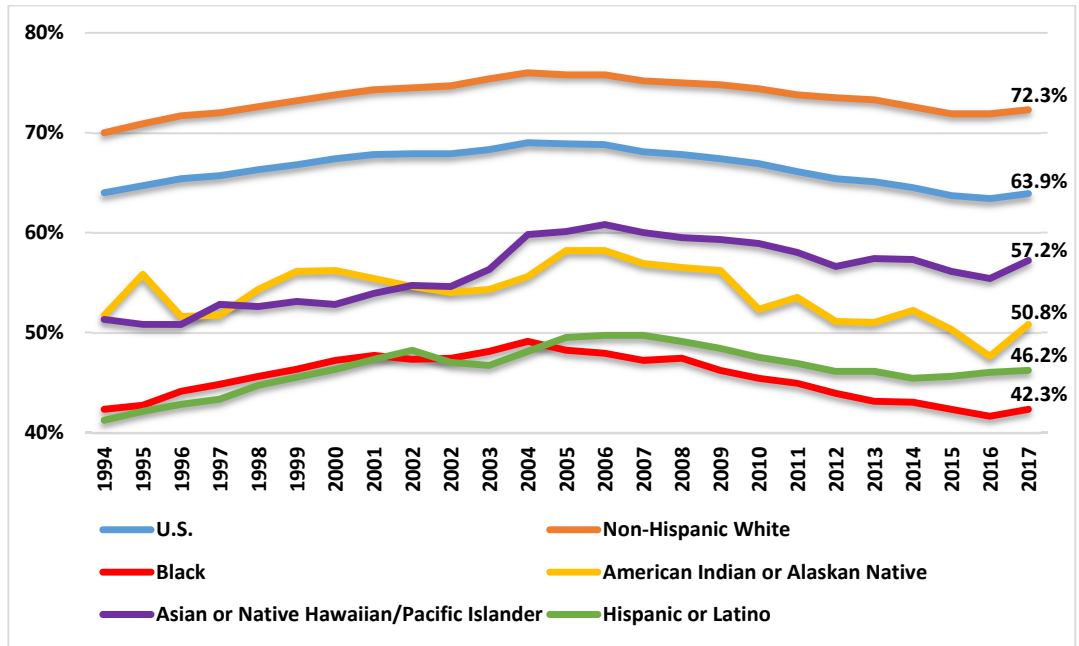
Source: U.S. Census Bureau

Racial Divide in Homeownership

The housing crisis, which impacted minorities at higher rates, did not happen in a historical vacuum. Until 1968 in the U.S., it was legal to discriminate against race and ethnicity in housing. In 1936, the FHA underwriting manual for mortgages not only specified that the housing should be uniform within a community, but the race should be uniform (Federal Housing Administration 1936). Loans were not to be underwritten by FHA if the borrower was not purchasing a home in a specific neighborhood, which was the same race as they were. In 1939, the Federal Housing Association provided a foundation of how neighborhoods should be mapped and where individuals should be allowed to live given their race (Hoyt 1939). However, this stigma of racial segregation continues to permeate the housing market. Even when laws were lifted, neighborhoods could be integrated and the homeownership rate was rising among minorities, cities remained largely segregated (Immergluck 1998, Logan and Stults 2011, R. Rothstein 2017). The U.S. continues to propagate systematic racism in housing. Although the policies today may not be overt, the academic research has clearly documented the results of covert racism (Mayock and Malacrida 2016, Kuebler and Rugh 2013, Clark 2013, Sturtevant 2018, Early et al. 2018, Bhutta and Ringo 2016, R. Rothstein 2017).

While, the homeownership rate for Black/African American and Hispanic/Latino individuals declined as credit tightened after the recession, there is evidence to suggest this is not the full story. Lending has tightened for all races, but standards have become significantly stricter for Black/African American and Hispanic/Latino buyers (Bhutta and Ringo 2016). Findings show that Black/African Americans are less likely to apply for a mortgage, and mortgage applicants who are Black/African American are twice as likely to be rejected in comparison to White/Caucasian applicants (Charles and Hurst 2002). Other academics disagree that lending standards are to blame, but rather suggest socio-economic factors of the buyers are the culprit (Gabriel and Rosenthal 2005). However, even while making this argument, the authors acknowledge that credit barriers are to blame for a five-percentage point difference in the homeownership rate gap (Gabriel and Rosenthal 2005). The entire Black/African American and White/Caucasian gap in homeownership cannot be easily explained through economic modeling, and factors such a discrimination and the missing of family wealth transfers is also a factor (DeSilva and Elmelech 2012, Bond and Eriksen 2017, Goodman and Mayer 2018, R. Rothstein 2017).

In the U.S., it is difficult to not to overlook that segregation and systemic racism are intertwined with socio-economic wealth and income. Segregation is most common among a divide of Black/African American and White/Caucasian neighborhoods (Bennett 2011). There is a concentration of minorities in lower priced neighborhoods and homes (Mayock and Malacrida 2016). Income and college attendance are influenced by the neighborhood where your family lives as a child (Chetty et al. 2016). This is not surprising given segregation leads to a difference in the quality of schools and access to quality healthcare facilities (Williams and Collins 2001). Stricter lending practices lead to a homeownership rate gap, and also lead to a wealth gap (Hirschl and Rank 2010). The impact of segregation is widespread and effects multiple generations.

> "Policies focus on improving economic outcomes of a single generation – such as cash transfer programs or minimum wage increases – can narrow the gap at a given point in time, but are less likely to have persistent effects unless they also affect intergenerational mobility. Policies that reduced residential segregation or engage black and white children to attend the same schools without achieving racial integration within neighborhoods and schools would likely leave much of the gap in place, since the gap persists even among low-income children raised on the same block." (Chetty et al. 2018, p. 42)

It is easy to see an intergenerational cycle of homeownership and neighborhood quality, which leads to a difference in the life choices and opportunities of future generations. A homeowner not only earns equity, but also exposes a child to better schools, and healthier environments, which children may want to emulate.

One claim has been made the homeownership rate is not in fact different for Black/African American's in comparison to Asian Americans and is not as low if the headship rate is taken into account (Yu and Myers 2010). Yu and Myers (2010) argue the real difference is in headship rates, among minority populations. Some populations may live at home or double up with families and would not have a need for homeownership. This assertion completely ignores why Black/African Americans may have higher household formation in the tenure choice of renting. These adults may need to rent, as homeownership is not a viable or available option for them. Additionally, living at home for an extended period of time as young adults may not be an opportunity they have.

Living at home may provide financial benefits, but family transfers of wealth are also more difficult to Black/African American home buyers. Black/African American households have significantly lower levels of wealth than White/Caucasian homes; $11,200 compared to $144,200 in 2013, respectively (Pew Research Center 2016). The wealth gap has widened from eight times in 1983 of the two races to 13 times the wealth in 2013 (Ibid.). A transfer of wealth through downpayment assistance from a family member can help to push a potential buyer from sitting out of the housing market to entering the market. Black/African American home buyers are less likely to receive help from family in comparison to White/Caucasian home buyers (Charles and Hurst 2002). Parental wealth in itself is an important factor, which determines if a buyer will enter the housing market (Bond and Eriksen 2017). Choi et al. (2018) found the homeownership and wealth gap between White/Caucasian and Black/African American parents can account for 12 to 13 percent of the homeownership rate in future generations.

Role of Student Loan Debt

The role of race and ethnicity in housing has been a historic conflict. A relatively new topic in housing is the amount of student loan debt in the U.S. economy. While student debt is disproportionately held by minorities, student debt is held by a widespread population in the U.S. There is evidence that student debt not only impacts recent graduates, but also non-graduates (Looney and Yannelis 2015), and those who never accrued the debt for their own studies (Jeszeck 2014, Fishman May 2, 2017). As this is an emerging issue in the economy, student debt's relationship to housing is just starting to be explored. Traditionally, higher education was a viewed as a way to educate oneself and achieve part of the American Dream, an investment in one's future, and to earn more (Salle Mae and Ipsos 2018). Many Americans have embraced that ideal. From 1983 to 2015, households with only a high school education or less fell dramatically to 44.6 percent from 61.3 percent and those with college degrees rose to 39.8 percent from 21.5 percent (Goodman and Mayer 2018). However, to obtain that education, the student has to pay tuition or accrue debt. As of the second quarter of 2018, the aggregate amount of student debt tops $1.41 trillion (Federal Reserve Bank of New York 2018).

In the U.S., not all students pay the same tuition for undergraduate education. Each university sets its own tuition within the 50 states and the District of Columbia. Public universities have lower tuition rates than private colleges, however if a student attends a college outside of their home state, they pay out-of-state tuition. While there are examples of the distribution of educational costs, the examples do not include room and board. Annual tuition fees vary widely.

> "In 2018-19, published tuition and fees for out-of-state students at flagship universities range from $12,430 in South Dakota and $17,490 in Wyoming to $47,560 in Virginia and $49,350 in Michigan. In Florida, North Carolina, and Texas, the out-of-state price is more than three and a half times as high as the in-state price. In New Hampshire, Pennsylvania, and South Dakota, the published 2018-19 out-of-state price is less than twice the in-state price. The largest dollar difference between the in-state and out-of-state prices is $34,090 in Michigan; the smallest difference is $3,370 in South Dakota." (Ma et al. 2018, p. 17)

The rise in overall tuition is coupled with the larger share of people who are attending college, which then increases the overall amount of debt. Recent graduates leave college with about

$34,000 in debt, which is an increase of about 70 percent from 2007 (Chakrabarti et al. 2017). However, that is not the full story. Public institutions were forced to transfer the cost of attendance to students as the state appropriations did not keep pace during the recession (Glater 2016).

> "It is precisely a crisis of access: federal aid policies intended to facilitate higher education access have failed to provide grant aid commensurate with rising costs of attendance, forcing students to take on debt that for some proves devastating." (Glater 2016, p. 146)

One of the effects of any recession is job loss and re-education. Jobs that were once needed and desired by an economy are lost, and many chose a new education and career. Many adults turned to for-profit colleges, such as the University of Phoenix-Phoenix Campus and Walden University (Looney and Yannelis 2015). These universities offer online courses for non-traditional students who are often part-time adult learners. These students are more likely minorities and more likely to be from lower income families (Ibid.).

While adults under the age of 30 currently hold the largest amount of student debt—$383.8 billion, the amount of debt held by older adults has risen (Federal Reserve Bank of New York Consumer Credit Panel / Equifax 2018). From 2004 to 2017, the percent increase amount for those over 60 years of age is 1,254 percent (Ibid.). Student debt for those over 60 years of age rose from $6.3 billion to $85.4 billion from 2004 to 2017 (Federal Reserve Bank of New York Consumer Credit Panel / Equifax 2018). For those who are over age of 50, 73 percent to 83 percent of the debt accrued is for their personal education, while the remainder is for a child (Jeszeck 2014). The high student loan balances for older adults likely has an impact on housing, as those adults have a reduced probability of moving and face rising home prices.

Exhibit 4: Total Student Loan Balances by Age Group: 2004-2017 (Billions of Dollars)

	Under 30	30 to 39	40 to 49	50 to 59	60 and above
2004	$147.77	$112.34	$48.74	$29.51	$6.31
2005	162.44	127.62	56.36	36.44	8.24
2006	196.29	154.79	69.78	48.15	12.17
2007	219.81	174.46	79.98	56.38	15.88
2008	250.92	205.43	94.43	67.64	20.36
2009	275.86	232.20	108.97	78.47	25.29
2010	301.23	261.17	128.47	89.57	30.78
2011	316.44	282.04	141.71	97.02	35.39
2012	322.72	320.24	167.27	111.31	43.02
2013	361.96	354.07	188.08	124.88	49.81
2014	370.51	383.09	207.60	136.47	57.74
2015	376.37	408.39	229.62	149.69	66.74
2016	383.22	437.44	255.61	163.20	76.34
2017	383.81	461.03	278.92	177.17	85.45
Percent Change 2004-2017	159.73%	310.38%	472.29%	500.47%	1253.71%

Source: Federal Reserve Bank of New York Consumer Credit Panel / Equifax, calculations done by Jessica Lautz

The default rate is also a cause for concern as the damage to one's credit holds back the potential for purchasing a home. Among all student debt holders, more than one-third are not currently paying on their student debt (Tarkan et al. 2016). On a quarterly basis about 280,000 student loan holders enter default (Blagg 2018) Those most at risk of defaulting on their loans are those in lower income areas (Chakrabarti et al. 2017), those from low-income households (Herr and Burt 2005), and those in neighborhoods with a higher concentration of Hispanic and Black adults (Blagg 2018).

Those with lower balances (Looney and Yannelis 2018, Blagg 2018) tend to have higher default rates. There is a recent trend towards borrowers with large balances defaulting on their debt (Looney and Yannelis 2018, Chakrabarti et al. 2017, Mueller and Yannelis 2017). Defaults also may be due to a growing number of borrowers with high balances among for-profit college attendees (Looney and Yannelis 2018, Looney and Yannelis 2015). Mezza et al. (2016) found a 10 percent increase in student debt raises the delinquency rate by 0.7 percent. Blagg (2018) found the payment plan was mattered the most; a $100 increase in the monthly payment resulted in a 0.1 percent increase in defaults.

Even among those who are paying on their student debt and who are current on their debt, 47.5 percent of borrowers have a balance that is the same or higher than the previous quarter (Federal Reserve Bank of New York Consumer Credit Panel / Equifax 2018). It is possible, and

even likely they are not paying any portion of their installment towards the principal of their loan. In the U.S., there is no standard repayment plan for a borrower's student loan debt. An individual borrower may have several types of loans public, private, subsidized (borrower does not accrue interest in the grace period), unsubsidized (interest is accrued while in school and in the grace period) and each loan may have a different interest rate and payment terms. After the Great Recession, a new program allowed borrowers to pay based on their personal earnings—Income Based Repayment (IBR) (Mueller and Yannelis 2017). While the goal was to curb default rates, in reality the loans act as negative amortization. Mueller and Yannelis (2017) did find the benefit of IBR loans; however, those who signed up had a decline in defaults. The authors also found this protected IBR borrowers from labor market and home price shock.

A study comparing Black/African Americans and White/Caucasians four years after graduation found that the debt was $52,726 compared to $28,006, respectively (Scott-Clayton and Li 2016). The authors suggest White/Caucasians may have better job prospects, are less likely to default, and are less likely to attend for-profit graduate schools (Ibid.). It is also possible based on more difficult job prospects and salary differences once they obtain a job that they are paying less to the principal of their loan. Communities with segregation have less access to quality schools. It may make it more difficult for Black/African American students to compete for scholarships and enter college with a financial advantage.

The big question however remains—how does student loan debt relate to the homeownership rate? Education does lead to higher income and better career opportunities. College educated individuals do have higher rates of homeownership 71.4 percent compared to 48.6 percent for those who have the least education (Goodman and Mayer 2018). However, since the Great Recession, the homeownership rate has fallen for those under 35 years of age—those most likely to have student debt and to have higher balances. In 2004, the homeownership rate for those under the age of 35 was 43.1 percent. By 2017, the homeownership rate for those under the age of 35 fell to 35.3 percent. In the available historical data from 1982 by age, the homeownership rate has never been as low as it is today (Exhibit 5).

Exhibit 5: Homeownership Rates for the United States, by Age of Householder: 1982-2017
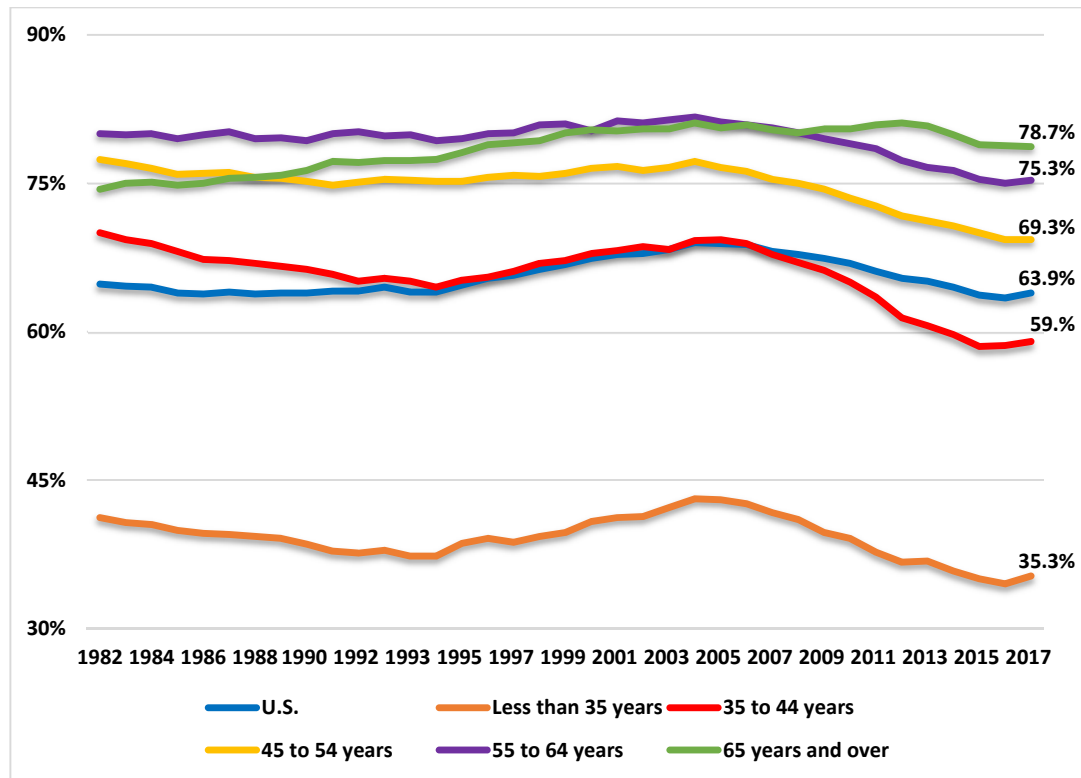
Source: U.S. Census Bureau

There is a growing body of academic work on the role of student debt to the homeownership rate, an issue that has only been highlighted in recent years. Data on student loan debt and homeownership are also hard to access and are generally limited to data that is out-of-date to the recent growth in student debt in the economy. There is also reluctance by some to study this issue as student debt is seen as a requirement to access for career opportunities and a successful life (Elliott et al. 2013).The studies that have been published are nearly all in agreement that student loan debt has impacted the ability to purchase a home. On an aggregate level, a recent paper found 11 to 35 percent of the decline in the homeownership rate between 2007 and 2015 among those 28 to 30 years of age could be explained by student debt and the rise in tuition (Bleemer et al. 2017). There is also evidence that student debt holders were more likely to be impacted by negative home equity during the Great Recession and had a larger loss of housing wealth (Elliott and Nam 2013).

When student borrowers take on loans, they are doing so often as a tradeoff to family assistance with tuition. Researchers (Brown et al. 2015) have explored the role of home equity lines of credit to pay for tuition, suggesting parents may not have been able to assist their children with

both the rising cost of college, as their personal home equity declined. The authors do not find strong evidence of this and instead only find a $5 increase in student loans among older homeowners for every 1 percent drop in home prices. Families can also assist by housing a young adult after they have left college. There is a 5.0 percent to 9.9 percent decrease in student loan borrowers with a balance of $10,000 moving out of a parent's home (Bleemer et al. 2015). Parents who are able to house their adult children may give them a better opportunity to purchase a home in the future and more financial security, but this is not always an option. One in five first-time buyers did move directly from their family or friend's home before purchasing, a share which has increased incrementally in recent years (Lautz et al. 2018).

On an individual level, Cooper and Wang (2014) found a 10 percent increase in student debt results in a 0.1 percent decline in the chance homeownership. The authors used a sample of student borrowers who attended college in the 1990s before the price escalation in tuition. In another cohort study, Mezza et al. (2016) uncovered a 10 percent increase in student debt results in a 1 to 2 percent drop in the homeownership rate among those were 23 to 31 years of age in 2004.

The most recent literature uses a cohort who were 26 years of age in 2012 (Miller and Nikaj 2018). While this cohort is considerably younger than the median age of a first-time buyer who was 32 in 2017 (Lautz et al. 2018), they find a strong relationship between student debt and homeownership. Miller and Nikaj (2018) discovered that those who did not complete college and have student debt are 7.8 percent less likely own a home. Additionally, Miller and Nikaj (2018) found among all borrowers a 10 percent increase in debt results in a 0.3 percent reduction in owning, but among non-completers this rises to 1 percent. Gicheva and Thompson (2015) found similar results if a borrower did not complete college; a $1,000 increase in student debt decreases their chance of homeownership by 1.4 percent to 5.6 percent.

There are two papers, which are more reserved in their findings. Houle and Berger (2015) obtained results showing that those with $10,000 in student loan debt have a decrease in the homeownership rate by 0.8 percent. The authors contend the role of student debt is over-inflated in the media and is not a substantial problem. In the analysis, there is little displayed to the model used, results, or limitations in the data source. While Houle and Berger (2015) do find a connection to student debt and homeownership, because the relationship is small, they reach the conclusion that student debt is not an impediment for recent buyers.

Building on the work of Houle and Berger (2015), Letkiewicz and Heckman (2018) use the same data source: the 1997 National Longitudinal Survey of Youth. However, these authors reveal more details of how the data is used. In the paper, they disclose that the oldest participants in the cohort were 30 years old between 2010 and 2011. This is an age that is both too old for the increase in student debt and the decline in the homeownership rate among young adults. The authors find student debt could be a credit limitation for some home buyers, but the rise in income of obtaining higher education negates student debt as an obstacle to ownership. The data does have substantial limitations; it is only a sample of 1,003 young adults, does not have a large share of minorities and is not the correct timeframe to address the growing and recent issue. Letkiewicz and Heckman (2018) do however answer the data limitations Houle and Berger (2015) did not include or address in their paper.

All of the published papers confirm the homeownership rate is impacted by the amount of student loan debt held by young adults. The increase in student loan debt has yielded stronger results and documents the change over time in the limited academic studies. None of the papers that have been published look at the change in housing affordability and how that further restricts populations from the ability to purchase homes. As minorities take on larger shares of debt and have a more difficult time paying their debt, and struggle to obtain homeownership is compounded. The qualitative and quantitative research in this study helps to answer the issues that have not been explored.

Societal Benefits of Homeownership

The encouragement of the U.S. to become an ownership society came long before there were academic papers showing the value of homeownership. Government politicians relied on the instinct that renting does not provide the same stability to families as ownership does. Academic papers address why society should care about the homeownership rate and the benefits stable housing provides to adults and children. While many politicians cared about either creating jobs or thwarting the threat of strikes on a macro level, academic papers provide micro level analysis into why individuals benefit from homeownership.

On a micro level, homeownership increases the likelihood someone will participate by voting in local elections and join civic associations (McCabe 2013). Similarly, researchers have found those who are homeowners also volunteer more hours (Rotolo et al. 2010). Homeownership tenure choice has even been found to increase religious attendance, voting, outdoor yard maintenance, and participation in professional organizations (DiPasquale and Glaeser 1999). The same paper found owners have an increased likelihood of gun ownership, which could be viewed as a negative result of homeownership. All of these papers have a commonality; while the actions taken by owners are beneficial to the owner to be an active and engaged member of their community, it also helps the community around them. Non-owners benefit from homeowners who volunteer, vote, participate in civic associations, and even garden. As a society, there are overarching advantages everyone receives when there is a higher share of owners. One could argue, non-owners should represent their own interests by voting in local elections themselves, but if non-owners are also less likely to participate in volunteering and civic associations, they may not be informed of how to vote in local elections and the local issues.

Homeownership does not only benefit the adults in the home, it also improves the lives of the children. The test scores of children has been widely cited as a benefit children have from living in a home that is owned (Haurin et al. 2002). The same paper also found there was a reduction in behavior problems among children. While this paper has been disputed by other researchers (Barker and Miller 2009), individuals who own are fundamentally atypical from renters and their families would be better off regardless of tenure choice. While this is a possibility, if there are inter-generational benefits, focusing on ownership for those who have children, should be a policy priority. While the parents' behavior may not change, moving a child into a stable ownership environment could improve the life of the child and further generations.

Teen pregnancy is another topic, which is explored in the literature. Stable housing is a key finding for others who find homeownership reduces the chances of teen pregnancy and increases high school attendance (Green and White 1997). Further examining the topic, researchers explore the loan-to-value ratios and teen pregnancy and find all owners have lower rates of teen pregnancy than renters and higher high school graduation rates (Green et al. 2012). It is clear that the researchers wanted to ensure their results were reliable and valid by testing them a second time and examining the loan-to-value to ensure all owners were more likely to provide more a more stable future for their teenagers. The results point to the value of ownership encouraging high school education, which in-turn provides a healthier financial future for the teenagers as they transition to adulthood.

Earnings of adults after leaving an owned home are higher than of renters overall, which was a found in another study (Boehm and Schlottmann 1999). While other researchers found if the home equity of an owned home increased while 17-year old resided in a parent's home, their income would be higher as an adult (Cooper and Luengo-Prado 2014). Similar to test scores for children, the increase of earnings can greatly impact future generations. This can encourage homeownership, but also increase engagement in the broader macro economy. While generations prior saw a positive relationship of homeownership to economic stability, these results confirm that instinct nearly 100 years later.

Research Method 1: Quantitative

Data Source

Within the existing research on student loan debt, there is a lag in time between when the report is published and the data that is available to use. For example, the most recent article on student debt was from Miller and Nikaj (2018), which uses data based on a panel of young adults, Educational Longitudinal Study of 2002, who were 26 years old in 2012. Credit bureau data are typically not current and are not widely available for academic use, but has been used widely by Federal Reserve Banks. Bleemer et al. (2017) used New York Fed Consumer Credit Panel/Equifax data, which was based on student debt data through 2015. The American Housing Survey conducted by the Census Bureau, is available for public use. However, the most recent data when analysis was being conducted for this paper was collected in 2015 and is reflective of 2013 to 2015. Additionally, the American Housing Survey does not contain key variables—student loan debt or the years debt delayed the home buyer.

To overcome this lag with more recent data, which are also more comprehensive, National Association of Realtors *Profile of Home Buyers and Sellers* (HBS) survey data set was used. The dataset is available for students and academics to use for reports, journal articles, and papers and has been used in a number of papers (Baryla et al. 2000, Genesove and Han 2012, Goodwin and Stetelman 2013, Han and Strange 2014, Hayunga and Pace 2016, Jud and Frew 1986). Academics have cited the *Profile of Home Buyers and Sellers* data as, "the response rate are similar to other surveys, and recent studies…using NAR data set indicate the data are well behaved." "that sample selection bias is either not evident or quantitatively unimportant." (Hayunga and Pace 2016). The National Association of Realtors uses the survey data for an annual report and spin-off reports, which are also widely cited by housing researchers and academics.

The data has been collected since 1981, which makes it the longest running demographic study of home buyers in the U.S. The survey has evolved over time and in 2017 there were 131 questions in the survey. Since 2002, the survey has been conducted annually and for the last three years includes a question on student loan debt and overall debt. See Appendix Item 2 for the full 2017 survey. As it is a survey sent to consumers, it relies on the honesty of consumers for their own interpretation of information, which is especially important when reporting financial data, such as a home price, household income, and the years they were delayed from homeownership due to debt.

The survey National Association of Realtors uses the vendor Experian, a credit agency, to determine who purchased a home in the last year. The time period of home purchases is June to July. The survey is mailed to recent home buyers to the purchase address. A survey participant can take the survey on paper in English, or online in English or Spanish. Annually, between 5,000 and 10,000 home buyers take the survey. The survey results are among primary residence home buyers. A vacation buyer or investor is unlikely to receive the survey to the mailed address, but if they do take the survey, they are removed from the sample.

Within this research, three years of data was combined from 2015, 2016, and 2017, resulting in a sample size of 15,258. However, respondents to the survey are not required to answer all questions and may skip questions they would prefer not to answer. In the U.S., in 2014, 2015, and 2016, 65 percent of home sales were among primary residence buyers (National Association of Realtors 2017). There was only one source for the share of primary residence buyers, and that report has since been retired. If the assumption remains, that 65 percent of buyers were primary residence buyers in 2017, then between 2014 and 2017, there were 15.12 million home sales of primary residence buyers. As such, the confidence interval, at the 95 percent confidence level is plus-or-minus 0.79 percent. The sample has been weighted based on state sales figures.

The three years of data are similar to each other in both the survey and sample of buyers who purchased each year. Nationally, in the four-year period, there is a small change in per capita income in 2017 dollars, from $31,276 to $34,489 (U.S. Census Bureau 2018a). The main change in the timeframe was rapid home price escalation. In the model, there is a variable added to help control for the period among those who purchased between September 2016 and July 2017, which is described in more detail further in the paper. In this timeframe inflation stayed relatively low, between 1.6 percent and 2.3 percent (Bureau of Labor Statistics 2018a). Exhibit 6 shows the descriptive make-up of the national data set.

National Descriptive Data

Exhibit 6: Descriptive Statistics Home Purchased Between January 2014-August 2017

Variables	All Respondents	First-Time Buyer	Repeat Buyer	Levene's Test F-Statistic	Sig.
Purchase Price (Median)	$232,000	$185,000	$260,000	81.803	0.000
Have Student Debt	27%	43%	20%	2600.467	0.000
Age (Median)	43	31	52	1347.025	0.000
Children Under 18 (Median)	0	0	0	32.462	0.005
Gift Friends Relatives	12%	23%	7%	3393.271	0.000
Loan Friends Relatives	3%	5%	2%	411.371	0.000
White/Caucasian	84%	79%	87%	656.353	0.000
Black/African American	5%	6%	4%	148.108	0.000
Hispanic/Latino/Mexican/ Puerto Rican	7%	9%	6%	294.982	0.000
Asian/Pacific Islander	5%	7%	4%	367.138	0.000
Other Race	3%	3%	2%	34.664	0.005
First-Time Buyer	34%	100%	%	NA	NA
Born in US	91%	88%	92%	337.878	0.000
Suburban/Subdivision	53%	51%	54%	325.312*	0.000
Urban	13%	18%	11%		
Small Town	20%	20%	20%		
Rural	12%	11%	12%		
Resort	2%	1%	3%		
Married Couples	67%	57%	71%	89.302*	0.000
Single Female	16%	17%	15%		
Single Male	8%	9%	7%		
Unmarried Couple	8%	15%	5%		
Other Marital	2%	2%	2%		
Prior Living Own	46%	4%	68%	20285.131*	0.000
Prior Living Rent	43%	76%	26%		
Prior Living Live W Parents	11%	20%	6%		
HH Income Less than 35k	6%	9%	5%	624.840*	0.000
HH Income 35k-55K	14%	19%	11%		
HH Income 55k-75k	17%	22%	15%		
HH Income 75k-100k	20%	22%	19%		
HH Income 100k-125k	15%	13%	17%		
HH Income 125k-175k	15%	10%	18%		
HH More than 175k	12%	6%	16%		
Sq FT (Median)	1,900	1,640	2,010	273.823	0.000
Year Home Built (Median)	1991	1980	1996	192.933	0.000
Full Bathrooms (Median)	2	2	2	104.771	0.000
Northeast	13%	17%	11%	132.428*	0.000
Midwest	21%	23%	20%		
South	42%	38%	44%		
West	24%	22%	25%		
Purchase Sept '16-July '18	31%	31%	31%	1.917	.491

See appendix for full Tamhane results

The median home price purchased was $232,000 among the buyers in the sample. As will be displayed, this varies among MSAs and is not reflective of many areas in the U.S. Within the sample, 27 percent of recent home buyers did have student loan debt. Among first-time home buyers, this share rises to 43 percent compared to 20 percent of repeat home buyers. The share of first-time buyers who have student loan debt is significant, as these student loan borrowers must have found a way to manage their debt and purchase a home.

Among those who did use a downpayment on their home purchase, 12 percent did use a gift from family or friends. This share rises to 23 percent among first-time buyers, although it is notable that 7 percent of repeat buyers do use this as a source of a downpayment. Only 2 percent of repeat buyers used a loan from friends or family for a downpayment, however, it is more common among first-time home buyers at 5 percent. While helping friends and family for a downpayment can allow a buyer to purchase a home, this may increase the wealth inequality among those who are able to purchase a home and those who are not. The focus group results show this is a downpayment source for recent home buyers with student loan debt.

Another way families can help future home buyers is to let them live at home without housing costs. It allows the buyer to offset student loan debt and enable a buyer to save for a home by living with friends and family. While family wealth is not captured in the data set, others have found intergenerational transfers of wealth and knowledge encourage home buying (Choi et al. 2018, Haurin et al. 1996). Among all buyers, 11 percent lived with family before purchasing, 46 percent owned their home, and 43 percent rented before purchasing. Among first-time buyers, 20 percent lived with family before they purchased a home compared to just 6 percent of repeat buyers. Living with family is a way young adults are not only saving on living expenses they are also able to save more as a result. This will be explored more within the focus group results.

The vast majority of the sample is White/Caucasian at 84 percent, while 7 percent are Hispanic/Latino/Mexican/Puerto Rican, 5 percent are Asian/Pacific Islander, and 5 percent are Black/African-American. Within the HBS survey, respondents are allowed to pick more than one race so the data does not total 100 percent. It should be noted the respondents can pick more than one race in the survey. When significance tests are conducted, the ANOVA tests if the buyer is that particular race or not of the race. The ANOVA is not testing one race compared to all races in the survey.

Within this data set, 34 percent of the sample were first-time home buyers. While this data set is only reflective of three years, the historical average since 1981 is 39 percent of the primary residence home buying market were first-time buyers. The share is suppressed due likely to both student loan debt, but also rising home prices, which are hindering affordability (Rosen et al. 2017a, Joint Center for Housing Studies of Harvard University 2017).

There is a myth that has been circulated that falling marriage rates are to blame for the drop in homeownership. It is true that the most common household composition among home buyers is married couples at 67 percent. Sixteen percent of the sample are single females, 8 percent are single males, 8 percent are unmarried couples, and 2 percent have a different marital status. Household compositions of singles and unmarried couples are more common among first-time home buyers. Among first-time buyers, the share of unmarried couples is at the highest rate recorded in the data set since 1981 (Lautz et al. 2018), which indicates home buyers are purchasing homes at higher rates as singles, and don't feel the need to be married to purchase homes.

The typical age of home buyers was 43 in the data set; however, among first-time buyers the typical age was 31, and among repeat buyers, the typical age was 52 years old. There is also the myth that first-time home buyers are purchasing home later in life, however, the median age of first-time buyers remains at historical norms within the data set (Lautz et al. 2018). The age of repeat buyers has increased, which indicates buyers are purchasing homes later in life, perhaps in retirement, at more frequently.

Within the sample, 53 percent purchased a home in a suburban location, 20 percent in a small town, 13 percent in an urban area/central city, 12 percent in a rural area, and 2 percent in a resort location. Contrary to recent media reports, even among first-time home buyers, purchasing in a suburban area is the most common location to purchase a home.

The median square footage purchased for the sample was 1,900 square feet. However, there are differences in the median home size among first-time buyers and repeat buyers. First-time buyers typically bought a home that was 1,640 square feet, while repeat buyers typically bought a home that was 2,010 square feet. First-time buyers are also more likely to purchase an older home that was typically built in 1980 compared to repeat buyers who purchased homes typically built in 1996. Older homes typically are more affordable for home buyers.

Metropolitan Statistical Area Descriptive Data

There is a phrase in the real estate market, 'location, location, location'. That phrase is apt to this study. When assessing the data set, the U.S. is too large for one number to represent all buyer types or markets. For example, while the median home price in the data set is $232,000, the prices range considerably within the 374 Metropolitan Statistical Areas (MSAs) and 581 micropolitan statistical areas. MSAs are localized areas that have similar economic conditions. MSA is a more narrow measure than state, which could have varying economic conditions within its boundaries. For example, California had a population of 39.54 million people in 2017, but is represented by 26 MSAs and 9 micropolitan areas. The U.S. Census Bureau reports 93.7 percent of the U.S. population lives in a MSA (Wilson, et al. 2012).

The HBS data has a question for zip code. Zip codes were recoded to match the five MSA groupings. Similar to Census Bureau findings, within the HBS data set, 92.6 percent recent home buyers (14,058 respondents) were in a MSA or micropolitan area. This data set is broken into five MSA groupings (and if available micropolitan areas): home price, housing inventory, share of population with a Bachelor's degree, share of population over the age of 65 years, and unemployment rate. The descriptive groupings may have overlap, as one MSA could have both low inventory and a relatively young population. However, the groupings provide context for the overall descriptive data and econometric findings. Each was chosen as a way to describe the area and where there could be differences in the findings. The number and type of groupings is limitless, but these were chosen based on both existing literature that identified factors affecting homeownership and the availability of public data and economic and demographic conditions, which are interesting in context to housing affordability. Within each grouping, the source of the data and sample is discussed. Each data source varies in the MSAs, which are available. An attempt was made to use data from the middle point of the data collection of HBS, which is July 2014 to June 2017.

<u>*Home Price*</u>

Within the HBS data set, the price of home purchased ranges from $0 to $9 million dollars. Homes with no sales prices or $1 homes, may be a family transfer (Lautz et al. 2018, Internal Revenue Service 2018) or a beneficiary of local government programs for those with modest incomes to enter homeownership (U.S. Department of Housing and Urban Development 2018). To provide the home price segmentation, 2016 home prices were used from the National Association of Realtors Metro Median Area Home Prices and Affordability. While this data set only includes home prices for existing home sales, in the HBS data 83 percent of buyers purchased an existing home, rather than a new home. In the breakout, there were 8,053 buyers who purchased a home under $235,500 and 3,563 buyers purchased a home above $235,500. In high priced areas, the median purchase price was $350,000 while the median purchase price in more affordable areas was $204,900.

Exhibit 7: Under or Over National Home Price (Average $235,500 in 2016)

Variables	All Respondents	Under National Price	Over National Price	Levene's Test F-Statistic	Sig.
Purchase Price (Median)	$232,000	$204,900	$350,000	358.046	0.000
Have Student Debt	27%	28%	28%	1.205	0.584
Age (Median)	43	43	42	42.035	0.006
Children Under 18 (Median)	0	0	0	6.044	0.001
Gift Friends Relatives	12%	12%	14%	38.671	0.002
Loan Friends Relatives	3%	3%	4%	27.555	0.013
White/Caucasian	84%	86%	80%	252.529	0.000
Black/African American	5%	5%	5%	4.643	0.274
Hispanic/Latino/Mexican/ Puerto Rican	7%	6%	8%	34.475	0.004
Asian/Pacific Islander	5%	3%	9%	618.976	0.000
Other Race	3%	2%	3%	60.142	0.000
First-Time Buyer	34%	33%	36%	23.720	0.013
Born in US	91%	92%	85%	520.856	0.000
Suburban/Subdivision	53%	60%	58%	21.925*	0.000
Urban	13%	13%	16%		
Small Town	20%	15%	16%		
Rural	12%	10%	8%		
Resort	2%	2%	2%		
Married Couples	67%	65%	68%	20.528*	0.000
Single Female	16%	16%	15%		
Single Male	8%	8%	7%		
Unmarried Couple	8%	9%	8%		
Other Marital	2%	2%	2%		
Prior Living Own	46%	48%	43%	83.125*	0.000
Prior Living Rent	43%	41%	48%		
Prior Living Live W Parents	11%	11%	9%		
HH Income Less than 35k	6%	7%	3%	222.152*	0.000
HH Income 35k-55K	14%	14%	8%		
HH Income 55k-75k	17%	17%	14%		
HH Income 75k-100k	20%	21%	18%		
HH Income 100k-125k	15%	15%	17%		
HH Income 125k-175k	15%	15%	19%		
HH More than 175k	12%	10%	20%		
Sq FT (Median)	1,900	1,900	1,920	7.209	0.129
Year Home Built (Median)	1991	1994	1988	0.197	0.000
Full Bathrooms (Median)	2	2	2	21.367	0.001
Northeast	13%	11%	19%	802.671*	.000
Midwest	21%	28%	7%		
South	42%	53%	30%		
West	24%	8%	45%		
Purchase Sept '16-July '18	31%	29%	35%	168.583	.000

*See appendix for full Tamhane results

There are a number of demographic differences among buyers in high priced compared to more affordable areas. Buyers in higher priced areas are less likely to be White/Caucasian and more likely to be Asian/Pacific Islander or Hispanic/Latino/Mexican/Puerto Rican. Buyers in more affordable MSAs are more likely to be born in the U.S. and less likely to be immigrants, 92 percent compared to 85 percent respectively. Buyers in high priced areas are slightly more likely to be first-time buyers, 36 percent compared to 34 percent, respectively. This is likely influenced by the age of the population, as buyers in high priced areas tend to be slightly younger.

Divergence in buyers' financial situation is stark when comparing high and low priced MSAs. Twenty-one percent of buyers in low priced MSAs had household incomes under $55,000 compared to 11 percent of buyers in high priced MSAs. Conversely, 20 percent of buyers in high priced MSAs had household incomes of more than $175,000 compared to just 10 percent of buyers in low priced MSAs. Buyers in high priced MSAs were more likely to receive a gift or loan for their downpayment—18 percent compared to 15 percent in low priced MSAs. It is possible that this is because the buyer is more likely to need the gift or loan or because buyers in high priced MSAs have families who are more likely to be able to help. However, within the focus groups, the cost of MSA did not alter who received a gift at the time of purchase.

The housing stock in low priced areas is significantly older than in low priced areas. This is likely one of the reasons why the homes are higher in price as there is a lack of new construction, which is driving the price of homes up. The typical year the home was built in high priced areas is 1988 compared to 1994 in low priced areas. Homes in low priced areas are slightly more likely to be in suburban areas and rural areas. Homes in high priced areas are slightly more likely to be in urban areas and small towns. Homes in high priced areas are significantly more likely to be the Northeast and West, where homes in the low priced areas are more likely to be located in the Midwest and South.

Housing Inventory

As housing inventory is a driver of housing prices, it was important to examine the differences in buyers in high and low housing inventory MSAs. There are a number of measures of housing inventory, including months' supply of homes, the ratio of homes to new jobs, the total number of homes to purchase to population, and the days on market. Inventory was researched to find the impact of supply and demand. In a low housing inventory environment, homes would be expected to sell faster and at higher price points. Inventory should be a predictor of future price growth or depreciation.

To measure housing inventory, average days on market was taken for July of 2016 using data from Realtor.com. The average for this month was 75 days. There were 11,516 buyers who purchased homes in markets where homes were listed under 75 days and 1,985 buyers who purchased homes where homes were listed more than 75 days. While this is one method to examine inventory, it is not without weakness. In 2016, higher priced homes stayed on the market for longer periods than affordable homes, as there was limited affordable homes available for purchase (Yun 2016). Overwhelmingly, in the U.S. during this time period, demand has outstripped supply and homes have increased in price and sold at a rapid pace. Among recent home sellers, the typical weeks a home was listed last year was just three weeks (21 days) (Lautz et al. 2018). This is the shortest amount of time since the data began collection in 1989. Despite homes at high price points taking longer to sell, in MSAs with fewer days on market, homes sold for $33,000 more than homes in MSAs with longer days on market. Demand for housing is likely highly localized to particular neighborhoods within a MSA, so overall days on market and selling prices are likely to vary.

Exhibit 8: Days on Market (Average 75 Days July 2016)

Variables	All Respondents	Below Average Days on Market	Above Average Days on Market	Levene's Test F-Statistic	Sig.
Purchase Price (Median)	$232,000	$240,000	$207,000	11.299	0.000
Have Student Debt	27%	29%	27%	13.308	0.073
Age (Median)	43	42	45	26.580	0.000
Children Under 18 (Median)	0	0	0	7.828	0.000
Gift Friends Relatives	12%	13%	12%	1.045	0.607
Loan Friends Relatives	3%	3%	3%	0.311	0.778
White/Caucasian	84%	84%	86%	11.975	0.080
Black/African American	5%	5%	5%	0.434	0.739
Hispanic/Latino/Mexican/ Puerto Rican	7%	7%	9%	49.956	0.001
Asian/Pacific Islander	5%	5%	2%	219.500	0.000
Other Race	3%	3%	2%	4.964	0.238
First-Time Buyer	34%	34%	35%	1.362	0.555
Born in US	91%	91%	90%	0.167	0.839
Suburban/Subdivision	53%	59%	43%	244.115*	0.000
Urban	13%	14%	13%		
Small Town	20%	16%	26%		
Rural	12%	10%	16%		
Resort	2%	1%	3%		
Married Couples	67%	67%	63%	17.695*	0.000
Single Female	16%	16%	16%		
Single Male	8%	8%	9%		
Unmarried Couple	8%	8%	10%		
Other Marital	2%	2%	2%		
Prior Living Own	46%	46%	47%	19.776*	0.000
Prior Living Rent	43%	44%	41%		
Prior Living Live W Parents	11%	10%	12%		
HH Income Less than 35k	6%	6%	8%	45.045*	0.000
HH Income 35k-55K	14%	13%	16%		
HH Income 55k-75k	17%	16%	19%		
HH Income 75k-100k	20%	20%	21%		
HH Income 100k-125k	15%	16%	13%		
HH Income 125k-175k	15%	16%	13%		
HH More than 175k	12%	13%	10%		
Sq FT (Median)	1,900	1,920	1,800	22.017	0.000
Year Home Built (Median)	1991	1992	1990	5.213	0.002
Full Bathrooms (Median)	2	2	2	49.970	0.000
Northeast	13%	10%	33%	3130.456*	0.000
Midwest	21%	24%	4%		
South	42%	40%	59%		
West	24%	26%	4%		
Purchase Sept '16-July '18	31%	31%	29%	24.514	.016

*See appendix for full Tamhane results

Buyers in areas with tight inventory are more likely to be Hispanic/Latino/Mexican/Puerto Rican and Asian/Pacific Islander. While buyers in high inventory areas are more likely to be White/Caucasian and older. High inventory may reflect falling prices, however there is heterogeneity across the MSAs and micro locations within the MSAs. There are differences in the location where buyers purchased by region and type of area which reflect the populations in the U.S., which are traditionally less diverse, such as rural areas and small towns. Buyers in low inventory areas are more likely to be married couples, perhaps as a dual income would help to purchase a more expensive home. It is possible in more expensive high inventory areas, single buyers may want to enter the housing market, but are not able to due to housing prices.

Income is reflective of the market conditions; however, the contrast is not as wide as among areas separated by home prices. Buyers who purchase homes in MSAs with tight inventory are more likely to rent before buying, while buyers in areas with higher inventory are more likely to live with friends or family before purchasing. There is a lack of affordable rental units in rural areas and small towns (Scally et al. 2018), which may drive families to double up rather than rent. Rural areas and small towns are more likely to have higher housing inventory to purchase. This may also speak to the need and desire to live with family differing among the MSAs. As income is lower in high inventory areas, there may be a financial restriction on renting.

Homes in high inventory areas are slightly older than homes in low inventory areas. While the distinction is only two years, it is a statistically significant difference. Homes in high inventory areas are also smaller by 120 square feet. In high inventory MSAs, it is more common for a buyer to purchase in a small town, rural area, or resort area. Buyers in low inventory areas are more likely to purchase in suburban areas and urban locations. The region the buyer purchased in shows significant contrast. Buyers who purchased in high inventory areas are more likely to purchase in the Northeast and South, while buyers in low inventory areas are more likely to purchase in the Midwest and West.

<u>*Unemployment Rate*</u>

The unemployment rate of a local community is a driven of the overall economic situation. If the unemployment rate is low, it is not only advantageous to the population already living in the area, it may also attract young college graduates to move to the area. The U.S. interstate migration rate is half the share from 2000 to 2012 compared to 1981 to 1989 (Molloy et al. 2017). However, the interstate migration rate is higher for those aged 20 to 24, renters, and college graduates (Ibid.). It can be difficult to find affordable housing in higher growth areas. Denver, CO was the top area, attracting 706,000 new professionals, but it also has limited housing affordability (Evangelou 2018). The influx of new residents perpetuate the limited availability of homes. There is research to support the idea that young adults prefer to live in cities where home prices are higher, but there is a higher earning potential (Choi et al. 2018). Central cities, which are attractive to younger adults and are predicted to continue to attract these residents (Lee 2018). Many of the central cities, which have become alluring to younger residents, have caused prices to rise too drastically for the residents they appeal to. As a result, suburbs have experienced a revitalization as young adults seek affordability (Moos 2016).

If the area has a strong employment market, purchasing a home may seem like a more secure financial investment, and nationally, has historically has improved the homeownership rate (Rosen et al. 2017). In an area with a weak job market, even if the buyer themselves has steady employment, watching others struggle in one's community could provide a sense of uncertainty. Bloom (2014) notes when there is a sense of economic uncertainty consumers delay or stall large purchases, such as a new home, a new automobile, or even furnishings.

The national unemployment rate in 2016 was 4.9 percent. The unemployment rate in MSAs ranges from 2.3 percent in Sioux Falls, SD to 23.5 percent El Centro, CA. While, low unemployment cities vary in area from South Dakota, Iowa, New Hampshire, Minnesota, Vermont, and Colorado, high unemployment cities are concentrated in California, Arizona, and New Mexico. There were 7,637 respondents in low unemployment rate areas and 5,275 respondents in higher unemployment rate areas. Buyers in high unemployment areas typically purchase homes that are $221,000 compared to $240,000 in low unemployment areas.

Exhibit 9: Above or Below National Unemployment Rate (National Rate 4.9% in 2016)

Variables	All Respondents	Below National Rate	At or Above National Rate	Levene's Test F-Statistic	Sig.
Purchase Price (Median)	$232,000	$240,000	$221,000	66.391	0.000
Have Student Debt	27%	28%	28%	0.719	0.672
Age (Median)	43	42	43	2.058	0.055
Children Under 18 (Median)	0	0	0	0.171	0.808
Gift Friends Relatives	12%	13%	12%	14.836	0.053
Loan Friends Relatives	3%	3%	3%	0.278	0.792
White/Caucasian	84%	85%	82%	78.770	0.000
Black/African American	5%	5%	6%	25.644	0.013
Hispanic/Latino/Mexican/ Puerto Rican	7%	6%	9%	157.713	0.000
Asian/Pacific Islander	5%	5%	5%	6.565	0.197
Other Race	3%	3%	3%	2.140	0.468
First-Time Buyer	34%	33%	35%	38.741	0.002
Born in US	91%	91%	90%	12.863	0.075
Suburban/Subdivision	53%	59%	55%	27.739*	0.000
Urban	13%	14%	14%		
Small Town	20%	15%	19%		
Rural	12%	10%	11%		
Resort	2%	2%	2%		
Married Couples	67%	67%	66%	6.286*	0.000
Single Female	16%	16%	15%		
Single Male	8%	7%	8%		
Unmarried Couple	8%	8%	8%		
Other Marital	2%	2%	2%		
Prior Living Own	46%	47%	46%	28.405*	0.000
Prior Living Rent	43%	44%	42%		
Prior Living Live W Parents	11%	9%	13%		
HH Income Less than 35k	6%	6%	6%	22.092*	0.000
HH Income 35k-55K	14%	13%	15%		
HH Income 55k-75k	17%	17%	17%		
HH Income 75k-100k	20%	20%	21%		
HH Income 100k-125k	15%	16%	15%		
HH Income 125k-175k	15%	16%	16%		
HH More than 175k	12%	13%	11%		
Sq FT (Median)	1,900	1,930	1,850	2.584	0.007
Year Home Built (Median)	1991	1994	1991	2.157	0.001
Full Bathrooms (Median)	2	2	2	3.373	0.004
Northeast	13%	7%	13%	61.086*	0.000
Midwest	21%	24%	19%		
South	42%	47	42		
West	24%	23	26		
Purchase Sept '16-July '18	31%	29%	35%	28.015	.009

*See appendix for full Tamhane results

Buyers in high unemployment areas are more likely to be Hispanic/Latino or Black/African American. Nine percent of buyers in high unemployment areas are Hispanic/Latino compared to just six percent in low unemployment areas. Buyers in high unemployment areas are more likely to be first-time home buyers. This is likely because homes are more affordable so they are more easily accessible to both minorities and to first-time buyers.

Buyers in high unemployment areas are more likely to have lower incomes than buyers in low unemployment areas. Interestingly in high unemployment areas, buyers are more likely to live at home with friends and family before purchasing a home. It is possible younger buyers who chose to stay in high unemployment areas decide to stay in area where there are fewer job prospects, so they can stay close to friends and family and then purchase in that area. This would be a decision that contrasts with buyers who move to low unemployment areas, where renting is more common before purchasing. Yu and Myers (2010) found lower headship rates among Black/African American young adults, which are found at high shares in high unemployment areas.

Homes that are purchased in low unemployment areas are larger and newer than homes purchased in high unemployment areas. Homes purchased are also more likely to be in the Midwest and South. Homes in high unemployment areas are more likely in the Northeast and West. Homes in high unemployment areas are more likely to be purchased in small towns and rural areas. This is not surprising given these areas are concentrated with high unemployment, which has plagued the local economies, but also fueled the population moving from these areas for better opportunities.

<u>*Share of Population Has Bachelor's Degree*</u>

Evaluating the population of successful buyers by unemployment rate brings into focus who is living in the community. Highly educated individuals may seek better employment opportunities and leave the area, they may also move to an area for retirement. To try to assess the differences, MSAs were divided into areas based on the share of the population with Bachelor's degrees.

In the U.S., 31.3 percent of the population has a Bachelor's Degree in 2016 based on the Census Department's American Community Survey. The share of the population with Bachelor's degrees in MSAs ranges from 11.3 percent in Lake Havasu City-Kingman, AZ to 60.6 percent in Boulder, CO. There are eight MSAs where more than half of the population has at least at Bachelor's Degree. There are also 10 MSAs where under 15 percent of the population has a Bachelor's Degree. In the sample, 5,406 respondents purchased homes in areas where there was a smaller share of the population with Bachelor's degrees. The sample had 8,095 respondents who purchased in areas with a high concentration of educated individuals. Buyers in areas with a more educated population purchased homes that were $264,300 compared to less educated areas where the median purchase price was $200,000.

Exhibit 10: Share of Population With Bachelor's Degree (National Share 31.3% 2016)

Variables	All Respondents	31.2% or Less Population Has Degree	31.3% or More Population Has Degree	Levene's Test F-Statistic	Sig.
Purchase Price (Median)	$232,000	$200,000	$264,300	180.252	0.000
Have Student Debt	27%	27%	29%	49.567	0.000
Age (Median)	43	46	40	69.281	0.000
Children Under 18 (Median)	0	0	0	4.925	0.000
Gift Friends Relatives	12%	12%	13%	31.138	0.005
Loan Friends Relatives	3%	3%	3%	16.878	0.036
White/Caucasian	84%	85%	84%	9.885	0.115
Black/African American	5%	4%	5%	16.182	0.042
Hispanic/Latino/Mexican/ Puerto Rican	7%	9%	6%	221.227	0.000
Asian/Pacific Islander	5%	3%	6%	327.623	0.000
Other Race	3%	3%	3%	0.079	0.888
First-Time Buyer	34%	33%	35%	33.744	0.004
Born in US	91%	92%	90%	84.029	0.000
Suburban/Subdivision	53%	50%	60%	87.263*	0.000
Urban	13%	14%	14%		
Small Town	20%	21%	16%		
Rural	12%	12%	9%		
Resort	2%	2%	1%		
Married Couples	67%	65%	67%	5.469*	0.000
Single Female	16%	16%	16%		
Single Male	8%	8%	8%		
Unmarried Couple	8%	9%	8%		
Other Marital	2%	2%	2%		
Prior Living Own	46%	47%	46%	17.050*	0.000
Prior Living Rent	43%	42%	44%		
Prior Living Live W Parents	11%	11%	10%		
HH Income Less than 35k	6%	8%	4%	167.872*	0.000
HH Income 35k-55K	14%	17%	11%		
HH Income 55k-75k	17%	19%	15%		
HH Income 75k-100k	20%	21%	20%		
HH Income 100k-125k	15%	14%	17%		
HH Income 125k-175k	15%	13%	18%		
HH More than 175k	12%	9%	15%		
Sq FT (Median)	1,900	1,800	1,990	64.348	0.000
Year Home Built (Median)	1991	1993	1992	37.735	0.000
Full Bathrooms (Median)	2	2	2	112.914	0.001
Northeast	13%	7%	18%	1156.048*	0.000
Midwest	21%	17%	23%		
South	42%	51%	38%		
West	24%	25%	21%		
Purchase Sept '16-July '18	31%	32%	31%	6.395	.204

*See appendix for full Tamhane results

There are more differences in the population of buyers in higher and lower educated MSAs than was found in earlier comparisons. In highly educated MSAs, home buyers are younger and are more likely to be Black/African American or Asian/Pacific Islander. In lower educated areas, there is a higher share of buyers who are born outside of the U.S. The segmentation by race may likely be connected to the area, as highly educated areas are less likely to be in small towns and rural areas.

In higher educated areas, there is a larger share of married couples as buyers. This is likely due to higher home prices and two incomes needed to be able to purchase homes. In more educated areas, there are also a slightly larger share of unmarried couples, which may indicate a cultural difference and acceptance of purchasing together as an unmarried couple, which may differ in less educated areas.

Not surprisingly, the share of the population with student loan debt is higher in MSAs that have higher education levels, 29 percent compared to 27 percent. Buyers in areas that have more educated populations are more likely to receive help from friends and family when they purchase a home, from either a gift or a loan. This is likely an intergenerational transfer of wealth and knowledge of homeownership (Haurin et al. 1996, Choi et al. 2018). There are also more first-time buyers in areas that are more educated. Likely, both the first-time buyer share and the frequency of receiving a gift or loan are more common due to a younger population. Buyers in more educated areas are more likely to rent before purchasing their home. A trend that maintains the idea that buyers move to educated population centers for a job and purchase a home in these areas. Buyers in educated areas are significantly more likely to have higher incomes than buyers in less educated areas. Forty-four percent of buyers in less educated areas have household incomes under $75,000 compared to 50 percent of buyers in more educated areas who have household incomes above $100,000.

Buyers in highly educated areas purchase homes that are larger (1,990 square feet) and slightly older than buyers in less educated areas. Buyers who purchase homes in less educated areas are heavily concentrated in the South at 51 percent of all buyers. Buyers in highly educated areas are more likely to purchase homes in the Northeast and Midwest. While the suburbs is the most common location to purchase in, 21 percent of buyers in less educated areas purchased in small towns compared to just 16 percent of buyers in highly educated areas.

<u>*Share of Population Are Over the Age of 65 Years*</u>

In the U.S., there are areas of the country that are attractive for seniors to relocate or continue living in as they retire. Affordable housing is important to all generations, but it is especially important to seniors who may not have a consistent income as they enter into retirement (Joint Center for Housing Studies of Harvard University 2014). While home buyers move within a short distance from their past residence, those who are over the age of 50 are more likely to move for more affordable housing, and are more likely to move longer distances (Joint Center for Housing Studies of Harvard University 2014, Lautz et al. 2018). In doing so, there are areas in the U.S. which are particularly attractive to seniors as they enter retirement.

Nationally, 15.1 percent of the population was over the age of 65 years based on the data from the Census Department's American Community Survey. In areas of high birth rates and growing population, the share is considerably lower. In Salt Lake City, UT, only 10.1 percent of the population was over the age of 65 years. In the six MSAs who have less than 11 percent of their population over the age of 65, three are located in Texas, two are located in Utah, and one is in California. In North Port-Sarasota-Brandenton, FL, 31.1 percent of the population is over the age of 65 years. Four of five MSAs, which have more than 20 percent of their population over the age of 65, are located in Florida. The fifth MSA is located on the Pennsylvania and Ohio border.

In the sample, 8,385 respondents purchased in areas where there was a higher concentration of younger adults and 2,575 purchased in areas where there was a high concentration of older adults. The purchase price is significantly lower in area where there is a large population of older adults. The typical price is just $190,000 compared to $265,000 in areas where there is a younger population.

Exhibit 11: Share of Population over 65 Years of Age (National Share 15.2% 2016)

Variables	All Respondents	15.1% or Less of the Population is Over 65	15.2% or More of the Population is Over 65	Levene's Test F-Statistic	Sig.
Purchase Price (Median)	$232,000	$265,000	$190,000	128.805	0.000
Have Student Debt	27%	29%	28%	0.041	0.919
Age (Median)	43	41	46	45.433	0.000
Children Under 18 (Median)	0	0	0	37.335	0.000
Gift Friends Relatives	12%	13%	11%	27.573	0.007
Loan Friends Relatives	3%	3%	2%	18.122	0.022
White/Caucasian	84%	81%	88%	260.357	0.000
Black/African American	5%	6%	4%	56.964	0.000
Hispanic/Latino/Mexican/ Puerto Rican	7%	8%	7%	0.414	0.746
Asian/Pacific Islander	5%	6%	2%	367.685	0.000
Other Race	3%	3%	2%	2.839	0.386
First-Time Buyer	34%	35%	32%	24.961	0.015
Born in US	91%	89%	93%	132.492	0.000
Suburban/Subdivision	53%	62%	55%	90.816*	0.000
Urban	13%	15%	12%		
Small Town	20%	14%	20%		
Rural	12%	8%	12%		
Resort	2%	2%	2%		
Married Couples	67%	68%	62%	31.476*	0.000
Single Female	16%	15%	17%		
Single Male	8%	7%	9%		
Unmarried Couple	8%	8%	10%		
Other Marital	2%	2%	2%		
Prior Living Own	46%	45%	49%	30.601*	0.000
Prior Living Rent	43%	45%	40%		
Prior Living Live W Parents	11%	10%	11%		
HH Income Less than 35k	6%	4%	8%	116.217*	0.000
HH Income 35k-55K	14%	11%	16%		
HH Income 55k-75k	17%	16%	17%		
HH Income 75k-100k	20%	20%	20%		
HH Income 100k-125k	15%	16%	16%		
HH Income 125k-175k	15%	18%	12%		
HH More than 175k	12%	15%	10%		
Sq FT (Median)	1,900	2,000	1,750	40.762	0.000
Year Home Built (Median)	1991	1996	1981	28.242	0.000
Full Bathrooms (Median)	2%	2%	2%	73.060	0.000
Northeast	13%	9%	31%	1058.135*	0.000
Midwest	21%	18%	25%		
South	42%	47%	36%		
West	24%	26%	8%		
Purchase Sept '16-July '18	31%	32%	26%	128.667	.000

*See appendix for full Tamhane results

Aside from the difference in median age—41 versus 46—there are a number of other demographic differences. Buyers in areas with a concentration of older populations are more likely to be White/Caucasian 88 percent compared to 81 percent. Buyers in younger areas are more likely to be Black/African American and Asian/Pacific Islander. Buyers in areas with older populations are more likely to be born in the U.S. Similar to other breakouts, this may be due to the high concentration of White/Caucasians in rural areas and small towns.

Buyers in areas with younger populations are more likely to be married couples, while buyers in older population areas are more likely to be single females, single males, and unmarried couples. This could be because of the affordability of these areas, which single incomes can afford or because they are more likely to be widowed or divorced.

Buyers in areas that are younger are more likely to purchase with downpayment assistance in the form of a gift or loan from friends and family. They are also more likely to be first-time home buyers. Both are likely due to the age of the community and of the home buyer themselves. Buyers in younger communities are more likely to rent before buying, whereas buyers in older communities are more likely to own before buying. There are clear household income differences for buyers when their MSAs are separated by age. Twenty-four percent of buyers who purchased in older communities had household incomes under $55,000 compared to just 15 percent of buyers in younger communities. In contrast, 33 percent of buyers in younger communities had household incomes over $125,000 while 22 percent of buyers in older communities had household incomes over $125,000.

Homes in older communities are significantly older. The typical home purchased was built in 1981 compared to 1996 in younger communities. Homes purchased in older communities were typically smaller and had 1,750 square feet compared to those in younger areas with 2,000 square feet. Homes purchased in younger areas were more likely in the South and West, while buyers who purchased in older areas were more likely to purchase in the Northeast and Midwest. Buyers who purchased in older communities were more likely to purchase in small towns and rural areas, whereas buyers in younger communities were more heavily concentrated in the suburbs and urban areas.

<u>*Summary of Descriptive Statistics*</u>

The descriptive statistics frame purchase behavior of recent home buyers. There are clear differences between first-time and repeat buyers. First-time buyers are more likely to be impacted by the affordability crisis as their incomes are lower and they are more likely to have student loan debt. Repeat buyers are less likely to rely on family assistance to purchase a home, however, they may have had assistance for their first home purchase. Family assistance is often restrained to those who are currently owners, who understand both the value of homeownership and are able to pass wealth to their children (Choi et al. 2018), which further holds back minority populations who are less likely to be homeowners.

By examining the data set on based on the local economic and demographic conditions within where the buyer purchased a home, there is deeper understanding of the patterns of purchase behavior. However, the MSA local conditions do overlap as areas with low inventory and which are well-educated are likely to have higher home prices, and areas with lower unemployment rates also attract an educated and younger population.

Areas with concentrations of younger and more racially diverse populations are more likely to purchase in high cost MSAs. The types of MSAs, which attract younger and more diverse buyers, are also more likely to have buyers who purchase in suburban areas and urban cities. This concentration of buyers, may help to explain one aspect which makes purchasing homes more difficult for younger buyers and those who are diverse. Where they are purchasing homes, in areas highly sought after by buyers. They are also moving from areas where family may live and help to assist them by the ability to live at home for free rather than rent.

Areas with higher concentrations of buyers in rural areas and small towns, are more likely to be in places with lower home prices, higher unemployment, and longer days on market. In these MSAs, buyers are more likely to be White/Caucasian and older. These buyers purchase more affordable housing and are less likely to face the tight inventory, which may alleviate any restraints they have to purchasing a home. Buyers in these areas are also more likely to be able to live at home before purchasing a home, which may provide further financial assistance for young buyers.

Econometrics

Ordinary Least Squares

Knowing that there is a housing affordability crisis and there is a rise in student debt holders during the same period creates an easy narrative: student debt is holding back home buyers. There is literature to support that narrative (Bleemer et al. 2015, Brown et al. 2015, Cooper and Wang 2014, Elliott et al. 2013, Houle and Berger 2015, Mezza et al. 2016). There is no existing literature that discusses the price of home a buyer successfully purchases given that buyer's demographics and financial scenario, while controlling for the home characteristics. A traditional hedonic model looks only at a home's characteristics, such as the square feet of the home, the number of bathrooms, the age of the home and location to analyze how much a home sells for in the market (Studenmund 2006). What the hedonic model does not do is look at who is able to purchase what kind of home. This model controls for home characteristics to show who is most impacted by the affordability crisis. This question is a question that has been answered through descriptive statistics and the homeownership rate, but not directly through prices.

In earlier iterations of this model, Ordinary Least Squares (OLS) was used to determine factors affecting the log of home price purchased by recent home buyers. Throughout the analysis, it was determined there was endogenous variable bias within the model. The final iteration of the model is Two-Stage Least Squares. This section includes both the analysis of the Ordinary Least Squares on a national scale, how the model was corrected to overcome the endogenous variable bias, and the Two-Stage Least Squares model. The first stage OLS model is:

$$\log(y) = \beta_1 SD_1 + \beta_2 Y_1 + \beta_3 C_1 + \beta_4 F_1 + \beta_5 D_1 + \beta_6 L_1 + \varepsilon$$

The outcome variable y is the log of home price purchased by successful home buyers. The model contains 39 variables. The variable SD is if the buyer had student debt or did not have student debt. The variable Y is the number of years the buyer is delayed by all debt. The home characteristics, represented in C, variables include: number of full bathrooms in the home, year home was built, the square feet, the region, and the location of the home. The buyer's financial scenario, represented in F, was included with the variables includes: household income, the prior living arrangement such as renting or living with family first, and if the buyer had help with the downpayment through a loan or gift. The buyer's demographics, represented in D, were also

included, such as race, if the buyer was born in the U.S., the buyer's marital status, how many children the buyer had, and the buyer's age. Finally, the model contains controls for the local economic and demographic conditions within the MSA where the home was purchased, represented in *L*: unemployment rate, average days on market for homes, share of the population with a Bachelor's degree, and share of the population over the age of 65. Within the model, there are a number of variables, which are dummy variables. In omitting one dummy variable, repeat buyers and those were born outside the U.S. had to be omitted. Homes purchased in the Northeast and the suburbs had to be omitted. If the buyer had an income under $35,000, they were omitted. Married couples were omitted. White/Caucasian buyers were also omitted.

Full results are shown in Exhibit 12 below for OLS. The sample size is 8,032. The sample is smaller than used in the descriptive statistics as some data is missing due to some respondents who chose not to complete the entire survey or data was not available in MSA locations.

Exhibit 12: Ordinary Least Squares Results: Log of Home Price Between January 2014-August 2017
N= 8,032
Adjusted R Squared= .424
F-Statistic=152.831

	Coefficient	Standard Error	T-Statistic	P-value Significance
Years Debt Delayed	-0.004	0.002	-2.105	0.035
Have Student Debt	-0.088	0.015	-5.768	0.000
Gift for Downpayment	0.035	0.019	1.834	0.067
Loan for Downpayment	0.029	0.036	0.810	0.418
Black/African American	-0.112	0.028	-3.961	0.000
Hispanic/Latino	-0.091	0.024	-3.724	0.000
Asian/Pacific Islander	0.097	0.032	3.012	0.003
Other Race	-0.021	0.040	-0.533	0.594
First-time Buyer	-0.025	0.019	-1.316	0.188
Born in U.S.	-0.021	0.025	-0.865	0.387
Single Female	0.004	0.020	0.204	0.838
Single Male	-0.099	0.025	-3.944	0.000
Unmarried Couple	-0.068	0.023	-2.915	0.004
Other Marital	-0.115	0.049	-2.357	0.018
Age of Buyer	-0.002	0.001	-3.436	0.001
Number of Children	-0.025	0.007	-3.678	0.000
Rent Prior	-0.039	0.017	-2.301	0.021
Live w/Family Prior	-0.087	0.025	-3.481	0.001
HHI 35k to 55K	0.188	0.033	5.655	0.000
HHI 55k to 75k	0.316	0.033	9.682	0.000
HHI 75k to 100k	0.427	0.033	13.071	0.000
HHI 100k to 125k	0.521	0.034	15.200	0.000
HHI 125k to 175k	0.638	0.035	18.312	0.000
HHI More Than 175k	0.791	0.037	21.464	0.000
Urban	0.065	0.020	3.187	0.001
Small Town	-0.012	0.019	-0.615	0.539
Rural	-0.048	0.024	-2.011	0.044
Resort	0.125	0.052	2.395	0.017
Log Square Feet	0.465	0.024	19.537	0.000
Full Bathrooms	0.110	0.012	9.192	0.000
Year Home Built	0.000	0.000	0.619	0.536
Purchase Sept '16-July '18	0.025	0.014	1.720	0.085
Midwest	-0.096	0.027	-3.516	0.000
South	-0.009	0.025	-0.355	0.723
West	0.353	0.031	11.418	0.000
Unemployment Rate MSA	0.032	0.008	3.837	0.000
Average Days on Market MSA	0.001	0.001	1.428	0.153
Share With Bachelor's MSA	0.025	0.001	18.322	0.000
Share Over 65 Years of Age MSA	0.002	0.003	0.766	0.444

Using the OLS model, the adjusted R squared is .424. If a recent buyer has student loan debt, they purchase a home that is 8.8 percent less than other buyers. This is a significant amount of money when the median price home for this time period was $232,000. The buyer purchased a home that was $20,416 less than an identical buyer without student loan debt. This difference may not be available in many housing markets and may force the potential buyer to relocate, opt out of buying a home, or move to a more affordable small town or distant suburb. If a buyer has to make that decision to purchase a significantly lowered priced home, they are likely to make a number of sacrifices to that home purchase, such as location or quality of them home. Ultimately, the buyer may decide that making a home purchase now is not a worthwhile decision and opt to stay out of the housing market. This price difference may account for the lower homeownership rate found in other research (Miller and Nikaj 2018, Mezza et al. 2016, Gicheva and Thompson 2015, Houle and Berger 2015).

The number of years the buyer is delayed from any debt also reduces their home purchase price by .4 percent. The buyer is likely to have to save for a longer period of time for their downpayment, pay down their current debt, and improve their credit score to before they enter homeownership. Ultimately, these buyers purchase a home at a lower price point.

If the buyer purchased in an urban area, the home was 6.5 percent more than other buyers. This finding is consistent with recent research, which shows a price premium for urban areas, reversing traditional trends of suburban areas as more expensive (Bogin et al. 2016). Homes purchased in resort areas were expectedly more expensive than homes in other areas—these homes were 12.5 percent more expensive. Rural areas had the lowest price and were purchased at 4.8 percent less than homes in other areas.

For each additional percent increase of square feet, the purchase price increases 0.465 percent. Homes are often assessed by the price per square feet in a particular area. It is an easy way to compare properties. The number of full bathrooms in the home has a distinct price premium. For each additional full bathroom in the home, the price increases 11.0 percent.

Regions were controlled for by the Census regions. Homes purchased in the West had the largest price premium and were 35.3 percent more expensive than homes purchased in other areas. Homes in the Midwest were considerably more affordable and were 9.6 percent less than other

areas. This is consistent with home sales statistics released on a quarterly basis, which show regional price variations (Dollinger 2018b).

The buyer's demographics were included to show there who is most affected by the affordability crisis. Those who are Black/African American purchase homes that are 11.2 percent less than other buyers. This is a significant price reduction and one that would greatly impact what type of neighborhood the home is purchased in and the condition of the home. Hispanic/Latino buyers also have a price difference and purchase homes that are 9.1 percent less than other buyers. Both buyer types face historical racism and have lower rates of homeownership as was demonstrated earlier. This is particularly striking as both region and the buyer's income is controlled for in the model. As was found in the descriptive statistics, Hispanic/Latino/Mexican/Puerto Rican buyers purchase lower priced homes on a national scale. This is especially perplexing where they are purchasing homes considering they are more likely to purchase in high priced MSAs.

It is possible Hispanic/Latino and Black/African-American buyers are purchasing away from their place of employment. They may be weighing the cost of owning a car versus living outside walking distance. That may cause the buyer to purchase a less expensive home because of the car payment and maintenance costs. This may be a tradeoff the buyers are willing to make, but likely does not tell the full story based on the historical disadvantages, such as pricing of mortgages, denial rates, and racial segregation. In comparison, Asian/Pacific Islander buyers purchase homes that are 9.7 percent more than other buyers. While this is a price increase, the homeownership rate for Asian/Pacific Islanders is still lower than White/Caucasians in the U.S.

Single males purchase homes, which are 9.9 percent less than other buyers. Single males may be willing to make compromises on their home purchase may prefer to fix up the home themselves, or they may be more concerned about their debt-to-income ratios. Goodman et al. (2016) found single male home buyers have lower debt-to-income ratios. Unmarried couples purchase homes that are 6.8 percent less than other buyers. However, as some researchers have found, women, while better at paying their mortgages, often pay more for them and are targeted for subprime lending (Goodman et al. 2016). Single female buyers are not statistically significant in this model. Buyers who noted they were another family type, purchased homes 11.5 percent less than other buyers. These buyers could be non-romantic adults, siblings, and grandparent and grandchild or other family types.

For each year older, the buyer purchases a home that is 0.2 percent less than other buyers. For each additional child under the age of 18 in the home, the buyer purchases a home that is 2.5 percent less than other buyers. This makes sense as the added cost of daycare, activities for a child, and basic food and clothing are expenses within the home buyer's budget. These expenses are not accounted for within the model, but are easily rationalized.

Some families are able to help successful home buyers is by allowing them to live at home before purchasing. The buyer is likely not paying market value rent in a family home. Buyers who live at home before purchasing purchase homes that are 8.7 percent less than other buyers. Buyers who live with friends or family before paying may need to the added advantage of saving for a downpayment, fixing their credit scores and paying down debt. Haurin et al. (1996) found gifts from family and parental education are endogenous to the home buyers' ability to save for a downpayment. Those living at home, may receive education on how to purchase a home, as well as, discounted rent. Buyers who rent before buying purchase homes that are 3.9 percent less than other buyers.

Not surprisingly, the household income of the buyer is significant. If the buyer has a household income of $35,000 to $55,000, they purchase homes that are 18.8 percent more expensive than lower income buyers. If the buyer earns $55,000 to $75,000, they purchase homes that are 31.6 percent more than other buyers. Buyers with incomes $75,000 to $100,000 purchase homes that are 42.7 percent more than other buyers. Those with incomes $100,000 to $125,000 purchase homes that are 52.1 percent more than other buyers. Buyers with incomes of $125,000 to $175,000 purchase homes that are 63.8 percent more than other buyers. Those with incomes more than $175,000 purchase homes that are 79.1 percent more than other buyers.

For each increase in the unemployment rate of 1 percent within the MSA the buyer purchased in, the home price purchased increased by 3.2 percent. While the model controls for both region and neighborhood type, this finding indicates buyers are paying more in MSAs where the unemployment rate is higher. It could indicate individuals are actively in the workforce, as opposed to opting out of the workforce, as data on non-workers would not be collected.

In MSAs where there is a higher level of Bachelor's degree recipients, there is also an increased price of home purchased. For each increased share of Bachelor degree recipients, the price of home increased by 2.5 percent. The concentration of highly educated individuals may limit the

amount of inventory in an area and increase home prices or may indicate educated individuals prefer areas with higher home prices.

Endogenous Explanatory Variable

The years the buyer is delayed from all debt and whether the buyer has student loan debt is endogenous with each other. An endogenous explanatory variable, years debt delayed, is correlated with the error term and can introduce bias into the model (Wooldridge 2012). This, in turn makes the results unreliable. To fix endogenous explanatory variables, there are two methods of correction. The first method is to remove one endogenous variable. However, since in both the years the debt delayed the buyer, and student loan debt are both significant, thus, this is not the recommended solution. Removing the variable then introduces omitted variable bias (Wooldridge 2012, Studenmund 2006). Both provide insight into buyer behavior in the housing market. The second option is Two-Stage Least Squares, which is what was used here.

To solve for an endogenous variable, one must find an instrumental variable (Murray 2006). To find a strong instrumental variable (z variable), a number of options were used. The instrumental variable is a variable which is exogenous to the model (Wooldridge 2012). It would not have a direct impact the price of home purchased and would not be correlated with the price of home, but would be correlated with the years the debt delayed the buyer from purchasing a home. To find the relationship, a reduced form model is created so all other independent variables are controlled for. The years debt delayed the buyer becomes the dependent variable; the instrumental variable is added to the model as an independent variable along with the original independent variables. When a strong instrumental variable is found, the unstandardized predicted value (years debt delayed hat) replaces years debt delayed in the structural model.

Intuition and economic theory are suggested when assessing when finding the right instrumental variable (Murray 2006). In similar studies which assessed the homeownership rate of student debt holders, the financial aid available to students (Miller and Nikaj 2018) or tuition costs were used (Mezza et al. 2016). These studies were able to link individual records within data sets. As the HBS survey is anonymous, and access to public records data is limited, this was not possible. However, attempts were made to replicate methods by applying the typical tuition or financial literacy score to all state home buyers. This was not an effective method as the variables were both correlated with the log of home price and not significant in the reduced form model.

Those who are not able to purchase a home have been advised to stop spending money on items such as avocado toast and cappuccinos (Qiu and Victor 2017), so this idea was studied. In

exploring the role of debt and what expenses could hold a buyer back, a number of sources of expenses were tested, such as restaurant spending, gas prices, health care costs, auto spending, and marijuana spending. However, this was not an ideal approach, as the general price information was applied to all residents within a state. Gas prices, auto prices, and spending at restaurants could potentially delay one from paying off debt, and purchasing a home, but if the home buyer did not use these consumer goods, this would not be applicable. Many of the variables were correlated with the log of home price, as well. A full list is found in Exhibit 13.

Further attempts were to use variables, which were already within the HBS data set and included in the sample. This is a stronger approach than using aggregate level data, when the economic situation may not be applicable to the particular home buyer. The first variable which was endeavored was the expected length of ownership of the home purchased. This was not significant in the reduced form. It is also possible this variable poses its own endogenous variable issues and would not be a strong theoretical variable. Additional variables were attempted such as the number of agents interviewed, miles moved from previous home, number of income earners in the household, and number of people in the home. These variables were not effective and had limited theoretical support.

Exhibit 13: Instrumental Variables Tried

Variables Tried	Instrumental Is Sig. in Reduced Form	Instrumental Is Not Correlated with Home Price	Predicted Value Is Sig. in Structural Equation
Length of search after finding agent	Yes	No	Yes
Length of search before finding an agent	Yes	No	No
Years expect to own home	Yes		No
Miles moved	Yes	No	No
Number of homes buyer has owned	No		
Year of purchase	Yes	No	
Gas prices in state	No	No	
Auto sales in state by dealerships	Yes	No	
Financial literacy score in state	No	No	
Number of restaurants per capita in state	Yes	No	
Per capita food spending per state	No	No	
Gas + Auto + Food per state	Yes	No	
State public tuition	No	No	
Marijuana is legal in state	No		
Gas + Auto + Food +Marijuana + State tuition per state	Yes	No	
Gas + Auto + Food + State tuition per state	Yes	No	
Number of people in the home	Yes	No	
Number of income earners in home	Yes	No	
Had a distressed sale in the past	No		
Share of population who does not have health insurance in the state	No	No	
Agents interviewed	Yes	No	No
Number of auto dealers per state	No		
Number of homes viewed		No	
Total search time--w/ agent and w/out agent	Yes	Yes	Yes

The last variable attempted was the total number of weeks a buyer searches for a home—both before finding an agent and after finding an agent. In the data set, these are separate variables. Separately, the variables did not meet the specifications of an instrumental variable as both were correlated with the log of home price. The total search time was significant in the reduced form, but was not correlated with log of home price, and produced economic logical results.

Exhibit 14: Correlation of Log of Home Price and Total Search Time

		Total Search Time	Log of Home Price
Total Search Time	Pearson Correlation	1	0.014
	Sig. (2-tailed)		0.095
	N	13740	13735
Log of Home Price	Pearson Correlation	0.014	1
	Sig. (2-tailed)	0.095	
	N	13735	15247

If the buyer was delayed in purchasing a home, it is likely their home search process will be longer and more arduous than a buyer who is not as financially constrained. This is also likely an issue as the housing stock is tighter for lower priced homes. It is possible they are searching online for homes in neighborhoods trying to determine where they could purchase before seeking out an agent's help. It is difficult to test to see if this variable could just be added to the original structural model as the structural model already contains bias (Murray 2006). The reduced form model is:

$$YD = \beta_0 ST_0 + \beta_1 SD_1 + \beta_3 C_1 + \beta_4 F_1 + \beta_5 D_1 + \beta_6 L_1 + v$$

In the reduced form model, *Y*, the number of years the buyer is delayed by all debt becomes the outcome variable. The variable *ST* is the total time the buyer searched for a home, before and after finding an agent. All exogenous variables remain in the model: if the buyer has student debt, represented by *SD*, home characteristics, represented in *C*; the buyer's financial scenario, represented in *F;* the buyer's demographics, represented in *D*, local economic and demographic conditions within the MSA where the home was purchased, represented in *L*.

However, after finding a variable, which meets the minimum specifications, further tests must determine if it is a weak instrument rather than relying solely on the T-statistics and correlations. Bound et al. (1995) discuss the difficulty finding a suitable instrumental variable. The authors established, even with large Census samples of 329,000, as was used in Angrist and Krueger (1991), bias can immerge. To test for the strength of the instrumental variable, they examined the F-statistic in the first stage model (Staiger and Stock 1997, Bound et al. 1995). Using the Staiger and Stock (1997) method, the instrumental variable would be considered acceptable, as the F-statistic in this model was 14.678. Staiger and Stock (1997) define an F-statistic above 10 for the bias in the instrumental variable to be under 10 percent in the reduced form model. Bound et al. (1995) suggest also reporting the first stage adjusted R squared when discussing findings. The

reduced form R squared is only .068; however, the other specifications are met. Exhibit 15

provide the results of the reduced form model.

Exhibit 15: Reduced Form: Years Debt Delayed Between January 2014-August 2017
N=7,267
Adjusted R Squared=.068
F-Statistic=14.678

	Coefficient	Standard Error	T-Statistic	P-value Significance
Total Search Time	0.004	0.001	2.961	0.003
Have Student Debt	0.980	0.087	11.282	0.000
Gift for Downpayment	0.146	0.110	1.323	0.186
Loan for Downpayment	0.607	0.213	2.856	0.004
Black/African American	-0.174	0.166	-1.047	0.295
Hispanic/Latino	0.238	0.142	1.679	0.093
Asian/Pacific Islander	0.100	0.187	0.537	0.591
Other Race	-0.198	0.231	-0.860	0.390
First-time Buyer	0.688	0.110	6.237	0.000
Born in U.S.	-0.215	0.142	-1.512	0.131
Single Female	0.184	0.116	1.588	0.112
Single Male	0.566	0.145	3.915	0.000
Unmarried Couple	0.083	0.134	0.623	0.533
Other Marital	-0.264	0.277	-0.953	0.341
Age of Buyer	0.035	0.004	9.860	0.000
Number of Children	0.330	0.039	8.512	0.000
Rent Prior	0.906	0.099	9.168	0.000
Live w/Family Prior	0.469	0.143	3.291	0.001
HHI 35k to 55K	0.043	0.192	0.225	0.822
HHI 55k to 75k	0.276	0.188	1.465	0.143
HHI 75k to 100k	0.335	0.189	1.770	0.077
HHI 100k to 125k	0.356	0.198	1.796	0.073
HHI 125k to 175k	0.173	0.202	0.855	0.393
HHI More Than 175k	0.324	0.214	1.514	0.130
Urban	0.128	0.116	1.109	0.268
Small Town	0.204	0.113	1.812	0.070
Rural	-0.088	0.137	-0.643	0.520
Resort	0.371	0.304	1.220	0.223
Log Square Feet	-0.202	0.137	-1.480	0.139
Bathrooms	-0.088	0.069	-1.273	0.203
Year Home Built	-0.002	0.002	-1.351	0.177
Purchase Sept '16-July '18	0.067	0.084	0.805	0.421
Midwest	-0.037	0.156	-0.237	0.813
South	0.006	0.145	-0.045	0.964
West	-0.143	0.178	-0.802	0.423
Unemployment Rate MSA	0.036	0.048	0.639	0.523
Average Days on Market MSA	-0.003	0.004	-0.622	0.534
Share With Bachelor's MSA	0.003	0.008	0.359	0.719
Share Over 65 Years of Age MSA	0.018	0.018	0.984	0.325

Further analysis of the instrumental variable of total search time found the standard errors of the coefficients had minimal changes. The adjusted R square did increase but did not move substantially closer to 1. Both factors provide additional strength to the instrument. Moving forward these tests lends more confidence, however, "We can never entirely dispel the clouds of uncertain validity that hang over instrumental variable analyses, but we should chase away what clouds we can." (Murray 2006, p. 130)

Two-Stage Least Squares

Exhibit 16 shows the results of the final Two-Stage Least Squares (2SLS) structural form model. The structural form model has a sample size of 9,130 and an adjusted R squared of .458. The structural model:

$$\log(y) = \beta_1 SD_1 + \beta_2 \hat{Y}_1 + \beta_3 C_1 + \beta_4 F_1 + \beta_5 D_1 + \beta_6 L_1 + \varepsilon$$

The outcome variable y is the log of home price purchased by successful home buyers. In the structural model, $\hat{Y}$, the unstandardized predicted value from the reduced form model. Where $\hat{Y}$ is the number of years the buyer is delayed by all debt regressed with the exogenous outcome variables and the total weeks a buyer searched for a home before and after finding an agent. All other variables remain in the model from the first stage: home characteristics, represented in C; the buyer's financial scenario, represented in F; the buyer's demographics, represented in D, local economic and demographic conditions within the MSA where the home was purchased, represented in L.

In the structural form, for each year the buyer is delayed by debt, the price of home the buyer purchases increases by 10.9 percent. The sign changes from reduction in home price of 0.5 percent in the OLS model to an increase in price in the 2SLS model. The results of the 2SLS model do make plausible sense as for every year the buyer is delayed, they are able to pay down their debt and raise their debt-to-income ratio. For every year the buyer is delayed, home prices also have risen. It is also possible the buyer's household income rises during this time allowing them to purchase a more expensive home.

Exhibit 16: Two-Stage Least Squares Results: Log of Home Price Between January 2014-August 2017
N=9,130
Adjusted R Squared=.458
F-Statistic=198.562

	Coefficient	Standard Error	T-Statistic	P-value Significance
Years Debt Delayed-Unstand Predicted Value	0.109	0.050	2.162	0.031
Have Student Debt	-0.191	0.051	-3.752	0.000
Gift for Downpayment	0.017	0.019	0.923	0.356
Loan for Downpayment	0.004	0.045	0.095	0.925
Black/African American	-0.091	0.027	-3.388	0.001
Hispanic/Latino	-0.118	0.025	-4.679	0.000
Asian/Pacific Islander	0.104	0.029	3.636	0.000
Other Race	0.042	0.036	1.159	0.246
First-time Buyer	-0.069	0.039	-1.777	0.076
Born in U.S.	0.020	0.024	0.828	0.408
Single Female	-0.013	0.019	-0.690	0.490
Single Male	-0.141	0.036	-3.913	0.000
Unmarried Couple	-0.054	0.021	-2.540	0.011
Other Marital	-0.069	0.043	-1.629	0.103
Age of Buyer	-0.004	0.002	-2.299	0.021
Number of Children	-0.042	0.018	-2.381	0.017
Rent Prior	-0.140	0.048	-2.921	0.003
Live w/Family Prior	-0.133	0.032	-4.121	0.000
HHI 35k to 55K	0.167	0.028	5.912	0.000
HHI 55k to 75k	0.264	0.031	8.557	0.000
HHI 75k to 100k	0.368	0.032	11.407	0.000
HHI 100k to 125k	0.458	0.034	13.432	0.000
HHI 125k to 175k	0.604	0.031	19.607	0.000
HHI More Than 175k	0.749	0.035	21.124	0.000
Urban	0.067	0.019	3.617	0.000
Small Town	-0.036	0.020	-1.828	0.068
Rural	-0.007	0.021	-0.335	0.737
Resort	0.079	0.049	1.607	0.108
Log Square Feet	0.474	0.023	20.757	0.000
Full Bathrooms	0.116	0.011	10.310	0.000
Year Home Built	0.000	0.000	1.349	0.177
Purchase Sept '16-July '18	0.036	0.013	2.877	0.004
Midwest	-0.089	0.024	-3.767	0.000
South	-0.006	0.022	-0.291	0.771
West	0.386	0.028	13.800	0.000
Unemployment Rate MSA	0.032	0.007	4.299	0.000
Average Days on Market MSA	0.001	0.001	2.029	0.042
Share With Bachelor's MSA	0.025	0.001	21.339	0.000
Share Over 65 Years of Age MSA	0.001	0.003	0.240	0.810

The biggest change in the results by removing the endogenous relationship between the years delayed and the error term is the impact of student loan debt to the buyer. If the buyer had student loan debt, there was now a 19.1 percent reduction in the home price purchased. This is more than double the original OLS result of an 8.8 percent price reduction. This result has significantly stronger implications regarding the impact of student loan debt to a home buyer.

Home buyers may make the choice to opt completely out of the home buying market. Since the median price of a home was $232,000 during this period, if the buyer had student debt, the price of home purchased would be $187,688. This price difference may be impossible to find in many housing markets. If the house is found, it may contain an extensive commute distance to work or school preference that purchasing the home makes it unfeasible. This result helps to explain why the homeownership rate for those under the age of 35 years has not rebounded and is 8 percent less than the historical high. A concern, which is clear given these results, is if the student loan debt amount continues to increase, and home prices continue to increase, how much will this trend continue?

Many traditional determinants of home prices differences remain significant in the 2SLS model. If the buyer purchased in an urban area, the price of the home was 6.7 percent more expensive than in other areas. For each percent increase in the square feet purchased, the home price increased by 0.474 percent. The number of bathrooms within a home continues to contribute to the home price. For each additional full bathroom, the home price purchased increases by 11.6 percent. Homes in the West were purchased for 38.6 percent more than in other regions. Homes in the Midwest were 8.9 percent less than other areas.

While race is still statistically significant, the impact is slightly reduced among Black/African-American buyers from a price difference in the OLS results of 11.2 percent less to a price difference in the 2SLS of 9.1 percent less. However, the price difference for Hispanic/Latino buyers increased from 9.1 percent to 11.8 percent less. Both are highly statistically significant results and continue to call for policy changes, which are addressed later in this paper. It is likely the price difference is due to stricter lending standards faced by Black/African American and Hispanic/Latino buyers (Bhutta and Ringo 2016), which restricts the amount they are able to borrow. It is also possible these buyers purchase lower priced homes as they are not able to obtain a transfer of family wealth, which is crucial to closing the ownership gap (Bond and Eriksen 2017, Choi et al. 2018), information which is not gathered within the survey data. The price

differences are among successful Hispanic/Latino and Black/African American buyers. Those who are not able to enter the market are possibly those who do not even apply for a mortgage or attempt to enter the buying market (Charles and Hurst 2002).

The price difference for Asian/Pacific Islander buyers also increased by 10.4 percent. The increase in price difference among Asian/Pacific Islander buyers is highly statistically significant. The ability for the minority race to purchase a more expensive home than other buyers suggests these buyers not only do not face the same mortgage discrimination, but also suggest a family transfer of knowledge or wealth may be available.

Marital status has the same direction of results as seen in the OLS model, however, the strength has changed. If the buyer is a single male, he purchases a home that is 14.1 percent less than other buyers. For single males, this is a substantial difference from the original OLS result of 9.9 percent less. Unmarried couples purchase homes which are 5.4 percent less than other buyers. For each additional year the buyer is older, they purchase a home that is 0.4 percent less than other buyers. For each additional child under the age of 18 in the home, the home purchase price was 4.2 percent less than other buyers.

If the buyer received help by living with friends or family first before buying, the home price purchased was 13.3 percent less than other buyers. If the buyer rented first before buying, they purchased a home that was 14.0 percent less than other buyers. Both price differences are substantially higher than the OLS findings. Those who live at home are able to purchase a home that is slightly more expensive than those who rent, which indicates a transfer of financial gain from family.

The household income of the buyer remains important to the purchase price. When the buyer has a household income of $35,000 to $55,000, they purchase homes which are 16.7 percent more expensive than lower income buyers. If the buyer earns $55,000 to $75,000, they purchase homes that are 26.4 percent more than other buyers. Buyers with incomes $75,000 to $100,000 purchase homes that are 36.8 percent more than other buyers. Those with incomes $100,000 to $125,000 purchase homes that are 45.8 percent more than other buyers. Buyers with incomes of $125,000 to $175,000 purchase homes that are 60.4 percent more than other buyers. Those with incomes more than $175,000 purchase homes that are 74.9 percent more than other buyers.

There are a number of variables, which were not significant in the OLS model, but are significant in the 2SLS model. One such variable was a time period control added to both models, but only significant in the 2SLS model. The dummy variable was for homes purchased September 2016 through July 2018. This is a period in the U.S. of significant political unrest; September 2016 is two months before the U.S. Presidential Election, and July 2018 is 18 months into the Trump presidency. During this time, there was significant supply constraints of housing, but there is also noise within the data. According to one measure, there has been more economic uncertainty since the 2016 Presidential Election than the 1987 stock market crash in the U.S., 9/11, and the 2008 U.S. financial crisis (Economic Policy Uncertainty 2018). This is a dummy variable, which helps to control for the uncertainty for buyers during this time period. If a home was purchased during this time period, it was 3.6 percent more than homes purchased in other months.

The local conditions in which a buyer purchased a home continue to impact the price of the home purchased. For every percentage increase in the unemployment rate, the price of the home purchased increased by 3.2 percent. If the unemployment rate is low there are also temporary workers who may chose not to settle within the MSA, such as areas with seasonal employment or fracking. In areas with low unemployment, which attract a younger workforce, it is likely these young residents rent, as even at lower price points it is still too expensive to purchase a home. When the residents of areas do purchase, they may relocate to seek lower price points.

 It should be noted MSA level conditions were applied to the buyers, which is the smallest level of measurement available for the unemployment rate, but can be wide in scope. The MSA for the Washington, DC metro area, spans three states and the District of Columbia: West Virginia, Virginia, and Maryland. Each has distinct job opportunities and within it income inequality. The District of Columbia has the highest income inequality of any area in the country with a Gini coefficient of 0.535, and a poverty rate of 18.6 percent (Naveed 2017). However, the Washington, DC MSA also has one of the lowest unemployment rates of 3.8 percent, in 2016, the year the data was used. Those at lower income levels who are unemployed are not likely to purchase a higher priced home, but rather live within the metro area, which benefits others financially.

For every increase in the average days on market within the MSA, the price had only a marginal change of an increase of 0.01 percent. There are fewer buyers at the high price point of the market, which has been exacerbated by housing inequality and available inventory. In 2016, the

time period used for the data, research noted homes in the higher price points stayed on the market for longer periods (Yun 2016). There are limited entry level homes available for purchase and those homes did sell in shorter timeframes, while higher priced homes had longer days on market. Buyers purchasing more expensive homes may be limited in number and may be more selective about their purchase.

Within the MSA, for each additional share of the population who had a Bachelor's degree, the home price increased by 2.5 percent. An educated MSA continues to play a role in the price of homes purchased by successful home buyers. Those attracted to an educated area for career opportunities or culture may increase the demand for homes and in turn the home prices in the area.

Summary of Quantitative Findings

In analyzing the 2SLS results, the instrumental variable of total search time helps to separate the endogenous variables of years delayed by debt and student loan debt. The search time for buyers who have any type of debt is longer and more arduous, as the buyers must find a home within their price range, and other specifications such as commute time and school preferences. However, search time is not correlated with the price of homes; both variables are independent of each other.

Using total search time, before and after finding an agent, results in a strong instrumental variable for the 2SLS model. For every year the buyer is delayed by debt from purchasing a home, there is a rise in the purchase price the buyer is able to have. If the buyer has student debt, there are significant price differences, in comparison to other buyers regardless of income and controlling for the location of the home purchase. It is important to note that for each year the buyer is delayed by debt, the debt could be any type of debt, such as credit card, auto loans, and health care costs. It may also be student loan debt.

Hispanic/Latino and Black/African American buyers continue to see price differences despite the same income and local economic conditions. There could be neighborhood choice differences, mortgage pricing differences, or these buyers could face hurdles unknown in the market place. Regardless of the reason, minority buyers may make the decision to opt out of homeownership if they cannot purchase a home that fits their family's needs. This decision could have lasting repercussions for the ability to use homeownership as a wealth-building tool, as well as the social benefits stable housing provides.

Buyers who are able to share in wealth transfers by living at home are able to purchase a more expensive home. However, gifts and loans through downpayments are not statistically significant in the model and do not show any price differences. However, they may the make difference in the ability to purchase a home for the buyer, rather than not enter the housing market.

Single males make consistent price concessions and purchase lower priced homes, as they are perhaps willing to compromise on the condition to purchase a project to renovate or are willing to commute further distances. Unmarried couples purchase more affordable properties in

comparison to married couples, but do not make as large of a price concession in compared to single males.

Research Method 2: Qualitative

Methodology

Since the Great Recession in the U.S., there has been an increased demand for qualitative research in economics. The U.S. Great Recession, the Global Financial Crisis, and housing bust was unexpected by most analysts. Human behavior did not act rationally to housing market gains during the boom and feed off an urgency that econometric models could not predict (Akerlof and Shiller 2010). The crisis of the Great Recession is behind the U.S. However, the lessons learned remain and are important when analyzing the economic topics. Housing affordability and student debt are now today's economic concern. Economists today understand and value the importance of qualitative data to understand the human behavior. Learning from a cautionary warning from recent economic history.

Within this thesis, relying solely on an econometric model to understand the price of home buyers' purchase will not tell the complete picture. Researchers can make assumptions on the desire for buyers to purchase in more expensive areas or to want help from family members to buy a home, but these are not the consumer's explanation, but rather built on inherent bias of the analyst. When scholars explore student loan debt, the risk is even greater when solely depending on mathematic models. One is not the authoritative voice on teenage borrowing several years into the future. The teenager borrowing for their education may have known what they were doing or that this would be a tradeoff for their future. Additionally, while an expert in a particular econometric model, one cannot presume to understand the role of race in housing without talking to those who have personally been affected.

Within this evolving discipline of housing economics there is also a budding exploration of behavioral economics. A brighter spotlight on this field when Dr. Robert Shiller, a Yale University economist won the Nobel Laureate in economics after the Great Recession. Shiller not only was a lead researcher creating a repeat price index in housing, but he also has written a number of books and articles on the role of human behavior in financial decisions. *Irrational Exuberance* explores storytelling, narratives and the need for justifications in financial decisions (Shiller 2015). Within, *Animal Spirts*, it is noted,

> "Pure economic theory is indisputability valuable in a wide range of applications, and so
> there is a natural tendency to focus on that magnificent theory—even if it doesn't fit

some other very important applications. Focusing exclusively on the rational theory leads to an elegant presentation. It would violate the etiquette of textbooks to mention that some other factor, outside the formal discipline of economics, is the fundamental cause of a certain economic phenomena." (Akerlof and Shiller 2010, p. 21)

In a recent presentation, Shiller discussed, the necessity for housing researchers to comprehend how narrative provides a vital aspect in how home prices and land prices increase regardless of market conditions. The brisk increase in home prices occurred at a time when population and income growth rose at a consistent pace; however, prices out-pace both with steep escalation (Shiller December 6, 2017). Shiller spoke to narrative framing within the media. The role the media plays can in itself drive demand by just mentioning a topic. Reporters themselves become interested in a topic from reading other articles and want to explore it in their own work. Journalists strengthen the feedback loop. Consumers process the increased attention, which reinforces potential demand. This pattern is not easy to capture within an econometric model.

To fully capture the feedback loop a researcher would need to go much further than a model (Shiller 2017); Shiller discusses that while quantitative methods could be advanced from media to "personal diaries, sermons, personal letters, psychiatrists' patient notes, and social media." (Shiller 2017, p. 998). Some of those methods would incredibly intrusive and fall outside of the realm of privacy. This also begs the question of necessity. Should housing economics even need to go as far as personal letters and medical records? Likely not. There is a less intrusive method of data collection, however, focus groups were are also encouraged as viable option,

> "However, I would advocate for there to be resources devoted to collecting data about narratives and public reactions and understandings of narratives on a serious scale. It could be done with focus groups and social media." (Shiller 2017, p. 998)

To overcome the limitations of an econometric model and to understand the topics explored on a more robust scale, focus groups were conducted for this thesis. "In recent years, formalized focus group methods have been added to the toolbox of real estate appraisers and real estate economists."(Throupe 2011) Focus groups allow researchers to understand participants reasoning and understand the consumer's rationale for decisions they made. Focus groups also allow in this particular study to not only understanding pricing behavior, but to garner opinions and feelings on homeownership, and housing choices. Focus group discussions on student debt

also allowed participants to explore their own thoughts on student debt, which are more complex than surveys can uncover.

Encouraged by Shiller's push towards focus groups, focus groups were conducted to triangulate and confirm econometric findings (Golafshani 2003, Creswell 2013, Bulmer 1984). Ethnographic studies and case studies would not provide a wide encompassing view of the entire U.S. housing market and student loan debt, especially at it pertains to differences within MSAs. Several focus groups were conducted to safeguard findings were not uncharacteristic based on the location and participants (Babbie 2016).

The econometric model included variables to control for MSA conditions: days on market for homes, the unemployment rate, the share of the population above the age of 65, and the share of the population with Bachelor's degrees. To mirror the variables, locations were chosen ensuring these conditions and the home price were varied. It was important to talk to people in an assortment of locations. As will be discussed, the results of the focus groups do compliment the results of the econometrics.

Purposeful sampling was used by conducting focus groups in MSAs where the most valuable data is capable of being collected (Creswell 2013). MSA locations chosen for the focus groups and interviews were determined based on differing economic and demographic conditions. Demographic and economic conditions for each MSA are in Exhibit 17. Exhibit 18 is a U.S map showing where the cities are located.

Exhibit 17: Focus Group Cities With Demographic and Economic Conditions

MSA Locations:	Share of Population With Bachelor's Degree 2016, ACS	Median Existing Home Price 2016, NAR	Share of Population Aged 65 and Over 2016, ACS	Inventory-Average Days on Market July 2016, Realtor.com	Unemployment Rate 2016, BLS
National Level	31.3%	$235,500	15.2%	75 days	4.9%
Washington, DC	High: 50.2%	High: $390,600	Low: 12.2%	Low: 48 days	Low: 3.8%
Flagler Beach, FL	Low: 30.9%	Low: $172, 500	High: 25.1%	High: 79 days	High: 5.2%
Portland, OR	High: 38.9%	High: $351,200	Low: 14.1%	Low: 37 days	Low: 3%
Chicago, IL	High: 37.2%	Low: $234,900	Low: 13.5%	Low: 58 days	High: 5.8%
Nashville, TN	High: 34.2%	Low: $224,500	Low: 12.8%	Low: 38 days	Low: 3.8%
San Diego, CA (single interview)	High: 37.4%	High: $565,000	Low: 13.4%	Low: 41 days	Low: 4.7%
Birmingham, AL (mini group)	Low: 29.9%	Low: $186,400	High: 15.5%	High: 76 days	High: 5.6%

Exhibit 18: Map of Focus Group and Interview Locations in the U.S.
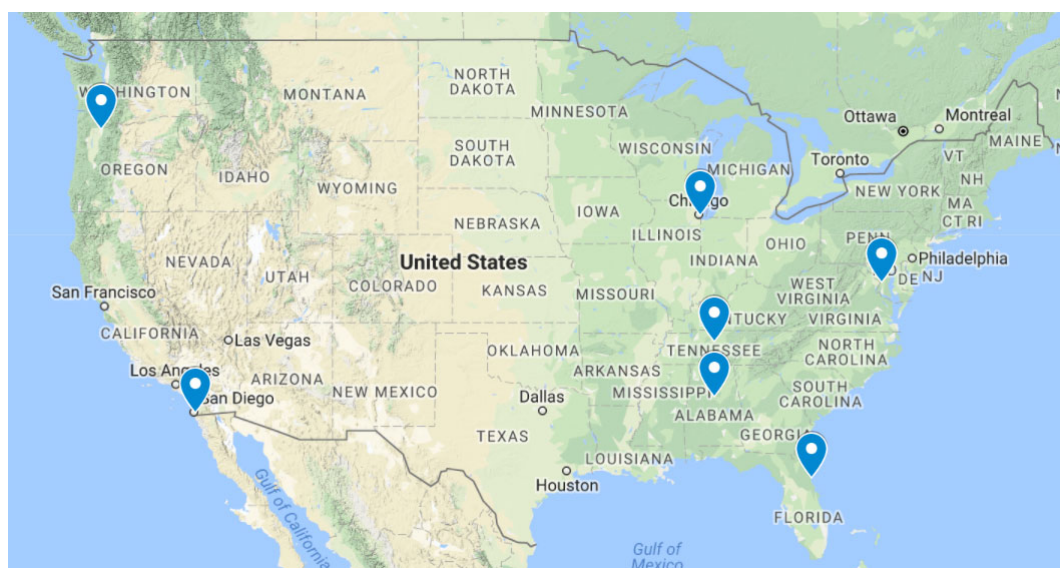
While there is emerging motivation to conduct focus groups by housing economists, no papers concerning home prices have been published using this method. However, focus groups have been conducted regarding sentiment on student loan debt. Two papers by the same researchers (Zerquera et al. 2016, Zerquera et al. 2016) explore conclusions from five semi-structured focus groups. The focus groups were held on one multi-campus college. The results narrow in scope and based on data from 31 undergraduate students who range in age from 18 to 25. As will be explored in results the section, despite the limited scope, there are parallel findings.

Researchers in Canada explored student loan debt through a series of eight focus groups in four cities with 73 participants (Ekos Research Associates 2010). The location and age of the participants was wider in scope, the groups were structured to contain both student loan debt borrowers and those who did not have student debt. The participants recruited, however, all had
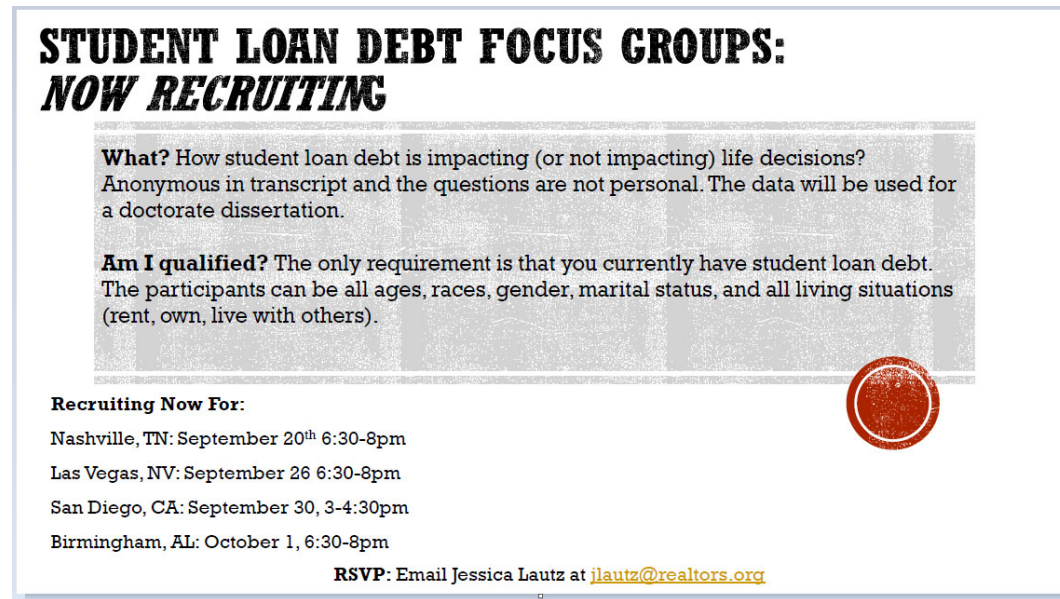
a lower socio-economic status. This method may magnify the impact of student debt in the U.S.; however, in Canada this methodology was appropriate as student loans are aimed to help this group obtain higher education.

Recruitment

Learning from past focus group authors (Zerquera et al. 2016, Zerquera et al. 2016, Ekos Research Associates 2010), and incorporating the intended use of the results, reinforced the need to focus groups in multiple locations. In the U.S., nearly anyone can accrue student debt either for themselves or someone else. If the borrower has a high income, which does not qualify them for a public loan, they are able to obtain private loans. With this in mind, recruitment was wide in scope and robust so the sample was not biased to one particular type of student loan borrower. Focus groups were recruited using homogenous sampling strategy, using a characteristic, which remains the same for all participants (Creswell 2013). For these focus groups, all participants must have student loan debt currently. The borrower could be paying currently on the debt, in their grace period, or in default. It is particularly difficult to obtain survey data from borrowers who are in default. Anyone could participate in the focus group, regardless of personal demographics, financial status, or how the debt was obtained. By allowing a wide range of participants, the intention was to improve the discussion within the groups, but also gather data from a robust sample and their experiences.

Recruitment for this particular study spanned multiple MSAs, some cities the researcher had never personally visited or knew anyone within the MSA. In Zerquera et al (2016) groups there was a reliance on campus posters. Relying on the vast expanse of social media was the main recruitment strategy. Flyers were posted on social media platforms, such as Twitter, Instagram, LinkedIn, and Facebook publicly (not limited to personal contacts). An example of a flyer can be found in Exhibit 19. Professional focus group moderators often purchase phone lists. This was determined nonviable solution for three reasons: the cost to purchase phone lists can cost thousands of dollars; phone lists are often inaccurate; since debt holders were being recruited, it is unlikely they would answer their phone to discuss this with a stranger, especially if they were in default. Relying on social media builds added trust, as the viewer may not know the researcher personally, but likely knows the name of the person sharing the post. Social media posts were not paid post, so had the added benefit of being free. The flyer was also circulated to all email contacts and asked to be posted on their feeds. This recruitment strategy, while free, was likely more robust that phone lists, as those could be limited to individuals who chose to answer their phone to hear about the group. In scrolling through a social media platform, if the algorithm shows the post, the viewer can read it or scroll past.

Exhibit 19: Focus Group Flyer

STUDENT LOAN DEBT FOCUS GROUPS: *NOW RECRUITING*

What? How student loan debt is impacting (or not impacting) life decisions? Anonymous in transcript and the questions are not personal. The data will be used for a doctorate dissertation.

Am I qualified? The only requirement is that you currently have student loan debt. The participants can be all ages, races, gender, marital status, and all living situations (rent, own, live with others).

Recruiting Now For:

Nashville, TN: September 20th 6:30-8pm

Las Vegas, NV: September 26 6:30-8pm

San Diego, CA: September 30, 3-4:30pm

Birmingham, AL: October 1, 6:30-8pm

RSVP: Email Jessica Lautz at jlautz@realtors.org

Recruitment was deemed unbiased via social media as the reach was vast. One post on LinkedIn had 27 likes, two comments, and was viewed by 11,639 individuals. At this time, personal connections of the researcher on LinkedIn totaled approximately 1,000 individuals. Facebook analytics does not allow for similar metrics, however, Facebook posts were shared more frequently by outside parties than LinkedIn posts. Tweets were retweeted and conversations were often engaged within those outside of personal connections. Exhibit 20 and Exhibit 21 provide examples.

Exhibit 20: Focus Group Social Media on LinkedIn

Jessica Lautz
Managing Director, Survey Research and Communications at National Association o…
2mo

Thank you everyone who has helped me recruit for the last four focus groups! Now, I'm asking for even more help. In the next month I'm going to finish with focus groups in Nashville, Las Vegas, San Diego, and Birmingham. If you know anyone in these cities who can help to recruit or who personally has student loan debt, I want to meet them! I do hope this research will not only help with school, but help to make a difference. How is student loan debt influencing life decisions?

STUDENT LOAN DEBT FOCUS GROUPS: *NOW RECRUITING*

What? How student loan debt is impacting (or not impacting) life decisions? Anonymous in transcript and the questions are not personal. The data will be used for a doctorate dissertation.

Am I qualified? The only requirement is that you currently have student loan debt. The participants can be all ages, races, gender, marital status, and all living situations (rent, own, live with others).

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Birmingham, AL: October 1, 6:30-8pm

RSVP: Email Jessica Lautz at jlautz@realtors.org

27 Likes · 2 Comments

👍 Like   💬 Comment   ➤ Share

📈 **11,639 views** of your post in the feed

Exhibit 21: Focus Group Social Media on Twitter

Tweet Activity

Jessica Lautz @JessicaLautz
In Flagler County, FL & have student loan debt? If so, join my focus group Tuesday, May 9-6:30-8. DM me for details #studentdebt #gradschool

Reach a bigger audience
Get more engagements by promoting this Tweet!

Get started

Impressions	2,279
Total engagements	16
Detail expands	6
Profile clicks	4
Retweets	3
Likes	2
Replies	1

Tweet Activity

Jessica Lautz @JessicaLautz
Live in Chicago? Have student loan debt? I need you! Hosting a focus group Aug 12, 3-4:30pm on the Magnificent Mile. 1st round on me!
pic.twitter.com/6KVBYea2a5

Reach a bigger audience
Get more engagements by promoting this Tweet!

Get started

Impressions	458
Media views	75
Total engagements	24
Detail expands	14
Profile clicks	6
Retweets	4

Posts were also added on all social media platforms of the focus groups table set up before they were conducted, without participants, as a way of further recruitment. The intent was to show potential focus group participants, the ease of the setting, and that it would be a fun way to spend a night out. Exhibit 22 provides an example.

Exhibit 22: Photo of Focus Group on Instagram and Facebook

Drop-off rates were expected, especially as participants were not paid for their time and only provided a snack or beverage. Researchers suggest over-recruitment of 20 percent (Morgan 1997). All potential participants were registered. To register, the participant sent an email to the researcher. While, participants were emailed saying the focus group was for a dissertation on the impact of student loan debt. The participants were told the exact location via email. Reminders were emailed via blind carbon copy. Participants were not informed entire intent of the research until after the group so they would not be biased (Babbie 2016).

Although, participants were not informed of the location until they emailed to sign up, there was a need to make the restaurant easy to get to and desirable. To reduce the drop out rate, the individual interview and mini-group participants decided the location best suited for them. Immediate impressions are important to creating a bond, which can establish trust with the participants so attention was provided to the researcher's apparel (Babbie 2016).

The goal was to have full focus groups in both San Diego, CA and Birmingham, AL, however, due to last minute drop outs, this was not possible. As travel was already booked, research continued with the participants available. An in-depth interview was conducted in San Diego, CA with one participant. A mini-group was conducted in Birmingham, AL with two participants. This was originally deemed an unexpected letdown in the research, however, this allowed for triangulation of focus group results to among a small sample. Additionally, as will be discussed in the results, the in-depth interview was among a participant who was in default, which provided a unique opportunity to gather information on that experience. This would have been more difficult in a

large focus group. Among the other cities, Washington, DC had nine contributors, Flagler Beach, FL had five contributors, Portland, OR had six contributors, Chicago, IL had nine contributors, and Nashville, TN had four contributors.

Three additional cities were originally intended as focus group locations: Las Vegas, NV; Pittsburgh, PA; and in Atlanta, GA. In each area, there were no sign ups. Fortunately, research indicates this is not an uncommon occurrence in recruitment (Babbie 2016). Notably, Atlanta, GA offers free public university tuition for residents of the state who attend some portion of their high school studies in the state. Due to this policy, it is likely recruitment in the MSA was more difficult as the population of student borrowers is limited. In Las Vegas, NV, only 23.3 percent of the population has a Bachelor's degree, which would suppress the number of student loan debt holders. In Pittsburgh, PA, 34.6 percent of the population has a Bachelor's degree; however, there is a high concentration of older residents—19.1 percent. Fortunately, each of the MSAs, while they do have unique attributes, does have similar demographic and economic characteristics to the other focus group MSAs.

Homogenous focus groups were recruited for; however, two participants attended who did not have student debt. This was discovered during focus groups in Chicago, IL and Flagler Beach, FL. Both participants did read and sign the waiver form. The groups were conducted, so that each question was addressed on an optional basis. Participants were not forced to answer questions. These contributors only answered one to two questions and only in regards to homeownership. When both understood the intent of the groups and listened to others' experiences, they were emotional. In Flagler Beach, the participant without was brought to tears. In Chicago, the participant had once had large debt balance and told an inspirational and reassuring story of paying off the debt.

Just as a screener was not used, a pre-focus group survey was not conducted. Demographic information was not formally collected; many borrowers voluntarily shared this information throughout the discussion. Borrowers ranged in age from 22 to the mid-50s. There were 34 participants total. Of these, 20 were White/Caucasian, nine were Black/African American, four were Asian/Pacific Islander, one was Hispanic/Latino/Mexican/ Puerto Rican. Washington, DC, Flagler Beach, FL, Portland, OR, and Chicago, IL all had a mix of genders. Nashville, TN participants were only female. The San Diego, CA interview was female and in Birmingham, AL both participants were male. There was both a mix of marital status and a mix of those with children

under the age of 18. There was one participant who was a single mother in Portland, OR and one participant who was a single mother in Nashville, TN.

The guide contained 16 questions. After the first group in Washington, DC, the guide was edited. One question was removed and four questions were added. The questions added helped to comprehend the contributors' home, family, and living arrangements. Editing the guide can help to ensure validity of the data collection and responsiveness of the researcher (Morse et al. 2002). Ignoring the need for edits to the guide can introduce bias.

Aside from asking questions, the researcher maintain a impartial stance. In staying neutral, the researcher's own bias was not introduced into the data collection (Babbie 2016). Personal stories were not introduced, nor correction of facts, or guidance on loan products. While this did happen, it was only among participants themselves, rather than knowledge from the researcher. Similarly, "If you are talking more than 5 percent of the time, that's probably too much."(Babbie 2016, p. 300)

Appendix Item 5 contains the full question guide. The analysis of the focus groups are summarized and contrasted to existing literature on the topic and to econometric results. The format is modeled from the paper by Zerquera et al. (2016). While, there were 16 questions in the guide, not all questions are explored throughout this analysis. Only the questions which pertain directly to housing, homeownership, and financial well-being are explored.

Findings

Current Living Situation

The focus groups explored the current living situation of participants. Specifically what attracted them to the particular city they were living in, their current living arrangements, and how student loan debt influences their living situation. If the borrower was a current homeowner, they were asked if the home price was influenced by their student debt. If they were not a homeowner, they were asked if they were to purchase a home would the price purchased be influenced by their debt. The borrowers were also asked their personal views on homeownership.

<u>City Chosen to Live In</u>

For most participants, the city they currently lived in was not where they were born and grew up. Many moved to either attend college in the particular city and stayed or relocated based on career opportunities for themselves or a spouse. This was true of participants in Washington, DC, Portland, OR, Chicago, IL, and Nashville, TN. For those in Florida and California, the weather and beach influenced their decision, as well as, employment. The two participants in Birmingham lived in the city for their current graduate school enrollment, but plan on moving after graduation.

The cost of living for some was not on the forefront of the decision in Washington, DC, and Portland, OR. Contributors understood the areas had high cost of housing and a high cost of living, but that would need to be figured out, once they had relocated. In Nashville, TN and Chicago, IL, the low cost of housing and living was a factor which attracted participants. In Nashville, there has been a growth in population of approximately 100 people per day from 2010 through 2017, totaling a population boom of 10.6 percent (United States Census Bureau 2017). Borrowers did feel the pressure of rising home prices; one participant specified "….I was in Miami before and I'm a single mom with two kids. Essentially the cost of living there was just getting way out of hand…".

Among some participants in the DC group, there was the idea the participants wanted to move back to where they were raised, but could not. They felt the career opportunities would be limited and they would not be able to pay their student debt if they moved. While the participants in Birmingham also wanted to move, they did not feel they would be limited in job

prospects, but preferred to move to larger cities would there would be more opportunity. Birmingham is a mid-size city in the U.S.

Current Tenure Choice and Roommates

The tenure choice of participants largely depended on the cost of living within the MSA, family assistance (addressed in-depth in the next section) and the race and age of the participant. Owners were largely older in age, more likely to be White/Caucasian, and were more likely to live in low priced MSAs. Non-owners were more likely to be younger, minorities, and live in high priced MSAs.

In the most expensive area of San Diego, the interviewee was a renter with a roommate. In high cost areas of Portland and DC renting with roommates was common. In DC, there was only one participant who was able to rent by themselves. In Nashville, Flagler Beach, and Chicago some participants did rent by themselves, but the cost of living in those areas is lower. It was more common to rent without roommates if the participant had children under the age of 18 in the home.

Portland only had one homeowner in the group. She and her husband received family help during the time of the purchase with unexpected medical costs. In DC, there was one married couple who were currently owners, but received family help with the downpayment. There was another individual owner in DC, but he received employer help to purchase, delayed his home purchase by a number of years, and purchased in a less than desirable area. In Chicago, there were two owners. One received help from family for the downpayment and one had a spouse with a lucrative job and no student debt herself. In Nashville, the participants who owned homes purchased them before prices had started to rise in the MSA. One participant noted, she would like to move to a new home, but could not because of her debt took on from school after she purchased her home. Flagler Beach, which has lower home prices, had two recent buyers and a homeowner who purchased before the affordability crisis. Even within the Flagler Beach group, one recent buyer did receive unexpected help from a family member during the purchase for a veterinarian bill.

Two of the youngest participants, who were also African-American, lived with parents to save on housing costs. One lived in a high cost area of DC and the other currently attended graduate

school in Birmingham. In the DC group and the Nashville group there were two participants who lived with partners without paying housing costs themselves.

There were was one participant in Nashville and one participant in Portland who had owned homes in the past, but did not currently own one. In Portland, the borrower would be unlikely to qualify for a mortgage as she has defaulted on her loans and purchased in a more affordable area in Ohio. She was currently renting. In Nashville, the participant had a home purchased for her by her parents, but had sold the home. She was currently living with a partner without paying housing costs.

Influence of Student Loan Debt Living Situation

The reason for conducting focus groups was to talk to student loan debt holders to determine their intentions and preferences without placing biased assumptions. The econometric sample relies on data from successful buyers only, which misses a large segment of the population. Obtaining data on intentions is difficult to analyze aside from a scales. Asking borrowers if student loan debt influenced their tenure choice is crucial.

Among non-owners, nearly all focus group participants want to own a home of their own in the future. There was one non-owner in DC who was concerned about maintenance of the home and enjoying being able to travel. However, she said she would want to own a home at some point. The in-depth interview provided insight to ownership as a wealth-building tool through investment properties. The interviewee recognized the high prices in San Diego would force her to rent, but she wanted to purchase an investment property to rent outside of the MSA.

Though there were homeowners in Flagler Beach, Nashville and DC, the ability to purchase was delayed. In DC a non-owner said, "I'm 29. I feel like this should be the point where I'm really considering buying a home, and it's not even on the horizon right now. I should've done it, sooner." Historically, this is the median age of first-time buyers has been 28 to 32 years of age (Lautz et al. 2017).

In Flagler Beach, recent buyers wanted to have a larger downpayment. The owner in Portland said her student debt influenced their home loan, "…because I have so much student debt that I couldn't get a conventional loan. We had to do an FHA." Federal Housing Administration (FHA)

loans, allow for downpayments as small as 3 percent, however, there are other requirements. Borrowers must obtain mortgage insurance for the 30-year life of the loan or refinance the entire mortgage.

Those who are non-owners currently may be more risk averse to low downpayment loans. This was the case in DC. The owners in DC had put down less than 10 percent, while non-owners were wary of such loan products. This was the only time during the focus groups when the researcher was asked a fact about home buying. Participants wanted to know the typical downpayment. Since the question was asked candidly, the question was answered directly. The confusion on downpayments has been researched. Eighty-seven percent of non-owners believe more than 10 percent downpayment is required to purchase a home (National Association of Realtors 2016), while the median downpayment for first-time buyers was 7 percent in the last year (Lautz et al. 2018).

There is a student loan payment plan, which is based on current income. In Portland and Flagler Beach, because borrowers were on those plans, they were able to have their current living arrangement—renting solo and owning. In Portland a woman said, "….Because I have a child, and I'm a single mother, so much monthly payment is fairly low and manageable. I don't know how things would change if I wasn't in the circumstances I'm in. I think it would be triple what I actually pay. That could be crippling." There were participants in DC who were trying to attack their student debt by paying multiple payments in a month. However, the participant paying the most had no household expenses by living with her mother.

Within the DC and Birmingham groups, there were two participants who did not need to pay currently on their debt. In DC, the participant was in her grace period after graduation. When she started paying on her debt, it would not change her living situation as she lived rent free with her partner. In Birmingham, a participant had undergraduate loans, which were deferred while he was in graduate school. As the loans are deferred, he is able to rent a nicer apartment in a better location.

A homeowner who went to graduate school after purchasing her home felt stuck. She wanted to move, but could not because of her student loans. This is a common situation among student debt holders who are homeowners—31 percent want to move, but cannot because of their student debt (National Association of Realtors and SALT 2016). It is possible borrowers cannot

pay as much towards their mortgage because of their student debt. Elliott, et al. (2013) student loan debt holders have $45,000 in equity compared to non-borrowers with $90,000 in home equity.

<u>*Views of Homeownership*</u>

There are a number of assumptions placed on younger generations about their desire to own a home of their own. Studies suggest younger adults today may not have the appetite for ownership after watching their parents go through the downturn (Rosen et al. 2017). Others find the likelihood of owning a home is impacted by the amount of debt held by borrowers (Cooper and Wang 2014, Mezza et al. 2016, Houle and Berger 2015). Cooper and Wang discuss their limitations and suggest next steps, "....additional research is needed to better understand why student loan liabilities seem to be associated with worse economic outcomes for individuals and households." (Cooper and Wang 2014, p. 22). To fully understand student loan borrowers' views on ownership, they were asked a series of questions.

The Great Recession hangover effect did not hold up in focus groups despite the argument to the contrary by Rosen et al. (2017). In Portland, a woman had watched her parents lose their home during the financial crisis and said, "For me, it gives me anxiety, thinking about it. Because I grew up in my parent's home and they lost their home in foreclosure. I had an opportunity when I was younger to buy a condo or something. And I just said eh. I felt like it was almost a missed opportunity. I feel like I'll never be able to buy a home. I worry I'll never be able to buy a home. But I'm still hoping in the back of my mind that I can make it happen somehow, someway." Her anxiety was not the idea of buying, but the idea that she would not be able to buy. If she achieves her goal of ownership, she plans purchase the home for herself, her father, and her child to live in.

Another current owner had a past short sale himself, but came back to ownership. The participant explained his scenario, "…What helps me to be able to afford to be able to live and own is because my wife also has a job and she no student loan payments. While I was single, I did buy a condo on my own in 2006. Right at the peak. And it wasn't really, I shouldn't really have been qualified for the loan. And after like four years of living there by myself, eventually I ended up having the short sale and walk away from it." His past experience was not the detractor some academics feel is the case.

Among both participants, the fear of maintenance costs was discussed. Owners knew if something broke it could be costly to repair. Among non-owners that was a detraction from owning as they could not currently absorb unexpected expenses. However, both groups also agreed that homeownership is a wealth-building tool. Both populations agreed equity and potential tax benefits were positives of homeownership. The concept participants knew homeownership could be expensive if a repair was needed, but that the desire for homeownership remains validates survey data (National Association of Realtors 2018a, Shahdad 2017) and the optimism of ownership. However, it also confirms Shiller's (2017) work that consumers do not act rationally. Homeownership is likely a wealth-building tool for the potential buyers, but the immediate thought is both the expense of ownership, but the potential for equity gains.

In Flagler Beach and DC, the owners discussed having a yard, a place of their own and spaces for pets. This sentiment was also discussed among non-owners in Chicago as a desirable trait of ownership that they did not have currently. The hope to have an outdoor space is not a new concept in the least, recent researchers who discuss the social benefits of housing, such as Dipasquale and Glaeser (1999) who found owners spent an increased amount of time doing yardwork, to those who encouraged homeownership in the early 1900s (National Own Your Own Home Committee 1917). The ability to have one's own space is intrinsic to the value proposition of ownership. The focus group participants were not unique in their views on ownership.

A non-owner in DC commented, "I don't think anyone really aspires to want to rent the rest of their life." The younger participants did not feel particularly left behind on owning yet. However, the participants who wanted the flexibility to rent, had not planned on settling in the city of residence—Birmingham, or were younger. Those who were older and wanted to own, felt they were left out of ownership currently, though they wanted to purchase a home of their own.

Home Price Influenced by Debt Load

To explore the econometric findings, participants were asked about the price of home they either have already purchased or would purchase in the future and how this is related to their student debt. Among the owners in the groups, there were threads of commonalities. If the buyer purchased their home in a lower price area, such as Flagler Beach, or at a time before the affordability crisis, in Nashville student debt had a smaller impact to the buyer. However, owners

in Nashville noted they would not be able to afford the city they own in now if they were to purchase a home today. One noted, "….Right now or in the future, absolutely. I couldn't afford to make the payments."

Recent buyers in DC had to purchase in a suburb that either was farther away from the city center with long commute times or had to purchase in an area that was less safe than other neighborhoods. A recent buyer in Portland was at first surprised by the mortgage amount she qualified for, then quickly realized that amount would not get her very far to purchase a home. Her and her husband opted to move to a suburb, which is farther out of the central city. In Chicago, even though a recent buyer qualified to a higher mortgage amount, she and her husband decided to buy a less expensive home so they were not "house poor" due to her student debt and mortgage. This is the only participant who noted she decided to intentionally purchase a less expensive home. These experiences triangulate econometric findings from other research, which found the home value is lower among student debt holders (Gicheva and Thompson 2015). The authors suspect what focus group participants faced in reality—they were not able to save as much for a downpayment and their debt-to-income ratio was affected by their student debt.

Among non-owners, there was near consensus the price of home would be altered if they purchased right now because of their student loan debt. Non-owners in Chicago were willing to compromise on the condition of the home, and would be willing to undertake renovations. In DC, there was a discussion that it just takes a longer period to even save for a downpayment because of high home prices, regardless of higher incomes. In San Diego, where home prices are the highest, the non-owner interviewee had even ruled out the possibility of even owning her primary residence. She did not expect to own a primary home regardless of time to save or compromises on the condition of the home.

In one of the lowest priced MSAs, Birmingham, the non-owners said the price of home would have to be affected, as even potential rental costs would be constrained when they both started to pay their student debt. The borrowers in Birmingham were both Black/African American, which in itself has a negative effect on the price of home purchased—9.1 percent price difference, nationally.

Family Assistance

<u>Living At Home</u>

A consistent econometric finding was the role family helps plays to the buying process. Families can help by welcoming someone to live at home before buying or by a direct transfer of funds for a downpayment. In the focus groups, two borrowers lived at home with family. One participant in Birmingham and one participants in DC. While these metro areas have differing housing costs, the participants themselves were similar—they were both younger in age and both were Black/African American.

These two similarities are notable as they speak to the Black/African American unemployment rate, which was 6.0 percent in September 2018, in comparison to the White/Caucasian unemployment rate at 3.3 percent (Bureau of Labor Statistics 2018b). In the econometric findings, Black/African American home buyers, purchase homes that are 9.1 percent less than other buyers. The focus groups, findings are similar to another study, which found a there was a 0.31 percent rise in the chance a 23 year would move from their family home, if the county's employment rate increased by 1 percentage point (Bleemer et al. 2015). While the participant in DC was employed, the participant in Birmingham was not employed and was attending graduate school. In Birmingham, the young borrower said, "I feel like there's a misconception of staying at home with your parents when you're going off to college. When you are out of college and you're expected to have a job right then and there as soon as you graduate." Birmingham, notably, has a higher unemployment rate at 5.6 percent and D.C. has the highest income inequality (Naveed 2017).

Bleemer, et al (2015) also found if the borrower's student debt increased by $10,000, there was a 1 to 3.3. percent increase in the young adult staying at their family residence. For the young borrower in DC who lived at home, she described her situation, "For me, I live at home with my mother. I actually live in the same house that my dad grew up in. I'm a born and raised DMV [DC, Maryland, Virginia] person. I still live at home with my mom. That's not really by choice. I would love to be ... I'm 22. I have my own job. I'll have been working for a year and three months. In some ways I'm a grown woman. … I would love to move out on my own, but the reality is ... I'm also getting paid more than most of my friends who live in other areas. But because the cost of living here is so ridiculous, even though I have a better salary than some of my other friends in other areas, I just can't do it. It wouldn't be wise, since I have such an affordable living situation."

Had it not been for her student debt, she may have had the opportunity to live independently. Living with her mother, provided her the opportunity to pay down her debt. She later described that while she does not pay rent, she contributes to grocery costs where she can.

Assistance with Downpayment

In the econometrics, downpayment assistance through family and friends was not statistically significant; however, there is evidence family assistance by living at home allows the buyer to purchase a more expensive home. Within all groups, there was a discussion to how parents could or could not help with student debt and with downpayments. Among recent data, nearly a third of buyers received a loan or gift for their downpayments from family or friends, (Lautz et al. 2018). It was clear in the focus groups, family help was crucial. The five homeowners who purchased without family help purchased their home before housing affordability became a problem or before accruing student debt, had a spouse who was in a better financial situation than the borrower was in, purchased in a low priced area, or had an employer downpayment assistance program.

Two recent buyers in Portland and Flagler Beach received family assistance when they were near the time of purchase with unexpected pet surgery and expenses surrounding a car accident. These would not necessarily be captured in the econometrics as they were not for downpayments, but for other expenses. In Portland, the buyer used the funds for a downpayment. In Chicago and DC, the transfers of funds by parents were directly tied to the downpayment. In DC, one couple stated "…We never asked our parents for anything, so didn't have a plan of getting help. But when we bought the home, both of our parents stepped up and helped us…".

Through the unexpected parental help is not only a transfer of wealth, but also a transfer in values of homeownership and knowledge (Haurin et al. 1996, Choi et al. 2018). The parents provide a confidence boost they are making the right decision for their future. This was also expressed in Nashville. One non-owner received $50,000 from her family to put towards a downpayment. However, at the time, she lived in New York City and the amount of money was inadequate for a downpayment, so she used the funds to pay down other financial obligations. She expressed guilt for not using the finances for homeownership.

Parents can also help through Parental Plus Loans. Plus loans are student loans where the parent takes on the financial debt for their child's tuition. Plus loans have increased in use as the cost of tuition has risen so drastically, current federal loan limits do not cover the cost of tuition and room and board. The increase has become an inter-generational passing of debt (Fishman May 2, 2017). Plus loans are often given to parents who are not able to pay for the debt and who have lower than average earnings and credit scores (Ibid.). In the Chicago group, nearly every participant mentioned their parents had taken on Plus loans for them.

One unique participant in Nashville had a mix of both scenarios. As she described, "In 2009, I bought a house and my parents could get a loan for me and I paid the mortgage, because I'm not able to get a loan. I am so deep in debt there's no way that I could get a loan to be self-sufficient as far as I guess I was lucky enough that they could put their name down on it." Her parents had also taken on student loans for her. She subsequently has sold the home. Since she made a profit on the home through equity, she returned the funds to her parents to pay off the student loans they took on for her.

Life Choices After Debt

<u>Defaulted on Debt</u>

There were four participants in the focus groups who talked openly about either currently being in default or defaulting in the past. A current law student, defaulted previously, describes her situation, "…First of all I'd get the Sally Mae envelope and throw it in the garbage for ages, until I wanted to go to law school, and you have to get legitimate before you do that. I feel like I should be further along than I am because it's not just the school, the decisions that I made, but also because of the debt. It looms, and it's not a reality if you're a teenager, until you're done with school and then it's like a ton of bricks, like, 'Why did I agree to this? Why did the bank give a teenager money?'". A borrower in default felt similarly about his debt. He took classes in 2001 in Washington, DC. His financial aid paperwork was lost during the terrorist attacks of September 11. He did not realize while taking the courses he had accumulated student loan debt from the two undergraduate classes. At the time of the focus group, he never paid on the debt over the last 16 years.

Two participants had accrued student debt from law school and were strategically defaulting. One borrower in Portland does pay large sums towards her debt at times such as a tax refund, but does not make scheduled monthly payments. "…I paid it back the best as I could. What I didn't do was stop living to pay you back. There's a difference." Interestingly, before the affordability crisis, this participant was able to purchase a home in Ohio, while in default. Currently, in Portland, and given tightened lending, she would not be able to qualify for a home purchase.

Another borrower in San Diego defaulted on her private loans, but not her federal public loans. Given this was an in-depth interview, detailed information was able to be gathered. Ninety-five percent were private loans with a total balance of $250,000. She was unable to complete her law degree, and her lender asked her to pay $1,800 installments monthly. The borrower was forthcoming about a divorce, losing her job via a downsizing, and a car accident. She tried to pay as much as she could towards her student loans, but the amount fell between $250 and $50 per month. Unfortunately, her loan was sold to a number of collection agencies who tried various approaches to collect debt—asking for a lump sum of $25,000, misinforming of her loan terms, harassing her and her mother. The borrower met with a student loan debt lawyer who advised her to stop all payments on her private loans. After four years of non-payments, her creditor is

required to end the request for payment. Seven years following this, it will linger on her credit report, but eventually fall off. This is only possible for her private loans. She must continue her payments on her public loans, as they are not allowed these legal protections. In recent years, many student loan borrowers have brought lawsuits towards lenders and servicers for predatory practices and intentionally deceiving borrowers on loan terms (Konish 2017, Cloud 2017).

The borrowers who were in default did feel the servicers' harassment to obtain payment. A report from Cooke et al. (2004) found as student debt is accumulated, anxiety, tension, and unease increase. The authors do discuss the limitations of survey data, suggesting it is difficult to know if those who are anxious were already more likely to be anxious regardless of their debt. The report does find those less financially literate, are most in debt. As the focus group participants took on the debt as teenagers, and some admit they were not clear what they were signing, these results are confirmed. In Birmingham, one participant discussed staying in school as a way to avoid making payments at this time. Once out of school, he would need to start making payments. While this was an informed and strategic choice, it begs the question: what would happen if he could not continue with classes?

The Income Based Repayment Program was discussed by many participants as a way to avoid default. Researchers have found a connection between defaulters, low incomes and the regular payment plans. It is more common for default if the borrower is not on an Income Based Repayment plan (Mueller and Yannelis 2017). Unfortunately, the borrower in default in San Diego requested an Income Based Repayment plan and her lender denied her.

Expected Life Differences/Timeframe Without Debt

Purchasing a home is one sacrifice borrowers discussed due to their student debt. Non-owners in DC, Chicago, San Diego, and Birmingham have the desire to be homeowners. Some non-owners would like the luxury of a larger one-bedroom apartment, or just to move from family member's home. However, there are other life impacts due to student loan debt.

Several participants in five different areas mentioned the idea of returning to college to pursue an advanced degree, but holding back because of the fear of accumulating more debt. More education could provide them higher earnings, but it was a risk they were unwilling to take at the time. Researchers have explored this among young undergraduate students labeling focus group

participants, debt averters, debt intermediates, and debt acceptors (Zerquera et al. 2016). While, the study only looks at undergraduate borrowers, the comparison is similar. There are tradeoffs for taking on more debt.

Borrowers throughout these focus groups were well versed in the tradeoffs. Several mentioned throughout the Flagler Beach, Chicago, Portland, and DC groups a better financial situation could be had. A financial life that would not have credit card debt, and would have larger savings accounts and retirement funds. A participant with a teenager in Flagler Beach wanted to have a college savings account for their child, but could not because of their own debt. In Nashville and Flagler Beach, as parents with children think of college, they want a better financial education for their children, rather than learning through experience as they had. In Nashville, participants would encourage in-state colleges. In Flagler Beach, the participant would not push as hard for the teenager to attend college, but rather to think through the decision.

In DC, Chicago, and Portland, borrowers wanted to start families and have children of their own, but did feel financially secure enough to do so. As a woman in Chicago put it, "I'm also petrified to have a child because of the cost. My husband is ready and I'm like, 'I can't do that. Sorry.' Because about half of my take home pay every month goes towards my student loans and that's a huge amount to me…". The San Diego participant has chosen not to disclose her debt when dating, but also would be concerned of a potential partner with comparable debt. She felt the idea of a child was not an option because of her debt. A study has triangulated the findings showing a $10,000 increase in student loan debt resulted in a 7 percentage point decline in the likelihood of marriage (Gicheva 2011). In a recent poll by Morning Consult and the New York Times (Miller 2018), four of the five top reasons given for not having a child, or additional children was due to personal finances.

Influence of Employment Decisions

The unemployment rate in 2016 was 4.9 percent and in 2018 has fallen as low as 3.7 percent in September of 2018 (Bureau of Labor Statistics 2018b). Some firms understand the impact of student debt and have added benefits to attract top employees, such as paying student loans, or tuition. There are also government-sponsored benefits. One benefit is the Public Service Loan Forgiveness Program. Under this program, if a borrower works at a qualified nonprofit or government agencies for 10 years and makes 120 payments to their debt, the debt is forgiven.

Other programs specify the employee must move to a rural area, where a job is high demand—such as doctors or veterinarians. Zerquera et al. (2016) found students consider the employment situation of the local economy, and choosing a nonprofit job before even leaving college. Focus group participants were posed employment questions.

The Public Loan Forgiveness Program was brought up in several groups. In Portland two participants and in Nashville three participants were enrolled in the program. There was noted confusion within groups of what qualifies them for the program. In Nashville, one borrower was timing her retirement to when she would meet 10-year requirement of the program. Participants understood the tradeoff for a lower salary for forgiveness of debt, but did feel the benefit outweighed the salary potential. In DC, a borrower had worked for the federal government for four years. She had planned to use the Public Loan Forgiveness Program, but decided the lower salary did not compensate her enough to stay.

In DC and Flagler Beach, there was consideration of working at nonprofit jobs for added benefits, but the participants ultimately dismissed the idea. The borrowers either did not want to move to rural areas or did not want the lower salaries associated with the benefit. Econometric studies confirm this pattern. Rothstein and Rouse (2011) found student debt holders opt for higher salary potential rather than public service.

The Nashville two participants who worked for the government also stayed in their positions because any future tuition would be paid for. In Chicago, two borrowers worked for employers who provided tuition reimbursement or student loan reimbursement. The borrowers did stay with the employer because of the added benefits and it motivated them to obtain graduate education.

Many participants discussed their own major choice as not lucrative or informed when they entered school. Some participants worked in fields they had not studied formally in school. Others discussed parental pressure to obtain a particular degree. This was brought up in all focus group locations. A Flagler Beach participant who was told she should steer clear of teaching, did become a veterinarian, but worked three jobs to pay her bills. Wiswall and Zafar (2015) find major choice is often chosen by personal taste. The field of study is determined by interest as opposed to demand of employers for the skill set and potential earnings. The authors point to rising student debt as a growing concern of this trend. As the labor shortage grows in the US, it is

possible this concern could mitigate. Employers seeking an educated workforce may need to offer benefits to retain top talent.

Other Debt Plays a Role

Unless an individual has unlimited funds, some debt is inevitable. The view held on student loan debt seems garner a different sentiment among borrowers than other debt held. In Nashville, DC, and Flagler Beach credits cards were brought up. A young recent graduate in DC had credit card debt from college as it paid for living expenses. In Flagler Beach, a participant covered current living expenses, as her student debt was too high. In Nashville and Flagler Beach participants discussed paying off credit cards was less of a burden than paying back student debt. Student debt for these borrowers was actually negative amortization, and though they are making on-time payments, their balance was either increasing, or not decreasing. When one pays a credit card, even the minimum payment decreases the overall balance. A Nashville single mom had paid off her credit cards repeatedly. Pinto and Mansfield (2006) found financially at-risk student loan borrowers often prioritize paying off their credit card before paying off their student loans. Among focus group participants, they found paying off credit cards easier than paying off student debt. This may be due to having lower credit card balances or a lower interest rate.

Medical and veterinarian bills were also discussed. While, the personal medical bill was large, the hospital cancelled a share of the debt held. Veterinarian bills for pet owners in DC and Flagler Beach were something they willingly took on and would do anything for their animals. In both medical scenarios, debt holders felt they had necessary services rendered for their fees.

Mortgage debt among a Portland owner was acceptable as she felt she received a concrete item. While she did not intend on defaulting on her student debt or mortgage, she would chose her student debt over her mortgage if the scenario arose in her life. She expressed there was more to lose if she defaulted on her mortgage.

There was an interesting paradox that arose in DC, Chicago, and Portland. Borrowers were encouraged to take on student debt when they were attending college as the debt was viewed as 'good' debt. In comparison to 'bad' debt, such as credit cards. However, as adults they felt worse taking on student loans in comparison to other debt. There was a parental and societal expectation of attending a four-year college and to obtain the degree, the student had to take on

loans. In hearing the participants' stories about how they were not risk averse accumulating the debt, but felt ill-informed of their decision, it seemed there was a parallel to risky mortgages. Akerlof and Shiller (2010) discuss the difference between human behavior and economic theory. The rationalization of human behavior to find one debt 'good' and another 'bad' would fall into a paradox. If a young adult, who is not employed, accumulated $35,000 in any other type of loan that would be considered irrational behavior, but student loan debt was considered rational and a 'good' investment.

In Portland and Nashville, participants conversed on the change in mortgage lending. Lenders have changed how they once viewed student loans as 'good' debt, while now it is viewed the same as other debt. Lenders have also changed how student debt is calculated for mortgages. It is possible this change is due to the overall rise in the aggregate amount of debt over time or the difficulty borrowers have paying down their student debt.

Summary of Qualitative Findings

By conducting nationwide focus groups and in-depth interviews, results from the econometrics are triangulated and validated. Participants willingly told their stories of student loan debt and the impact the debt has had on their lives. They shared their current living situations and their desire for change in the future. In doing so, the desire to understand the narrative about homeownership and student debt was better understood.

Consistently focus group participants have the desire for homeownership, if they do not already own a home. For those in high cost areas, the barrier to entry is higher. Not only are rental prices higher, but the ability to save in these areas seems substantially restrained by the cost of living. However, even if non-owners know of the potential costs of homeownership and maintenance they do want to own a place of their own. Homeowners in the focus groups had persistent scenarios; they purchased either before housing affordability limited potential buyers, they lived in low cost areas, or they had family help to purchase a home.

Family help continued to play a role among owners. Those who were recent buyers either purchased in low cost areas, or had family help. Family assistance emerged not just as a direct transfer of downpayments, but also to pay down student debt and to help with other expenses at the time of the home purchase. Some received family help through the ability to live at home as young adults.

In discussing other types of debt with focus group participants, student loan debt was the most difficult to pay down. Debt holders expressed confusion over their payment plans. Those who encountered default or forbearance also encountered predatory lending practices and misunderstanding of the loan process. Nearly all focus group participants wanted stronger financial literacy before taking on their student loan debt and felt unprepared taking on the loans as a teenager.

Policy Recommendations

Based on the research through both econometric findings and focus groups, there are a number of policies that could be implemented, to reduce student debt and encourage homeownership. The recommendations focus on financial literacy, both before deciding a college to attend and while in college. They also look at those who have already accumulated student debt, through student loan plans and workplace solutions. Lastly, there are concepts, which could expand mortgage financing to those who are shut out of homeownership currently.

Financial Literacy in High School

Throughout the focus groups, there was concern that participants did not feel well prepared to decide where to go to college or the cost involved. One participant even described forgoing a scholarship, which could have eliminated her student debt. They could not rely on parents and had no one to ask questions, especially if they were a first generation college student. This experience has been noted in larger studies, which cite that low and modest income families often rely on school professionals to guide them to the appropriate college education choices (Hoxby and Avery 2012). The teenagers went on blind faith that they were making the correct decision and many did not know what they were signing. Many went to the best possible school rather than exploring their options of in-state tuition or community college first. Others were pushed by their parents to attend a top-tier college, which can cost more and be out-of-state. Avery and Hoxby (2012) found well qualified students do not even apply to selective schools which could have reduced or free tuition both because of lack of guidance and college admission officers failing to communicate to all schools. To increase the financial literacy of the high school students before they enter college, provide annual required training to high school guidance counselors. The training would cover all options available to all students and the costs involved, as high school guidance counselors are possibly the only professional who is having a discussion with the student.

By training the individuals who guide the students into college, finances become part of the conversation, as opposed to something that is discovered after attendance in college. Part of this conversation should be, can the student afford it? What role will the family play? Is the student able to work to help offset costs? These questions are not part of the conversation according to the focus group participants. By bringing a third party into the conversation, it provides unbiased

participant who can discuss the options rationally, without pushing the student into something they cannot afford to pay back. This is also, likely, the only person educated to have the discussion with the student (Hoxby and Avery 2012). Even if parents are educated, having a professional sounding board allows for balanced views. Expanding on the role of the relationship between the parent and high school guidance counselor, there could be events targeted on exploring the financial aid discussion.

In 2018, 29 states had financial literacy education bills and three states did pass state legislation aimed at financial literacy in high school (National Conference of State Legislatures 2018). Iowa, Kentucky, and Louisiana have added courses as a requirement for public high school students for graduation (Ibid.). Additionally a number of other states passed legislation on financial literacy weeks and months. These are first steps towards better education, however, financial literacy should not end with high school students and their parents, but continue into higher education.

Financial Literacy in College

For many newly admitted college students, there is no education on the college tuition or their financial aid package. Within the focus groups, one participant described his financial aid education as, "The school literally had a line. We would all be in this line, and you'd go down the line, signing these papers. It was like a cafeteria line. It wasn't even in a private office or anything. You're signing this documentation that's going to really impact your life." To change this lack of knowledge, and environment, provide actual education to the newly admitted students.

Entrance counseling should involve a course, which is conducted in a classroom and in-person, annually. There is limited financial education before the student accepts loans, and much of the education is an online document the borrower clicks through and signs electronically. Move the system into the classroom where the borrower can ask questions. In the course, students could also be taught options on working while in college, and budget management. There is currently one bill before the U.S. Congress which is putting forward annual financial counseling and expanded exit counseling (Guthrie 2017). In recent years, there have been a number of bills aimed at financial literacy, but even with bi-partisan support those bills have not been passed by Congress.

One way to involve the universities into the process would be to provide an assembly or meeting with students and college financial aid officers. Many colleges provide a welcome assembly to newly admitted students as part of the welcome day. During this assembly, financial aid officers can make themselves known for questions, which may arise during the year. Having a public assembly also opens the tuition out of a hidden aspect of college, into a public sphere. There is research that shows even obtaining financial counseling the first year of college can reduce precarious financial decisions for college seniors (Xiao et al. 2014).

An expense that can easily be reduced in college is textbook costs. This is an area, where universities and independent professors experiment. Textbooks could be shared by students, or electronic copies could be stocked in libraries so multiple students could use them. In recent literature, discussion evolves to not only the improved cost savings for students, but students' grades improve as they are able to access a book, as opposed to skipping the purchase of the text due to cost (Fischer et al. 2015, Bliss et al. 2013).

Student Loan Payment Plans

Some student loan borrowers try their best to reduce their debt by working and making payments to their debt, while taking classes. The U.S. federal government allows students to work at the university in work-study jobs to offset their college costs. There are both unsubsidized and subsidized student loans in the U.S. Unsubsidized loans means interest begins accruing as soon as the loan is taken out. Subsidized loans means the interest is waived to the student and the federal government pays the interest while the borrower is in school. Both work-study programs and subsidized loans have declined in the last decade from 2007-08 to 2017-18 (16 percent and 39 percent, respectively) (Baum et al. 2018). Both programs should have federal funding increased to previous levels. These programs help to offset the cost of student loans accrued by students.

Income Based Repayment plans have allowed borrowers to make on-time payments without going into default. According to several focus group participants if they were not able to have the flexibility of these plans, they would likely be in default. However, the harmful aspect of these plans is that some are negative amortization. At the lowest payment level, borrowers may not be paying to their principal payment and only paying their interest. As such, their total loan balance increases over time. Allow borrowers to keep these plans, but make the minimum payment enough to cover the interest and at least $1 of principal. If this is not possible for the borrower, educate the borrower that their balance may increase and is a negative amortization loan. Have the borrowers sign a waiver annually explaining in common terms what this means and how this could adversely impact their credit score and their overall student loan balance. This would be similar to annual financial education, which has been proposed in college.

Student loan borrowers are not able to refinance their loans into lower interest rates. The U.S. Department of Education determines interest rates annually for federal public student loans. In the current loan market, there are lower interest rates for private loans than many borrowers have for their federal public student loans. Allowing a borrower to refinance their loans could not only reduce the amount they are paying on a monthly basis, it could reduce the overall amount of their debt. Refinancing student loans has been introduced to the U.S. Congress on a number of occasions with different sponsors. It has not passed as legislation. At this writing two bills have been introduced in the 2017-2018 Congress, but the text of the legislation is not publicly available.

In the U.S., while a borrower pays their student loan balance there is a tax deduction for the interest paid on the loan. However, the Internal Revenue Service has limitations to this benefit. The interest can only be deducted to a total of $2,500. The benefit starts to fade out among borrowers whose income is $65,000 annually and is fully removed if the income is over $80,000 or $165,000 among those who file joint returns. Expand this benefit to both allow a higher amount of interest to be deducted and to allow this benefit at high incomes. These amounts of interest limitations do not meet the needs of many borrowers with large student loan balances. The income limitations, target this benefit to modest income borrowers, while in reality, many older borrowers with higher incomes also have student loan debt. To open up the benefit could help all individuals with student debt rather than penalizing those with higher incomes.

Workplace Solutions

The ultimate goal of going to college is to follow a career path based on the education gained. Many workplaces realize to attract top talent and an educated workforce they need to offer benefits that offset student loan debt. Four percent of workplaces provide benefits such as making payments on the debt for the employee (Society for Human Resource Management 2018). If the employer is agreeable to provide this benefit to employees, they should be able to do so in pre-tax dollars. Allowing this in pre-tax dollars could increase the amount that is provided to the employee and would encourage employers to provide this benefit. There is currently one bill in the U.S. Congress that would allow employers to provide educational payments to loans or a lender and include it in Internal Revenue Service provisions (Davis 2017).

Approximately half of workplaces provide undergraduate or graduate student assistance (Society for Human Resource Management 2018). The Internal Revenue Service currently allows employers to provide employees $5,250 annually for education reimbursement. If the employer provides more than $5,250, the employee must count this as income and is taxed on that amount. This amount should be increased to reflect today's tuition.

Some employers are also offering benefits such as an online counseling system, which connects the borrower to best payment plan. If the employer is enthusiastic to provide this online system, there should be tax incentives for the cost of the system. These online counseling programs could be available not only to the employee, but extended to their families as well. It may alleviate stress and anxiety a parent faces for their own child when they prepare for college.

As was discussed by some focus group participants, it is attractive for some employees to seek employment in the nonprofit or public sector as their debt may be forgiven under the Public Service Loan Forgiveness Program. There is confusion among borrowers if they qualify for the plan and how to educate themselves. The U.S. Government Accountability Office (2018) suggested not only increasing the education among borrower, but educating employers of qualifications of the plan.

Mortgage Financing

Thus far, all of the solutions discussed have been directed at student loan debt. However, the intention is that these solutions would allow the borrower to pay down their student loan debt faster and with broadened assistance and more financial education on the debt they have accumulated. That would indirectly help the borrower obtain homeownership. The mortgage financing solutions are directly relate to who has access to credit and who does not.

Mortgage financing today is only based on a borrower's FICO score. The FICO score is based on a borrower's ability to pay traditional forms of credit, such as credit cards and student loan debt. However, utility bills and rent are not included in the FICO score. If borrowers could use alternative credit scoring, which includes these on-time payments into credit considerations, this could expand who is qualified for a loan and the amount they are qualified for, particularly among Black/African American and Hispanic/Latino borrowers (Calderon 2017, Carr et al. 2017). It is estimated alternative credit scores could open Black/African American homeownership by 115,000 home buyers per year (Carr et al. 2017). It is likely, not only would this modeling open the credit market, it would expand the amount the buyer is able to purchase.

Additionally, there are many homes where families are living with each other across multiple generations, as two participants in the focus groups were. Among recent home buyers, this is the case for 12 percent of households, and one-fifth of minority home buyers (Lautz et al. 2018). If this is a permanent housing preference, home buyers should be allowed to include all earners on a mortgage application. Currently mortgage applications are typically limited to two earners. This limitation may not be reflective of minority homeownership preferences, particularly among Hispanic/Latino families (Goodman et al. 2015). Adult children or senior adults may be contributing to household expenses and are employed. Expanding mortgage applications could expand who qualifies for a home purchase and expand the amount for which they qualify. This could mean a larger home to accommodate all residents or a better neighborhood for the family. If the adult income earner leaves the household, the mortgage could be refinanced, similar to a divorce, separation among an unmarried couple, or separation between two non-romantic partners.

Conclusion

This thesis explored how housing opportunities have changed following the Great Recession and the financial crisis in the U.S. Since the Great Recession, the homeownership rate has fallen for those under the age of 35, Black/African American, and Hispanic/Latino, and it has not rebounded. Home prices have increased for 79 months on year over year basis (Dollinger 2018a). From January 2012 to December 2017, existing home sales prices increased from $157,900 ($171,734 in inflation adjusted figures) to $246,500, which is a inflation adjusted 49 percent increase (National Association of Realtors 2018b). In comparison, per capita incomes have only increased 14 percent in that period, from $30,250 to $34,489 (U.S. Census Bureau 2018a). Parallel to the price increase housing, the amount of student debt in the U.S. has increased rapidly. The amount of debt held by recent college graduates has increased about 70 percent from 2007 to 2017 (Chakrabarti et al. 2017). There are a number of myths which follow these populations, suggesting they prefer to rent and do not want to own a home. Through a mixed-method approach, these myths were dispelled, but the true challenges which have inhibited a recovery in the homeownership rate were highlighted.

This thesis uses a mixed-method approach to explore the drop in the homeownership rate. First, an advanced econometric approach was taken using two-stage least squares to determine the price of home purchased by successful home buyers. Using this approach, one can determine how the demographics of the buyers, even while controlling for income and the size of home, differ. The instrumental variable used was the total search time for a home. Qualitative research has been encouraged by one of the largest names in housing research, Shiller (2017); however, few have published using this method. Econometric results were triangulated through focus groups. Student loan debt holders were personally asked their tenure preferences through nationwide focus groups so that the true narrative could be explored.

Results of the econometrics found Black/African American buyers, Hispanic/Latino buyers, and buyers with student loan debt purchase substantially lower priced homes, while controlling for other economic factors including household income. Through focus groups with student loan debt holders, it was found those who were owners made sacrifices to enter homeownership. Those who were not owners wanted to own, but could not enter the market today given their debt. Black/African American debt holders faced considerable economic challenges, and two participants lived at home with parents instead of renting independently.

Through both the econometric analysis and focus groups the role of family assistance to enter homeownership was a major finding. In the model, those who lived with friends and family before purchasing were able to buy a more expensive home than those who rented before buying. Through focus groups, it was rare to encounter a recent buyer who did not have family help purchasing a home. Most recent buyers had family help either directly with the downpayment or with an expense at the time of the purchase. As the U.S. faces an affordability crisis, those who can enter homeownership as first-time buyers with student debt either are purchasing in a significantly lower priced area or are purchasing with family help.

Among focus group participants, student debt holders were forthcoming that they did want to purchase a home, but felt shut out of homeownership today. Even as some participants had watched family members lose their home during the Great Recession, or personally lost a home, they believed in the benefits of homeownership. This dispels the myth that young potential buyers may choose to rent after watching their parents go through the Great Recession. Non-owners with student debt understood both the social and financial benefits of homeownership. Current owners were not worried to lose their home in another recession.

Successful single female buyers were apparent in the focus groups as either having the dream of ownership, or had recently purchased a home. Single males consistently purchased less expensive homes within the econometrics. As marriage rates and birth rates decline in the U.S., it is interesting to see single female and unmarried couples purchasing homes. Interestingly, though not surprisingly, those who have children under the age of 18 in the home purchased homes that were slightly less expensive than other buyers, which suggests the cost of childcare or costs associated with children may substitute for a more expensive home.

What is integral to these findings is the societal benefits of homeownership. The positive attributes of stable housing and homeownership have been well researched and written about since the early 1900s in the U.S. Participants in the research who are not homeowners want to purchase homes for the financial and social benefits. Policymakers have changed laws and regulations historically to increase the homeownership rate. Today, policymakers need to undertake new changes with the economic challenges and demographics of citizens in mind. The research shown through this thesis has led to policy recommendations which could positively impact the future of housing and the future of student loans. It is up to policy makers, high school

administrations, and universities to recognize the role they play in influencing the economic future of young adults and their parents. The research here is just a start, as this topic will continue to be explored through iterations of the *Profile of Home Buyers and Sellers* and continual qualitative research.

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Appendix

Item 1: Propaganda

SECTION THREE

Owning His Home Increases a Man's Working Efficiency and Earning Power.

It gives his daily work a new meaning to him, equips him better for it, and puts his heart into it.

It settles his interest and centers his attention in one place.

It gives him something worth while, of his own, to work for.

It gives him the responsibility that will keep him spurred to his best efforts.

It relieves him of many worries and gives him a freer mind for his work.

It gives him increasing proficiency in his chosen work.

It gives him the better living conditions that keep him fit in body and mind.

The Home Owner is the Most Efficient Workman
and the most successful in business and the professions

Only the man who has settled definitely upon one place of residence and one line of work can apply himself to that work with wholeheartedness and do it full justice.

When he establishes his permanent home in some good locality and starts definitely to build up his life there, he has taken his first step toward real efficiency and accomplishment.

Every man, in order to have his heart in his work, must have a constructive interest of some kind—something of his own that he is building up, adding to, or perfecting.

The building up and caring for a home of his own supplies just the interest he needs. His work then takes on a new meaning. It is no longer enforced drudgery. It becomes a genuine and inspiring pleasure. For by means of it he is acquiring more and more of the good things of life.

To attain and maintain his highest efficiency and full earning power, a man must also have something at stake to keep him up on his toes—something to lose if he lays down on his job.

A home of his own fills this need perfectly. No man who has experienced its advantages and has his good money and labor invested in it, will ever willingly lose it if his constant industry and vigilance can prevent it.

"The most productive, the most efficient, and the most contented worker is the one who has a cozy, comfortable home of his own to go to after the day's work."

SECTION FOUR

Her Own Home Makes Woman's Work Pleasanter and Her Life Happier

It adds the constructive interest that changes the routine of housekeeping into the fascinating work of home making.
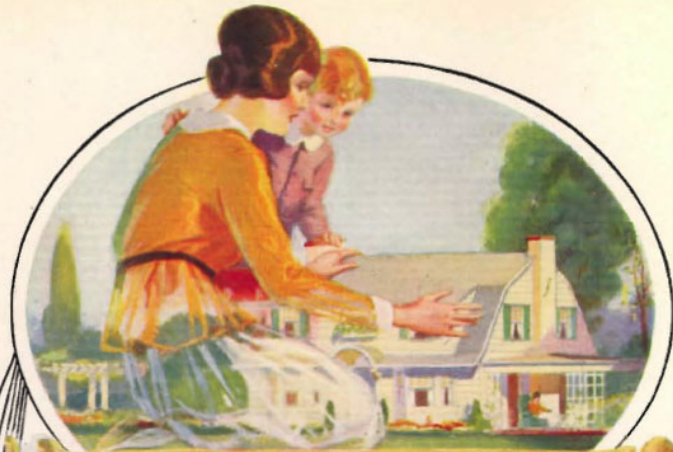
It puts her life on a settled basis and gives her a comforting sense of security.

It starts her on the creative work for which she was intended.

It gives her the joy of possession that relieves housework of its monotony.

It establishes her social position.

It gives her the garden and flowers that she has always wanted.

It affords her unequaled oppor-

The Owned Home Makes Life More Worth While in Every Way

MORE than anything else in all the world, what the true mother wants is a place where she and her family can live together year after year in undisturbed happiness and security.

The home of her dreams is a place—all her own—that shall be the embodiment of her best ideas of comfort and convenience, of good taste and refinement, a place that shall enable her to throw around her little family group all the protecting, restraining and uplifting influences that her woman's heart can devise.

Woman's chief work is the most constructive of all human occupations.

The development and building up of young lives, equipping them with sturdy health, sane, well-balanced minds, sound moral principles and high ideals—this is creative work indeed. And it is hers in addition to ministering to the needs, and maintaining the efficiency of her

possible by the permanently owned home may this great work be carried on with complete success—only under these conditions can a woman be completely happy.

To install your wife in a home of her own is a convincing demonstration of your affection and consideration for her comfort and happiness. The

Item 2: Profile of Home Buyers and Sellers Survey

NATIONAL ASSOCIATION of REALTORS®

2017 NATIONAL ASSOCIATION OF REALTORS® HOME BUYER AND SELLER SURVEY

Please indicate each of your answers by filling in or placing an "X" in the circle or box or writing your answer on the line or in the boxes provided. Your responses will remain confidential. If you do not know the exact answer to a question, please give your best estimate.

SECTION A: ABOUT THE HOME YOU RECENTLY PURCHASED

A1. Was this your first home purchase?
1. Yes
2. No

A2. If you previously owned a home, have you ever sold a home as a distressed property (short sale or foreclosure) and what was the year of the sale?
1. No
2. Yes → ☐☐☐☐ Year

A3. Was this property a new or previously owned home?
1. New
2. Previously owned

A4. If you purchased a "newly constructed home", why did you choose a new home? *(Mark only one)*
1. Avoid renovations or problems with plumbing or electricity
2. Ability to choose and customize design features
3. Green/energy efficiency
4. Amenities of new home construction communities
5. Lack of inventory of previously owned homes
6. Smart home features
7. Other, (Specify):_____

A5. If you purchased a "previously owned home" why did you choose a previously owned home? *(Mark only one)*
1. Better price
2. Better overall value
3. More "charm" and character
4. Lack of inventory of new homes
5. Other, (Specify):_____

A6. When was the home built that you recently purchased? Year: ☐☐☐☐

A7. Which of the following best describes the type of home you recently purchased? *(Mark only one)*
1. Cabin/cottage
2. Duplex/apartment/condo in 2 to 4 unit building
3. Apartment/condo in building with 5 or more units
4. Townhouse/row house
5. Mobile/manufactured home
6. Detached single-family home
7. Other

A8. Is the home you recently purchased senior-related housing or in an active adult community?
1. Yes
2. No

A9. 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

A10. What is the square footage of the home you purchased? ☐☐☐☐

How many bedrooms are in the home? ☐☐

How many full bathrooms are in the home? ☐☐

A11. Approximately how many miles is the home you purchased from your previous residence?
Miles: ☐☐☐☐☐ ○ Not applicable

A12. 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/Subdivision
5. Resort community/Recreation area

A13. Where is the home you purchased located?
State: ☐☐ Zip: ☐☐☐☐☐ ○ Outside U.S.

A14. Including the home you recently purchased, how many homes do you currently own *(not including any home you are in the process of selling)*?
# of Homes: ☐☐

A15. In addition to the home you just purchased, what other homes do you own? *(Mark all that apply)*
1. None
2. One or more vacation homes
3. One or more investment properties
4. My primary residence
5. My previous home I am trying to sell
6. Other

A16. What was your living arrangement immediately before your recent home purchase? *(Mark only one)*
1. Lived with parents/relatives/friends, paid rent
2. Lived with parents/relatives/friends, did not pay rent
3. Owned previous home
4. Rented a dorm
5. Rented an apartment or house
6. Rented the home I ultimately purchased

A17. Approximately how long do you expect to own this home? *(If less than one year, please insert "0")*
Years: ☐☐ ○ Don't know

A18. What could cause you to move in the future? *(Mark only one)*
1. Downsize/smaller house
2. Household member's health
3. Want a larger home
4. Never moving-forever home
5. Move with life changes (addition to family, marriage, children move out, retirement, etc.)
6. Move with job or career change
7. May desire better area/neighborhood
8. Want nicer home/added features
9. Will flip home
10. Other (Specify): _____

A19. Was the home you purchased a short sale (a sales transaction in which the mortgage lender agreed to accept proceeds less than the balance due on the loan)?
1. Yes, with the assistance of a real estate agent
2. Yes, without the assistance of a real estate agent
3. No
4. Don't know

A20. Was the home you purchased a foreclosure or trustee sale?
1. Yes, with the assistance of a real estate agent
2. Yes, without the assistance of a real estate agent
3. No
4. Don't know

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A21. 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 a household
- ③ Desire for larger home
- ④ Desire for smaller 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 vacation home/investment property
- ⑨ Desire to be closer to family/friends/relatives
- ⑩ Purchased home for family member or relative
- ⑪ Change in family situation (e.g. marriage, birth of child, divorce, etc.)
- ⑫ Greater number of homes on the market for sale/better choice
- ⑬ Affordability of homes
- ⑭ Job-related relocation or move
- ⑮ Retirement
- ⑯ Financial security
- ⑰ Tax benefits
- ⑱ Other (Specify): _____

A22. Which of the following were most important to you when considering different neighborhoods in which to purchase a home? *(Mark all that apply)*
- ☐1 Convenient to airport
- ☐2 Convenient to entertainment/leisure activities
- ☐3 Convenient to friends/family
- ☐4 Convenient to health facilities
- ☐5 Convenient to job
- ☐6 Convenient to parks/recreational facilities
- ☐7 Convenient to public transportation
- ☐8 Convenient to schools
- ☐9 Convenient to shopping
- ☐0 Design of neighborhood
- ☐X Home in a planned community
- ☐Y Quality of the neighborhood
- ☐1 Quality of the school district
- ☐2 Overall affordability of homes
- ☐3 Availability of larger lots or acreage
- ☐4 Other (Specify): _____

A23. 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
- ☐0 Quality of the neighborhood
- ☐X None – Made no compromises
- ☐Y Other compromises not listed

A24. During your recent home search process, did you consider buying a home that was in foreclosure? *(Mark all that apply)*
- ☐1 Yes, but I couldn't find a home I liked
- ☐2 Yes, but the process was too difficult/complex
- ☐3 Yes, but the home price 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 (Specify): _____

A25. How did you purchase this home? *(Mark only one)*
- ① Through a real estate agent or broker
- ② Directly from previous owner whom I knew
- ③ Directly from previous owner whom I didn't know
- ④ Directly from builder or builder's agent
- ⑤ Auction
- ⑥ 1031 Exchange
- ⑦ Other (Specify): _____

A26. How important were the following when you were searching for a home to purchase?

	Very Important	Somewhat important	Not Important
Commuting costs	①	②	③
A home's heating/cooling costs	①	②	③
A home's energy efficient appliances	①	②	③
A home's efficient use of lighting (e.g., natural light, Energy Star lighting)	①	②	③
Landscaping for energy conservation	①	②	③
Green (environmentally friendly) community features	①	②	③
Solar panels installed on home	①	②	③
Windows/Doors/Siding (Installation)	①	②	③

SECTION B: YOUR HOME SEARCH

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

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

B3. What was the <u>first step</u> you took when you started your 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 Looked online for properties for sale
- ④ Visited open houses
- ⑤ Drove by homes/neighborhoods
- ⑥ Contacted a home seller directly
- ⑦ Contacted builder/visited builder models
- ⑧ Contacted a bank or mortgage lender
- ⑨ Read books or guides about the home buying process
- ⑩ Attended a home buying seminar
- ⑪ Looked in newspapers, magazines, or home buying guides for properties for sale
- ⑫ Contacted a real estate agent
- ⑬ Looked up information about different neighborhoods or areas (schools, local lifestyle/nightlife, parks, public transportation)
- ⑭ Other (Specify): _____

B4. Where did you <u>first</u> learn that the home you recently purchased 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 sellers/Knew the sellers
- ⑦ Real estate agent
- ⑧ REALTOR.com®
- ⑨ Real estate agent Website
- ⑩ Real estate company Website
- ⑪ Online Classifieds (e.g. Craigslist, Newspaper, etc.)
- ⑫ Real estate magazine Website
- ⑬ Multiple Listing Service (MLS) Website
- ⑭ For-sale-by-owner Website
- ⑮ Other Websites with real estate listings (e.g. Google, Yahoo)
- ⑯ Social networking Websites (e.g. Facebook, Twitter, etc.)
- ⑰ Third Party aggregator (e.g. Zillow, Trulia, etc.)
- ⑱ Video hosting Websites (e.g. YouTube, etc.)
- ⑲ Billboard
- ⑳ Search engine

2

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

	How often did you use each of these when searching for a home?			How useful were each of these when searching for a home?		
	Frequently	Occasionally	Rarely or not at all	Very useful	Somewhat useful	Not useful
Yard sign	①	②	③	①	②	③
Real estate agent	①	②	③	①	②	③
Home builder	①	②	③	①	②	③
Television	①	②	③	①	②	③
Print newspaper ad	①	②	③	①	②	③
Relocation company	①	②	③	①	②	③
Home book or magazine	①	②	③	①	②	③
Open house	①	②	③	①	②	③
Billboard	①	②	③	①	②	③
Online Video Site	①	②	③	①	②	③
Mobile or tablet search device	①	②	③	①	②	③

B6. How satisfied were you with the process of buying your home?
- ① Very satisfied
- ② Somewhat satisfied
- ③ Somewhat dissatisfied
- ④ Very dissatisfied

B7. Did you use the Internet to search for homes?
- ① Yes, frequently
- ② Yes, occasionally
- ③ Rarely or never *(skip to SECTION C, question C1)*

B8. How useful were each of the following when searching for homes online? *(Rate each.)*

	Very useful	Somewhat Useful	Not Useful	Did not use/ Not available
Detailed information about properties for sale	①	②	③	④
Detailed information about recently sold properties/ comparable sales	①	②	③	④
Floor plans	①	②	③	④
Information about upcoming open houses	①	②	③	④
Interactive maps	①	②	③	④
Photos	①	②	③	④
Virtual tours	①	②	③	④
Neighborhood information	①	②	③	④
Pending sales/contract status	①	②	③	④
Real estate agent contact information	①	②	③	④
Videos	①	②	③	④
Real estate news or articles	①	②	③	④

B9. What actions did you take as a result of accessing real estate information on the Internet? *(Mark all that apply)*:
- ☐1 Found the agent used to search for or buy home
- ☐2 Walked through the home viewed online
- ☐3 Contacted builder/developer
- ☐4 Pre-qualified for a mortgage online
- ☐5 Applied for a mortgage online
- ☐6 Found a mortgage lender online
- ☐7 Saw exterior homes/neighborhood, but did not walk through
- ☐8 Requested more information
- ☐9 Looked for more information on how to get a mortgage and general home buyer tips

B10. Overall, how useful did you find the Internet when searching for homes?
- ① Very useful
- ② Somewhat useful
- ③ Not useful

B11. Did mobile searching help find your home in any of these ways? *(Mark all that apply)*
- ☐1 Found my home with a mobile device
- ☐2 Found my agent with a mobile device
- ☐3 Did not search for homes or agent on mobile device

B12. If you found your home on a website, which of the following best describes your experience:
- ① I had one agent track down most of the homes I found
- ② I would contact a different agent each time I found a home
- ③ I would contact several agents and work with the one who got back to me promptly

B13. Your experience on these sites

	realtor.com	Trulia.com	Zillow.com	Homes.com
Had most accurate info	①	②	③	④
I returned to this most frequently	①	②	③	④
Helped me sell my home	①	②	③	④
Found my agent on this	①	②	③	④
Found my home on this	①	②	③	④

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?

Month: ☐☐ (01= Jan, 10= Oct, etc.) Year: ☐☐☐☐

C4. What type of mortgage did you use to finance your home purchase? *(Mark only one)*
- ① Did not use a mortgage to finance my home purchase *(skip to question C8)*
- ② Fixed-rate mortgage (interest rate is fixed for entire period of loan)
- ③ Fixed- then adjustable-rate mortgage (interest rate is fixed for the first few years, then adjusts)
- ④ Adjustable-rate mortgage
- ⑤ Don't know
- ⑥ Other (Specify): _____

C5. What type of loan did you use?
- ① FHA
- ② VA
- ③ Conventional
- ④ Don't know
- ⑤ Other (Specify): _____

C6. What percentage of the purchase price did you finance with one or more mortgages?
- 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. 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
- ④ Easier than expected

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

① Yes, How Many: ☐☐   ② No

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C9. Why were you rejected by a mortgage lender? *(Mark all that apply)*
- [1] Low credit score
- [2] Debt to income ratio
- [3] Not enough money in reserves
- [4] Too soon after refinancing another property
- [5] Income was unable to be verified
- [6] Insufficient down payment
- [7] Other (Specify): _____
- [8] Don't know

C10. Did you need to make any of the following sacrifices to be able to make your recent home purchase? *(Mark all that apply)*
- [1] Cancelled vacation plans
- [2] Cut spending on luxury or non-essential 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] Paid minimum payments on bills
- [8] Other (Specify): _____
- [9] Did not need to make any sacrifices

C11. Which of the following did you use for your down payment or to pay for your home if you did not use a mortgage? *(Mark all that apply)*
- [1] Savings
- [2] Proceeds from sale of primary residence
- [3] Equity from primary residence I continue to own (e.g. cash-out refinance, second mortgage, home equity loan or home equity line of credit)
- [4] Proceeds from sale of real estate other than primary residence
- [5] Sale of stocks or bonds
- [6] Gift from relative/friend
- [7] Loan from relative/friend
- [8] Loan from financial institution other than a mortgage
- [9] 401k/pension fund including a loan
- [0] Individual Retirement Account (IRA)
- [X] Inheritance
- [Y] Loan or financial assistance program through employer
- [1] Loan or financial assistance program from some other source
- [2] Tax refund
- [3] Other
- [4] None – Made no down payment

C12. How long did you save for a down payment?
- [1] 6 months or less
- [2] 6 to 12 months
- [3] 12 to 18 months
- [4] 18 to 24 months
- [5] More than 24 months

C13. Do you consider your home purchase to be a good long-term 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: *(Mark only one)*
- [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 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 (Specify): _____

C15. What were the most difficult steps of purchasing your home? *(Mark all that apply)*
- [1] Saving for the down payment
- [2] Getting a mortgage
- [3] Appraisal of the property
- [4] Finding the right property
- [5] Paperwork
- [6] Understanding the process and steps
- [7] No difficult steps
- [8] Other

C16. If saving for a downpayment was difficult, what debt or expenses held you back or delayed you? *(Mark all that apply)*
- [1] Student loans
- [2] Car loan
- [3] Child care expenses
- [4] Credit card debt
- [5] Health care costs
- [6] Other (Specify): _____

C17. How many years did your debt prevent you from saving your down payment/buying a house? Years: [ ][ ]

C18. Do you have any student loan debt?
- [1] Yes
- [2] No

C19. If yes, how much is your student loan debt?

$ [ ][ ][ ],[ ][ ][ ]

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

ANSWER QUESTIONS D1-D18 ONLY IF YOU USED A REAL ESTATE AGENT/BROKER IN YOUR HOME PURCHASE. OTHERWISE, SKIP TO SECTION E, QUESTION E1.

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

D2. How many times did you contact the agent you selected before they got back to you? [ ][ ]

D3. What method did you use to originally contact your agent?
- [1] Social Media (e.g. FaceBook, Twitter, LinkedIn, etc.)
- [2] E-mail
- [3] Phone call
- [4] Text message
- [5] Inquiry for more information through 3rd party website (e.g. Realtor.com, Zillow, etc.)
- [6] Through agent's website
- [7] Asked a friend to put me in touch
- [8] Talked to them in person

D4. Before you contacted an agent, how long did you actively search for a home on your own? Weeks: [ ][ ]

D5. 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

D6. Was the real estate agent who assisted you with your home purchase a Realtor®, a member of the National Association of Realtors®?
- [1] Yes
- [2] No
- [3] Don't know

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D7. How did you find the real estate agent you used to buy your home? *(Mark only one)*
- ① Used agent previously to buy or sell a home
- ② Referred by (or is) a friend, neighbor or relative
- ③ Referred by another real estate agent/broker
- ④ Referred through employer or relocation company
- ⑤ Personal contact by agent (telephone, e-mail, etc.)
- ⑥ Visited an open house and met agent
- ⑦ Direct mail (newsletter, flyer, postcard, etc.)
- ⑧ Newspaper, Yellow Pages or home book ad
- ⑨ Advertising specialty (calendar, magnet, etc.)
- ⑩ Website (without a specific reference)
- ⑪ Saw contact information on For Sale/Open House sign
- ⑫ Walked into or called office and agent was on duty
- ⑬ Mobile or tablet application
- ⑭ Crowdsourcing through social media/knew the person through social media
- ⑮ Saw the agent's social media page without a connection
- ⑯ Other

D8. If you found your agent from searching homes on the web, how did they initiate the conversation? *(Mark only one)*
- ① Did not find agent online
- ② I received an automated text
- ③ I received a personal text response
- ④ I received an automated email
- ⑤ I received a personal email
- ⑥ I received a phone call
- ⑦ I called the agent

D9. Which one of the following factors was most important to you when choosing a real estate agent? *(Mark only one)*
- ① Agent's experience
- ② Reputation of agent
- ③ Active in local community/volunteerism
- ④ Agent's association with a particular firm
- ⑤ Professional designations held by agent
- ⑥ Agent's knowledge of the neighborhood
- ⑦ Agent is friend or family member
- ⑧ Agent has caring personality/good listener
- ⑨ Agent is honest and trustworthy
- ⑩ Agent is timely with responses
- ⑪ Agent seems 100% accessible because of use of technology like tablet or smart phone
- ⑫ Other (Specify): _____

D10. Before you bought your current home, what did you most want your agent to do for you? *(Mark only one)*
- ① Tell me how much home 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 Tell me more about the neighborhood or area (restaurants, parks, public transportation)
- ⑩ Other (Specify): _____

D11. Rate the importance of each.

	How important in an agent?			Were you satisfied with your agent?		
	Very Important	Somewhat Important	Not Important	Very Satisfied	Somewhat Satisfied	Not Satisfied
Knowledge of purchase process	①	②	③	①	②	③
Knowledge of real estate market	①	②	③	①	②	③
Knowledge of local area	①	②	③	①	②	③
Communication skills	①	②	③	①	②	③
Responsiveness	①	②	③	①	②	③
People skills	①	②	③	①	②	③
Skills with technology	①	②	③	①	②	③
Honesty and integrity	①	②	③	①	②	③
Negotiation skills	①	②	③	①	②	③

D12. The following are important when choosing an agent: *(Mark all that apply)*
- ☐1 Has a website
- ☐2 Active in local community/volunteerism
- ☐3 Advertises in newspapers
- ☐4 Has a blog
- ☐5 Is active on social media
- ☐6 Has a mobile site to show properties
- ☐7 Can send market reports on recent listings and sales
- ☐8 Calls personally to inform me of activities
- ☐9 Sends me an email newsletter
- ☐0 Sends me emails about my specific needs
- ☐X Sends me property info and communicates via text message
- ☐Y Sends me postings as soon as a property is listed/the price changes/under contract

D13. At the time you began working with a real estate agent, did your real estate agent ask you to sign a disclosure statement indicating who he/she represented in the transaction?
- ① Yes, at first meeting
- ② Yes, when contract was written
- ③ Yes, at some other time
- ④ No
- ⑤ Don't know

D14. 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

D15. 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

D16. What benefits did your real estate agent provide in your recent home purchase? *(Mark all that apply)*
- ☐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
- ☐0 Provided a better list of service providers (e.g. home inspector)
- ☐X None of the above
- ☐Y Other (Specify): _____

D17. 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

D18. How many people have you recommended use this agent? ☐☐

SECTION E: SELLING YOUR HOME

E1. When did you sell your previous home?

- ① 2017 ➡ Month: ☐☐ (01= Jan, 10= Oct, etc.)
- ② 2016
- ③ 2015 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 *(skip to SECTION H, question H1)*
- ⑦ Did not own previous home *(skip to SECTION H, question H1)*

E2. Was this your first time selling a home?
- ① Yes
- ② No

E3. Where was the home you sold or are in the process of selling located?

State: ☐☐ Zip: ☐☐☐☐☐ ① Outside U.S.

E4. When did you purchase the home you recently sold or are in the process of selling? Year: ☐☐☐☐

E5. When was the home built that you recently sold or are in the process of selling? Year: ☐☐☐☐

E6. What best describes the type of home you recently sold or are in the process of selling? *(Mark only one)*
- ① Cabin/cottage
- ② Duplex/apartment/condo in 2 to 4 unit building
- ③ Apartment/condo in building with 5 or more units
- ④ Townhouse/row house
- ⑤ Mobile/manufactured home
- ⑥ Detached single-family home
- ⑦ Other

E7. What was the square footage of the home you sold or are in the process of selling? ☐☐☐☐

How many bedrooms are in the home? ☐☐

How many full bathrooms are in the home? ☐☐

E8. What best describes the location of the home you recently sold or are in the process of selling? *(Mark only one)*
- ① Small town
- ② Rural area
- ③ Urban area/Central city
- ④ Suburb/Subdivision
- ⑤ Resort community/Recreation area

E9. What is the main reason you sold, or are selling, your home? *(Mark only one)*
- ① I want to move closer to my current job
- ② I can't afford the mortgage and other expenses of owning this home
- 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 (e.g. marriage, birth of child, divorce, etc)
- ⑨ Moving due to retirement
- ⑩ Job relocation
- ⑪ Schools became less desirable
- ⑫ To avoid possible foreclosure
- ⑬ Other (Specify): _____

E10. Did you sell a home that was in senior-related housing or in an active adult community?
- ① Yes ② No

E11. Had you previously wanted to sell your home and stalled or waited because your home was worth less than your mortgage?
- ① Yes, and lived in home
- ② Yes, but rented home to others and lived elsewhere
- ③ No, sold home when I wanted to sell

PLEASE ANSWER QUESTIONS E12-E22 IF YOUR PREVIOUS HOME HAS ALREADY BEEN SOLD. OTHERWISE, PLEASE SKIP TO SECTION F, QUESTION F1.

E12. What was the final selling price of the home you recently sold?

$ ☐,☐☐☐,☐☐☐

E13. What was the original asking price?

$ ☐,☐☐☐,☐☐☐

E14. When you purchased the home you recently sold what was the purchase price?

$ ☐,☐☐☐,☐☐☐

E15. How urgently did you need to sell your home?
- ① Very urgently, I needed to sell my home as quickly as possible
- ② Somewhat urgently, I had to sell my home but within a reasonable time frame
- ③ Not urgently, I waited for the right offer for my home

E16. How many times did you reduce your asking price before your home sold? *(If the response is "NONE", please insert "0")* ☐☐ ① Don't know

E17. How long was your home on the market before it sold (include all listing periods)? Weeks: ☐☐

E18. Did you offer any incentives to attract buyers? *(Mark all that apply)*
- ① No
- ② Assistance with closing costs
- ③ Assistance with condo association fees
- ④ Home warranty policies
- ⑤ Credit toward remodeling or repairs
- ⑥ Other incentives, such as a car, flat screen TV, etc.
- ⑦ Other (Specify): _____

E19. Was this a short sale (a sales transaction in which the mortgage lender agreed to accept proceeds less than the balance due on the loan)?
- ① No
- ② Yes

E20. Was the buyer a friend, family member or acquaintance whom you knew prior to the sale?
- ① Yes
- ② No

E21. How did you sell this home? *(Mark only one)*
- 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 *(skip to SECTION H, question H1)*
- ④ Sold it without ever using a real estate agent/broker
- ⑤ First listed with an agent, but then sold it myself
- ⑥ Other

E22. How satisfied were you with the process of selling your home?
- ① Very satisfied
- ② Somewhat satisfied
- ③ Somewhat dissatisfied
- ④ Very dissatisfied

6

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

ANSWER QUESTIONS F1-F14 IF YOU SOLD OR ARE SELLING YOUR PREVIOUS HOME WITH THE ASSISTANCE OF A REAL ESTATE AGENT. OTHERWISE, SKIP TO SECTION G, QUESTION G1.

F1. How many real estate agents did you contact before selecting one to help you sell your home?   # of Agents: [ ]

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? *(Mark only one)*
- ① Used agent previously to buy or sell a home
- ② Referred by (or is) a friend, neighbor or relative
- ③ Referred by another real estate agent/broker
- ④ Referred through employer or relocation company
- ⑤ Personal contact by agent (telephone, e-mail, etc.)
- ⑥ Visited an open house and met agent
- ⑦ Newspaper, Yellow Pages or home book ad
- ⑧ Direct mail (newsletter, flyer, postcard, etc.)
- ⑨ Advertising specialty (calendar, magnet, etc.)
- ⑩ Saw contact information on For Sale/Open House sign
- ⑪ Walked into or called office and agent was on duty
- ⑫ Website (without a specific reference)
- ⑬ Crowdsourcing through social media/knew the person through social media
- ⑭ Saw the agent's social media page without a connection
- ⑮ Other

F4. Was the real estate agent who assisted you with your home sale a REALTOR®, a member of the National Association of REALTORS®?
- ① Yes
- ② No
- ③ Don't know

F5. Which of the following was the most important to you in choosing a real estate agent to sell your home? *(Mark only one)*
- 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 Agent is timely with responses
- ⑨ Agent seems 100% accessible because of use of technology like tablet or smartphone
- ⑩ Other (Specify): _____

F6. Before you put your home on the market, what did you most want your agent to do for you? *(Mark only one)*
- ① Tell me how to fix up my home to sell it for more
- ② Help me sell my home within my timeframe
- ③ Help me market my home to potential buyers
- ④ Help me see homes available for purchase
- ⑤ Help me with paperwork/inspections/preparing for settlement
- ⑥ Help me price my home competitively
- ⑦ Help me find a buyer for my home
- ⑧ Help me with negotiations and dealing with buyers
- ⑨ Help me create and post videos to provide a tour of my home
- ⑩ Other (Specify): _____

F7. Who paid the real estate agent who assisted you in your home sale?
- ① Paid by me (seller)
- ② Paid by buyer
- ③ Paid by both me and buyer
- ④ Other
- ⑤ Don't know

F8. Which of the following did your real estate agent use to market your home? *(Mark all that apply)*
- ① Open house
- ② Realtor.com
- ③ Multiple Listing Service (MLS) website
- ④ Third party aggregator (Zillow, Trulia, Redfin, etc.)
- ⑤ Online classified ads (e.g. CraigsList, Newspaper etc.)
- ⑥ Real estate agent website
- ⑦ Real estate company website
- ⑧ Real estate magazine website
- ⑨ Real estate magazine
- ⓪ Video
- Ⓧ Television
- Ⓨ Direct mail (flyers, postcards, etc.)
- ① Print newspaper advertisement
- ② Yard sign
- ③ Other Web sites with real estate listings (e.g. Google, Yahoo)
- ④ Social networking Web sites (e.g. Facebook, MySpace, etc.)
- ⑤ Video hosting Web sites (e.g. YouTube, etc.)
- ⑥ Other (Specify): _____

F9. Was your home listed with a Multiple Listing Service (MLS)?
- ① Yes
- ② No
- ③ Don't know

F10. How would you describe the level of service provided by your agent when selling your home? *(Mark only one)*
- 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 Internet sites and performed few if any additional services

F11. How was the real estate agent who assisted you with your home sale compensated?
- ① Flat fee
- ② Percent of sales price
- ③ Per task fee
- ④ Other
- ⑤ Don't know

F12. Which of the following statements best describes your experience with your agent when negotiating the commission rate or fee for selling your property? *(Mark only one)*
- 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

F13. 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

F14. How many people have you recommended use this agent? [ ][ ]

7

SECTION G: SELLING YOUR HOME YOURSELF

ANSWER QUESTIONS G1-G5 IF YOU SOLD OR ARE SELLING YOUR PREVIOUS HOME WITHOUT THE ASSISTANCE OF A REAL ESTATE AGENT. OTHERWISE, SKIP TO SECTION H, QUESTION H1.

G1. What was the most important reason for selling your home without a real estate agent? *(Mark only one)*
- 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 (Specify): _____

G2. Which of the following did you use to market your home to potential buyers? *(Mark all that apply)*
- ☐ Open house
- ☐ Realtor.com
- ☐ Multiple Listing Service (MLS) website
- ☐ Third party aggregator (Zillow, Trulia, Redfin, etc.)
- ☐ Online classified ads (e.g. CraigsList, Newspaper etc.)
- ☐ Yard sign
- ☐ Video
- ☐ Print newspaper advertisement
- ☐ Television
- ☐ Friends, relatives, or neighbors
- ☐ Direct mail (flyers, postcards, etc)
- ☐ For-sale-by-owner magazine
- ☐ For-sale-by-owner Website
- ☐ Other Websites with real estate listings (e.g. Google, Yahoo)
- ☐ Social networking Websites (e.g. Facebook, MySpace, etc.)
- ☐ Video hosting Websites (e.g. YouTube, etc.)
- ☐ None – Did not actively market home
- ☐ Other (Specify): _____

G3. Which of the following tasks was the most difficult for you in selling your home yourself? *(Mark only one)*
- 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 (Specify): _____
- ⑨ None/nothing

G4. How did you determine the asking price of the home you sold? *(Mark all that apply)*
- ☐ Appraisal
- ☐ Agent presentation-who I did not use to sell home
- ☐ Recent home sold in area
- ☐ Attending open houses in area/viewing homes for sale online
- ☐ Online home evaluation tool (e.g. Zillow)
- ☐ Profit I needed from sale
- ☐ To cover what I owed on home

G5. The next time you sell a home, do you plan to sell it yourself or use an agent?
- ① Sell myself
- ② Use 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. Do you consider yourself to be:
- ① Heterosexual or straight
- ② Gay or lesbian
- ③ Bisexual
- ④ Prefer not to answer

H3. How many children under the age of 18 reside in your household?　# of Children: ▢▢

H4. How many total people (of all ages) reside in your household?　Total # of People: ▢▢

H5. Is the home you purchased a multi-generational home that will house more than you and children under the age of 18 (such as adult siblings, adult children, and/or grandparents, etc)?
- ① Yes
- ② No *(skip to question H7)*

H6. If answered yes to above, what was the primary reason you chose to buy a multi-generational home? *(Mark all that apply)*
- ☐ Cost Savings
- ☐ Health/Caretaking of aging parents/relatives
- ☐ To spend more time with aging parents/relatives
- ☐ Children/relatives over 18 moving back into the house
- ☐ Children/relatives over 18 never left home
- ☐ Wanted a larger home that multiple incomes could afford together
- ☐ None of the above
- ☐ Other

H7. How many income earners are there in your household?
- ① None
- ② One
- ③ Two
- ④ Three or more

H8. Are you or someone in your household currently:
- ① Active in the Armed Forces
- ② A veteran
- ③ Neither

H9. What is your age?　Years: ▢▢▢

H10. Do you consider yourself to be... *(Mark all that apply)*
- ☐ Black/African American
- ☐ Asian/Pacific Islander
- ☐ White/Caucasian
- ☐ Hispanic/Latino/Mexican/Puerto Rican
- ☐ Other

H11. Is English the primary language spoken in your household?
- ① Yes　② No

H12. Were you born in the United States?
- ① Yes　② No

H13. What was your total household income (before taxes and deductions) from all sources in 2016?
- 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 to $249,999
- ⑭ $250,000 to $499,999
- ⑮ $500,000 to $999,999
- ⑯ $1,000,000 or more

H14. Are you the head of the household?
- ① Yes　② No

8

Item 3: National Tamhane Results

Multiple Comparisons Tamhane
Dependent Variable: QA1 - Was this your first home purchase?

(I) QA12 - How would y	(J) QA12 - How would you describe the location of the home you recently purchased? (Mark only one)	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Suburb/Subdivision	Small town	0.013	0.010	0.884	-0.020	0.040
	Urban area/Central city	0.130	0.012	0.000	0.100	0.160
	Rural area	0.006	0.012	1.000	-0.030	0.040
	Resort/Recreation area	-0.233	0.017	0.000	-0.280	-0.190
Small town	Suburb/Subdivision	-0.013	0.010	0.884	-0.040	0.020
	Urban area/Central city	0.117	0.014	0.000	0.080	0.160
	Rural area	-0.007	0.014	1.000	-0.050	0.030
	Resort/Recreation area	-0.246	0.018	0.000	-0.300	-0.200
Urban area/Central city	Suburb/Subdivision	-0.130	0.012	0.000	-0.160	-0.100
	Small town	-0.117	0.014	0.000	-0.160	-0.080
	Rural area	-0.124	0.016	0.000	-0.170	-0.080
	Resort/Recreation area	-0.363	0.019	0.000	-0.420	-0.310
Rural area	Suburb/Subdivision	-0.006	0.012	1.000	-0.040	0.030
	Small town	0.007	0.014	1.000	-0.030	0.050
	Urban area/Central city	0.124	0.016	0.000	0.080	0.170
	Resort/Recreation area	-0.239	0.019	0.000	-0.290	-0.180
Resort/Recreation area	Suburb/Subdivision	0.233	0.017	0.000	0.190	0.280
	Small town	0.246	0.018	0.000	0.200	0.300
	Urban area/Central city	0.363	0.019	0.000	0.310	0.420
	Rural area	0.239	0.019	0.000	0.180	0.290

* The mean difference is significant at the 0.05 level.

(I) QH1 - Which of the household?	(J) QH1 - Which of the following best describes the composition of your household?	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Married couple	Single female	0.075	0.011	0.000	0.040	0.100
	Single male	0.090	0.015	0.000	0.050	0.130
	Unmarried couple	0.330	0.014	0.000	0.290	0.370
	Other	0.079	0.030	0.076	0.000	0.160
Single female	Married couple	-0.075	0.011	0.000	-0.100	-0.040
	Single male	0.016	0.017	0.988	-0.030	0.060
	Unmarried couple	0.255	0.017	0.000	0.210	0.300
	Other	0.005	0.031	1.000	-0.080	0.090
Single male	Married couple	-0.090	0.015	0.000	-0.130	-0.050
	Single female	-0.016	0.017	0.988	-0.060	0.030
	Unmarried couple	0.239	0.020	0.000	0.180	0.290
	Other	-0.011	0.032	1.000	-0.100	0.080
Unmarried couple	Married couple	-0.330	0.014	0.000	-0.370	-0.290
	Single female	-0.255	0.017	0.000	-0.300	-0.210
	Single male	-0.239	0.020	0.000	-0.290	-0.180
	Other	-0.251	0.032	0.000	-0.340	-0.160
Other	Married couple	-0.079	0.030	0.076	-0.160	0.000
	Single female	-0.005	0.031	1.000	-0.090	0.080
	Single male	0.011	0.032	1.000	-0.080	0.100
	Unmarried couple	0.251	0.032	0.000	0.160	0.340

* The mean difference is significant at the 0.05 level.

(I) newa16	(J) newa16	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Live with family and fri	Own	-0.608	0.012	0.000	-0.640	-0.580
	Rented	-0.039	0.013	0.011	-0.070	-0.010
Own	Live with family and friends	0.608	0.012	0.000	0.580	0.640
	Rented	0.570	0.006	0.000	0.550	0.580
Rented	Live with family and friends	0.039	0.013	0.011	0.010	0.070
	Own	-0.570	0.006	0.000	-0.580	-0.550

* The mean difference is significant at the 0.05 level.

(I) CombinedH13	(J) CombinedH13	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Under35k	35k to 55k	-0.019	0.019	1.000	-0.080	0.040
	55k to 75k	-0.065	0.019	0.012	-0.120	-0.010
	75k to 100k	-0.136	0.018	0.000	-0.190	-0.080
	100k to 125k	-0.222	0.019	0.000	-0.280	-0.170
	125k to 175k	-0.281	0.018	0.000	-0.340	-0.230
	More than 175k	-0.342	0.018	0.000	-0.400	-0.290
35k to 55k	Under35k	0.019	0.019	1.000	-0.040	0.080
	55k to 75k	-0.046	0.015	0.035	-0.090	0.000
	75k to 100k	-0.118	0.014	0.000	-0.160	-0.080
	100k to 125k	-0.203	0.014	0.000	-0.250	-0.160
	125k to 175k	-0.262	0.014	0.000	-0.300	-0.220
	More than 175k	-0.324	0.014	0.000	-0.370	-0.280
55k to 75k	Under35k	0.065	0.019	0.012	0.010	0.120
	35k to 55k	0.046	0.015	0.035	0.000	0.090
	75k to 100k	-0.072	0.013	0.000	-0.110	-0.030
	100k to 125k	-0.157	0.013	0.000	-0.200	-0.120
	125k to 175k	-0.216	0.013	0.000	-0.250	-0.180
	More than 175k	-0.278	0.013	0.000	-0.320	-0.240
75k to 100k	Under35k	0.136	0.018	0.000	0.080	0.190
	35k to 55k	0.118	0.014	0.000	0.080	0.160
	55k to 75k	0.072	0.013	0.000	0.030	0.110
	100k to 125k	-0.085	0.013	0.000	-0.120	-0.050
	125k to 175k	-0.144	0.012	0.000	-0.180	-0.110
	More than 175k	-0.206	0.012	0.000	-0.240	-0.170
100k to 125k	Under35k	0.222	0.019	0.000	0.170	0.280
	35k to 55k	0.203	0.014	0.000	0.160	0.250
	55k to 75k	0.157	0.013	0.000	0.120	0.200
	75k to 100k	0.085	0.013	0.000	0.050	0.120
	125k to 175k	-0.059	0.013	0.000	-0.100	-0.020
	More than 175k	-0.120	0.012	0.000	-0.160	-0.080
125k to 175k	Under35k	0.281	0.018	0.000	0.230	0.340
	35k to 55k	0.262	0.014	0.000	0.220	0.300
	55k to 75k	0.216	0.013	0.000	0.180	0.250
	75k to 100k	0.144	0.012	0.000	0.110	0.180
	100k to 125k	0.059	0.013	0.000	0.020	0.100
	More than 175k	-0.062	0.012	0.000	-0.100	-0.030
More than 175k	Under35k	0.342	0.018	0.000	0.290	0.400
	35k to 55k	0.324	0.014	0.000	0.280	0.370
	55k to 75k	0.278	0.013	0.000	0.240	0.320
	75k to 100k	0.206	0.012	0.000	0.170	0.240
	100k to 125k	0.120	0.012	0.000	0.080	0.160
	125k to 175k	0.062	0.012	0.000	0.030	0.100

* The mean difference is significant at the 0.05 level.

(I) Region	(J) Region	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
	South	-.127*	0.012	0.000	-0.160	-0.090
	West	-.120*	0.013	0.000	-0.160	-0.080
Midwest	Northeast	.057*	0.014	0.000	0.020	0.090
	South	-.070*	0.010	0.000	-0.100	-0.040
	West	-.064*	0.012	0.000	-0.090	-0.030
South	Northeast	.127*	0.012	0.000	0.090	0.160
	Midwest	.070*	0.010	0.000	0.040	0.100
	West	0.007	0.010	0.980	-0.020	0.030
West	Northeast	.120*	0.013	0.000	0.080	0.160
	Midwest	.064*	0.012	0.000	0.030	0.090
	South	-0.007	0.010	0.980	-0.030	0.020

* The mean difference is significant at the 0.05 level.

Item 4: Breakout Tamhane Results
4a. Home Price Tamhane Results

(I) QA12 - How would you describe the location of the home you recently purchased? (Mark only one)	(J) QA12 - How would you describe the location of the home you recently purchased? (Mark only one)	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	Upper Bound
Suburb/Subdivision	Small town	-0.021	0.012	0.637	-0.055	0.014
	Urban area/Central city	-0.056	0.013	0.000	-0.092	-0.019
	Rural area	0.016	0.015	0.967	-0.026	0.057
	Resort/Recreation area	-0.051	0.035	0.806	-0.151	0.049
Small town	Suburb/Subdivision	0.021	0.012	0.637	-0.014	0.055
	Urban area/Central city	-0.035	0.016	0.258	-0.080	0.010
	Rural area	0.036	0.018	0.336	-0.013	0.086
	Resort/Recreation area	-0.031	0.037	0.995	-0.134	0.073
Urban area/Central city	Suburb/Subdivision	0.056	0.013	0.000	0.019	0.092
	Small town	0.035	0.016	0.258	-0.010	0.080
	Rural area	0.071	0.018	0.001	0.021	0.122
	Resort/Recreation area	0.005	0.037	1.000	-0.100	0.109
Rural area	Suburb/Subdivision	-0.016	0.015	0.967	-0.057	0.026
	Small town	-0.036	0.018	0.336	-0.086	0.013
	Urban area/Central city	-0.071	0.018	0.001	-0.122	-0.021
	Resort/Recreation area	-0.067	0.038	0.551	-0.173	0.039
Resort/Recreation area	Suburb/Subdivision	0.051	0.035	0.806	-0.049	0.151
	Small town	0.031	0.037	0.995	-0.073	0.134
	Urban area/Central city	-0.005	0.037	1.000	-0.109	0.100
	Rural area	0.067	0.038	0.551	-0.039	0.173

* The mean difference is significant at the 0.05 level.

(I) QH1 - Which of the following best describes the composition of your household?	(J) QH1 - Which of the following best describes the composition of your household?	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	Upper Bound
Married couple	Single female	0.029	0.012	0.145	-0.005	0.062
	Single male	0.050	0.016	0.013	0.006	0.094
	Unmarried couple	0.034	0.015	0.240	-0.009	0.076
	Other	-0.052	0.034	0.744	-0.147	0.044
Single female	Married couple	-0.029	0.012	0.145	-0.062	0.005
	Single male	0.022	0.018	0.927	-0.029	0.072
	Unmarried couple	0.005	0.018	1.000	-0.045	0.055
	Other	-0.080	0.035	0.204	-0.179	0.019
Single male	Married couple	-0.050	0.016	0.013	-0.094	-0.006
	Single female	-0.022	0.018	0.927	-0.072	0.029
	Unmarried couple	-0.017	0.020	0.996	-0.074	0.041
	Other	-0.102	0.036	0.054	-0.205	0.001
Unmarried couple	Married couple	-0.034	0.015	0.240	-0.076	0.009
	Single female	-0.005	0.018	1.000	-0.055	0.045
	Single male	0.017	0.020	0.996	-0.041	0.074
	Other	-0.085	0.036	0.176	-0.188	0.017
Other	Married couple	0.052	0.034	0.744	-0.044	0.147
	Single female	0.080	0.035	0.204	-0.019	0.179
	Single male	0.102	0.036	0.054	-0.001	0.205
	Unmarried couple	0.085	0.036	0.176	-0.017	0.188

* The mean difference is significant at the 0.05 level.

(I) newa16	(J) newa16	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	Upper Bound
Live with family and friends	Own	-0.015	0.014	0.643	-0.049	0.019
	Rented	-0.068	0.014	0.000	-0.102	-0.034
Own	Live with family and friends	0.015	0.014	0.643	-0.019	0.049
	Rented	-0.053	0.009	0.000	-0.075	-0.031
Rented	Live with family and friends	0.068	0.014	0.000	0.034	0.102
	Own	0.053	0.009	0.000	0.031	0.075

* The mean difference is significant at the 0.05 level.

(I) CombinedH13	(J) CombinedH13	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Under35k	35k to 55k	-0.047	0.018	0.150	-0.101	0.007
	55k to 75k	-0.107	0.017	0.000	-0.159	-0.054
	75k to 100k	-0.114	0.017	0.000	-0.165	-0.063
	100k to 125k	-0.173	0.018	0.000	-0.227	-0.119
	125k to 175k	-0.205	0.018	0.000	-0.259	-0.151
	More than 175k	-0.302	0.019	0.000	-0.360	-0.245
35k to 55k	Under35k	0.047	0.018	0.150	-0.007	0.101
	55k to 75k	-0.060	0.015	0.001	-0.104	-0.015
	75k to 100k	-0.067	0.014	0.000	-0.110	-0.024
	100k to 125k	-0.126	0.015	0.000	-0.172	-0.079
	125k to 175k	-0.158	0.015	0.000	-0.205	-0.112
	More than 175k	-0.255	0.017	0.000	-0.305	-0.205
55k to 75k	Under35k	0.107	0.017	0.000	0.054	0.159
	35k to 55k	0.060	0.015	0.001	0.015	0.104
	75k to 100k	-0.007	0.014	1.000	-0.049	0.034
	100k to 125k	-0.066	0.015	0.000	-0.112	-0.021
	125k to 175k	-0.098	0.015	0.000	-0.144	-0.053
	More than 175k	-0.195	0.016	0.000	-0.245	-0.146
75k to 100k	Under35k	0.114	0.017	0.000	0.063	0.165
	35k to 55k	0.067	0.014	0.000	0.024	0.110
	55k to 75k	0.007	0.014	1.000	-0.034	0.049
	100k to 125k	-0.059	0.014	0.001	-0.102	-0.015
	125k to 175k	-0.091	0.014	0.000	-0.135	-0.047
	More than 175k	-0.188	0.016	0.000	-0.236	-0.140
100k to 125k	Under35k	0.173	0.018	0.000	0.119	0.227
	35k to 55k	0.126	0.015	0.000	0.079	0.172
	55k to 75k	0.066	0.015	0.000	0.021	0.112
	75k to 100k	0.059	0.014	0.001	0.015	0.102
	125k to 175k	-0.032	0.016	0.566	-0.080	0.015
	More than 175k	-0.129	0.017	0.000	-0.180	-0.078
125k to 175k	Under35k	0.205	0.018	0.000	0.151	0.259
	35k to 55k	0.158	0.015	0.000	0.112	0.205
	55k to 75k	0.098	0.015	0.000	0.053	0.144
	75k to 100k	0.091	0.014	0.000	0.047	0.135
	100k to 125k	0.032	0.016	0.566	-0.015	0.080
	More than 175k	-0.097	0.017	0.000	-0.148	-0.046
More than 175k	Under35k	0.302	0.019	0.000	0.245	0.360
	35k to 55k	0.255	0.017	0.000	0.205	0.305
	55k to 75k	0.195	0.016	0.000	0.146	0.245
	75k to 100k	0.188	0.016	0.000	0.140	0.236
	100k to 125k	0.129	0.017	0.000	0.078	0.180
	125k to 175k	0.097	0.017	0.000	0.046	0.148

(I) region	(J) region	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Northeast	Midwest	.329*	0.014	0.000	0.293	0.365
	South	.226*	0.014	0.000	0.190	0.262
	West	-.29398*	0.016	0.000	-0.335	-0.253
Midwest	Northeast	-.32896*	0.014	0.000	-0.365	-0.293
	South	-.10289*	0.008	0.000	-0.124	-0.082
	West	-.62294*	0.011	0.000	-0.653	-0.593
South	Northeast	-.22607*	0.014	0.000	-0.262	-0.190
	Midwest	.103*	0.008	0.000	0.082	0.124
	West	-.52005*	0.011	0.000	-0.549	-0.491
West	Northeast	.294*	0.016	0.000	0.253	0.335
	Midwest	.623*	0.011	0.000	0.593	0.653
	South	.520*	0.011	0.000	0.491	0.549

* The mean difference is significant at the 0.05 level.

4b. Housing Inventory Tamhane Results

(I) QA12 - How would you describe the location of the home you recently purchased? (Mark only one)	(J) QA12 - How would you describe the location of the home you recently purchased? (Mark only one)	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Suburb/Subdivision	Small town	-0.105	0.009	0.000	-0.131	-0.080
	Urban area/Central city	-0.022	0.009	0.097	-0.046	0.002
	Rural area	-0.107	0.012	0.000	-0.140	-0.075
	Resort/Recreation area	-0.162	0.030	0.000	-0.247	-0.077
Small town	Suburb/Subdivision	0.105	0.009	0.000	0.080	0.131
	Urban area/Central city	0.083	0.012	0.000	0.051	0.116
	Rural area	-0.002	0.014	1.000	-0.041	0.037
	Resort/Recreation area	-0.057	0.031	0.505	-0.144	0.031
Urban area/Central city	Suburb/Subdivision	0.022	0.009	0.097	-0.002	0.046
	Small town	-0.083	0.012	0.000	-0.116	-0.051
	Rural area	-0.085	0.014	0.000	-0.123	-0.047
	Resort/Recreation area	-0.140	0.031	0.000	-0.227	-0.053
Rural area	Suburb/Subdivision	0.107	0.012	0.000	0.075	0.140
	Small town	0.002	0.014	1.000	-0.037	0.041
	Urban area/Central city	0.085	0.014	0.000	0.047	0.123
	Resort/Recreation area	-0.055	0.032	0.587	-0.144	0.035
Resort/Recreation area	Suburb/Subdivision	0.162	0.030	0.000	0.077	0.247
	Small town	0.057	0.031	0.505	-0.031	0.144
	Urban area/Central city	0.140	0.031	0.000	0.053	0.227
	Rural area	0.055	0.032	0.587	-0.035	0.144

* The mean difference is significant at the 0.05 level.

(I) QH1 - Which of the fc	(J) QH1 - Which of the following best describes the composition of your household?	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Married couple	Single female	-0.013	0.009	0.737	-0.037	0.011
	Single male	-0.034	0.012	0.057	-0.068	0.001
	Unmarried couple	-0.034	0.012	0.039	-0.068	-0.001
	Other	-0.037	0.024	0.747	-0.106	0.032
Single female	Married couple	0.013	0.009	0.737	-0.011	0.037
	Single male	-0.021	0.014	0.783	-0.060	0.019
	Unmarried couple	-0.021	0.014	0.731	-0.060	0.017
	Other	-0.024	0.025	0.985	-0.096	0.047
Single male	Married couple	0.034	0.012	0.057	-0.001	0.068
	Single female	0.021	0.014	0.783	-0.019	0.060
	Unmarried couple	-0.001	0.016	1.000	-0.046	0.045
	Other	-0.003	0.027	1.000	-0.079	0.072
Unmarried couple	Married couple	0.034	0.012	0.039	0.001	0.068
	Single female	0.021	0.014	0.731	-0.017	0.060
	Single male	0.001	0.016	1.000	-0.045	0.046
	Other	-0.003	0.027	1.000	-0.078	0.072
Other	Married couple	0.037	0.024	0.747	-0.032	0.106
	Single female	0.024	0.025	0.985	-0.047	0.096
	Single male	0.003	0.027	1.000	-0.072	0.079
	Unmarried couple	0.003	0.027	1.000	-0.072	0.078

* The mean difference is significant at the 0.05 level.

(I) newa16	(J) newa16	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Live with family and frie	Own	0.019	0.011	0.235	-0.007	0.045
	Rented	0.031	0.011	0.012	0.005	0.057
Own	Live with family and friends	-0.019	0.011	0.235	-0.045	0.007
	Rented	0.013	0.006	0.140	-0.003	0.028
Rented	Live with family and friends	-0.031	0.011	0.012	-0.057	-0.005
	Own	-0.013	0.006	0.140	-0.028	0.003

* The mean difference is significant at the 0.05 level.

(I) CombinedH13	(J) CombinedH13	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Under35k	35k to 55k	0.012	0.017	1.000	-0.038	0.063
	55k to 75k	0.024	0.016	0.948	-0.025	0.073
	75k to 100k	0.043	0.016	0.110	-0.004	0.091
	100k to 125k	0.066	0.016	0.001	0.018	0.114
	125k to 175k	0.073	0.016	0.000	0.025	0.120
	More than 175k	0.075	0.016	0.000	0.026	0.123
35k to 55k	Under35k	-0.012	0.017	1.000	-0.063	0.038
	55k to 75k	0.012	0.012	1.000	-0.025	0.048
	75k to 100k	0.031	0.011	0.130	-0.004	0.065
	100k to 125k	0.053	0.012	0.000	0.018	0.089
	125k to 175k	0.060	0.011	0.000	0.025	0.095
	More than 175k	0.062	0.012	0.000	0.026	0.099
55k to 75k	Under35k	-0.024	0.016	0.948	-0.073	0.025
	35k to 55k	-0.012	0.012	1.000	-0.048	0.025
	75k to 100k	0.019	0.010	0.766	-0.013	0.051
	100k to 125k	0.042	0.011	0.002	0.009	0.074
	125k to 175k	0.048	0.011	0.000	0.016	0.080
	More than 175k	0.050	0.011	0.000	0.017	0.084
75k to 100k	Under35k	-0.043	0.016	0.110	-0.091	0.004
	35k to 55k	-0.031	0.011	0.130	-0.065	0.004
	55k to 75k	-0.019	0.010	0.766	-0.051	0.013
	100k to 125k	0.023	0.010	0.399	-0.008	0.053
	125k to 175k	0.029	0.010	0.059	-0.001	0.059
	More than 175k	0.031	0.010	0.055	0.000	0.063
100k to 125k	Under35k	-0.066	0.016	0.001	-0.114	-0.018
	35k to 55k	-0.053	0.012	0.000	-0.089	-0.018
	55k to 75k	-0.042	0.011	0.002	-0.074	-0.009
	75k to 100k	-0.023	0.010	0.399	-0.053	0.008
	125k to 175k	0.007	0.010	1.000	-0.024	0.037
	More than 175k	0.009	0.011	1.000	-0.024	0.041
125k to 175k	Under35k	-0.073	0.016	0.000	-0.120	-0.025
	35k to 55k	-0.060	0.011	0.000	-0.095	-0.025
	55k to 75k	-0.048	0.011	0.000	-0.080	-0.016
	75k to 100k	-0.029	0.010	0.059	-0.059	0.001
	100k to 125k	-0.007	0.010	1.000	-0.037	0.024
	More than 175k	0.002	0.011	1.000	-0.030	0.034
More than 175k	Under35k	-0.075	0.016	0.000	-0.123	-0.026
	35k to 55k	-0.062	0.012	0.000	-0.099	-0.026
	55k to 75k	-0.050	0.011	0.000	-0.084	-0.017
	75k to 100k	-0.031	0.010	0.055	-0.063	0.000
	100k to 125k	-0.009	0.011	1.000	-0.041	0.024
	125k to 175k	-0.002	0.011	1.000	-0.034	0.030

(I) Region	(J) Region	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Northeast	Midwest	.339*	0.012	0.000	0.308	0.370
	South	.164*	0.013	0.000	0.131	0.197
	West	.344*	0.012	0.000	0.314	0.375
Midwest	Northeast	-.339*	0.012	0.000	-0.370	-0.308
	South	-.175*	0.006	0.000	-0.191	-0.159
	West	0.006	0.004	0.657	-0.005	0.017
South	Northeast	-.164*	0.013	0.000	-0.197	-0.131
	Midwest	.175*	0.006	0.000	0.159	0.191
	West	.181*	0.006	0.000	0.165	0.196
West	Northeast	-.344*	0.012	0.000	-0.375	-0.314
	Midwest	-0.006	0.004	0.657	-0.017	0.005
	South	-.181*	0.006	0.000	-0.196	-0.165

* The mean difference is significant at the 0.05 level.

4c. Unemployment Rate Tamhane Results

(I) QA12 - How would you describe the location of the home you recently purchased? (Mark only one)	(J) QA12 - How would you describe the location of the home you recently purchased? (Mark only one)	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Suburb/Subdivision	Small town	-0.076	0.012	0.000	-0.110	-0.042
	Urban area/Central city	-0.019	0.013	0.759	-0.055	0.017
	Rural area	-0.036	0.015	0.133	-0.078	0.005
	Resort/Recreation area	-0.068	0.034	0.384	-0.165	0.029
Small town	Suburb/Subdivision	0.076	0.012	0.000	0.042	0.110
	Urban area/Central city	0.056	0.016	0.003	0.012	0.100
	Rural area	0.039	0.017	0.205	-0.009	0.088
	Resort/Recreation area	0.007	0.035	1.000	-0.093	0.107
Urban area/Central city	Suburb/Subdivision	0.019	0.013	0.759	-0.017	0.055
	Small town	-0.056	0.016	0.003	-0.100	-0.012
	Rural area	-0.017	0.018	0.985	-0.067	0.033
	Resort/Recreation area	-0.049	0.036	0.846	-0.150	0.052
Rural area	Suburb/Subdivision	0.036	0.015	0.133	-0.005	0.078
	Small town	-0.039	0.017	0.205	-0.088	0.009
	Urban area/Central city	0.017	0.018	0.985	-0.033	0.067
	Resort/Recreation area	-0.032	0.036	0.991	-0.135	0.071
Resort/Recreation area	Suburb/Subdivision	0.068	0.034	0.384	-0.029	0.165
	Small town	-0.007	0.035	1.000	-0.107	0.093
	Urban area/Central city	0.049	0.036	0.846	-0.052	0.150
	Rural area	0.032	0.036	0.991	-0.071	0.135

* The mean difference is significant at the 0.05 level.

(I) QH1 - Which of the f	(J) QH1 - Which of the following best describes the composition of your household?	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Married couple	Single female	0.014	0.012	0.944	-0.020	0.048
	Single male	-0.029	0.017	0.587	-0.075	0.018
	Unmarried couple	0.004	0.016	1.000	-0.041	0.049
	Other	-0.071	0.033	0.266	-0.164	0.021
Single female	Married couple	-0.014	0.012	0.944	-0.048	0.020
	Single male	-0.042	0.019	0.232	-0.096	0.011
	Unmarried couple	-0.010	0.019	1.000	-0.062	0.043
	Other	-0.085	0.034	0.123	-0.182	0.011
Single male	Married couple	0.029	0.017	0.587	-0.018	0.075
	Single female	0.042	0.019	0.232	-0.011	0.096
	Unmarried couple	0.033	0.022	0.758	-0.028	0.094
	Other	-0.043	0.036	0.930	-0.144	0.059
Unmarried couple	Married couple	-0.004	0.016	1.000	-0.049	0.041
	Single female	0.010	0.019	1.000	-0.043	0.062
	Single male	-0.033	0.022	0.758	-0.094	0.028
	Other	-0.076	0.036	0.299	-0.177	0.025
Other	Married couple	0.071	0.033	0.266	-0.021	0.164
	Single female	0.085	0.034	0.123	-0.011	0.182
	Single male	0.043	0.036	0.930	-0.059	0.144
	Unmarried couple	0.076	0.036	0.299	-0.025	0.177

* The mean difference is significant at the 0.05 level.

(I) newa16	(J) newa16	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Live with family and fri	Own	0.077	0.015	0.000	0.041	0.112
	Rented	0.085	0.015	0.000	0.049	0.121
Own	Live with family and friends	-0.077	0.015	0.000	-0.112	-0.041
	Rented	0.009	0.009	0.726	-0.013	0.030
Rented	Live with family and friends	-0.085	0.015	0.000	-0.121	-0.049
	Own	-0.009	0.009	0.726	-0.030	0.013

* The mean difference is significant at the 0.05 level.

(I) CombinedH13	(J) CombinedH13	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Under35k	35k to 55k	-0.025	0.021	0.997	-0.091	0.040
	55k to 75k	0.002	0.021	1.000	-0.060	0.065
	75k to 100k	0.003	0.020	1.000	-0.059	0.064
	100k to 125k	0.024	0.021	0.998	-0.040	0.087
	125k to 175k	0.010	0.021	1.000	-0.053	0.074
	More than 175k	0.060	0.021	0.108	-0.005	0.125
35k to 55k	Under35k	0.025	0.021	0.997	-0.040	0.091
	55k to 75k	0.028	0.016	0.829	-0.021	0.076
	75k to 100k	0.028	0.015	0.772	-0.019	0.075
	100k to 125k	0.049	0.016	0.048	0.000	0.098
	125k to 175k	0.036	0.016	0.440	-0.013	0.085
	More than 175k	0.085	0.017	0.000	0.034	0.137
55k to 75k	Under35k	-0.002	0.021	1.000	-0.065	0.060
	35k to 55k	-0.028	0.016	0.829	-0.076	0.021
	75k to 100k	0.000	0.014	1.000	-0.043	0.044
	100k to 125k	0.021	0.015	0.973	-0.025	0.068
	125k to 175k	0.008	0.015	1.000	-0.038	0.054
	More than 175k	0.057	0.016	0.007	0.009	0.106
75k to 100k	Under35k	-0.003	0.020	1.000	-0.064	0.059
	35k to 55k	-0.028	0.015	0.772	-0.075	0.019
	55k to 75k	0.000	0.014	1.000	-0.044	0.043
	100k to 125k	0.021	0.015	0.961	-0.023	0.066
	125k to 175k	0.008	0.015	1.000	-0.036	0.052
	More than 175k	0.057	0.015	0.004	0.011	0.104
100k to 125k	Under35k	-0.024	0.021	0.998	-0.087	0.040
	35k to 55k	-0.049	0.016	0.048	-0.098	0.000
	55k to 75k	-0.021	0.015	0.973	-0.068	0.025
	75k to 100k	-0.021	0.015	0.961	-0.066	0.023
	125k to 175k	-0.013	0.015	1.000	-0.061	0.034
	More than 175k	0.036	0.016	0.439	-0.013	0.085
125k to 175k	Under35k	-0.010	0.021	1.000	-0.074	0.053
	35k to 55k	-0.036	0.016	0.440	-0.085	0.013
	55k to 75k	-0.008	0.015	1.000	-0.054	0.038
	75k to 100k	-0.008	0.015	1.000	-0.052	0.036
	100k to 125k	0.013	0.015	1.000	-0.034	0.061
	More than 175k	0.049	0.016	0.050	0.000	0.099
More than 175k	Under35k	-0.060	0.021	0.108	-0.125	0.005
	35k to 55k	-0.085	0.017	0.000	-0.137	-0.034
	55k to 75k	-0.057	0.016	0.007	-0.106	-0.009
	75k to 100k	-0.057	0.015	0.004	-0.104	-0.011
	100k to 125k	-0.036	0.016	0.439	-0.085	0.013
	125k to 175k	-0.049	0.016	0.050	-0.099	0.000

(I) Region	(J) Region	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Northeast	Midwest	.339*	0.012	0.000	0.308	0.370
	South	.164*	0.013	0.000	0.131	0.197
	West	.344*	0.012	0.000	0.314	0.375
Midwest	Northeast	-.339*	0.012	0.000	-0.370	-0.308
	South	-.175*	0.006	0.000	-0.191	-0.159
	West	0.006	0.004	0.657	-0.005	0.017
South	Northeast	-.164*	0.013	0.000	-0.197	-0.131
	Midwest	.175*	0.006	0.000	0.159	0.191
	West	.181*	0.006	0.000	0.165	0.196
West	Northeast	-.344*	0.012	0.000	-0.375	-0.314
	Midwest	-0.006	0.004	0.657	-0.017	0.005
	South	-.181*	0.006	0.000	-0.196	-0.165

* The mean difference is significant at the 0.05 level.

4d. Share of Population Has Bachelor's Degree Tamhane Results

(I) QA12 - How would you describe the location of the home you recently purchased? (Mark only one)	(J) QA12 - How would you describe the location of the home you recently purchased? (Mark only one)	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	Upper Bound
Suburb/Subdivision	Small town	0.112	0.012	0.000	0.079	0.144
	Urban area/Central city	0.051	0.013	0.001	0.016	0.086
	Rural area	0.120	0.014	0.000	0.079	0.160
	Resort/Recreation area	0.182	0.034	0.000	0.087	0.277
Small town	Suburb/Subdivision	-0.112	0.012	0.000	-0.144	-0.079
	Urban area/Central city	-0.061	0.015	0.001	-0.104	-0.019
	Rural area	0.008	0.017	1.000	-0.039	0.055
	Resort/Recreation area	0.070	0.035	0.366	-0.028	0.168
Urban area/Central city	Suburb/Subdivision	-0.051	0.013	0.001	-0.086	-0.016
	Small town	0.061	0.015	0.001	0.019	0.104
	Rural area	0.069	0.017	0.001	0.020	0.118
	Resort/Recreation area	0.131	0.035	0.002	0.032	0.231
Rural area	Suburb/Subdivision	-0.120	0.014	0.000	-0.160	-0.079
	Small town	-0.008	0.017	1.000	-0.055	0.039
	Urban area/Central city	-0.069	0.017	0.001	-0.118	-0.020
	Resort/Recreation area	0.062	0.036	0.577	-0.039	0.163
Resort/Recreation area	Suburb/Subdivision	-0.182	0.034	0.000	-0.277	-0.087
	Small town	-0.070	0.035	0.366	-0.168	0.028
	Urban area/Central city	-0.131	0.035	0.002	-0.231	-0.032
	Rural area	-0.062	0.036	0.577	-0.163	0.039

* The mean difference is significant at the 0.05 level.

(I) QH1 - Which of the fol	(J) QH1 - Which of the following best describes the composition of your household?	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Married couple	Single female	0.013	0.012	0.947	-0.020	0.047
	Single male	0.023	0.016	0.800	-0.022	0.069
	Unmarried couple	0.026	0.016	0.627	-0.018	0.070
	Other	0.042	0.032	0.870	-0.048	0.132
Single female	Married couple	-0.013	0.012	0.947	-0.047	0.020
	Single male	0.010	0.019	1.000	-0.042	0.062
	Unmarried couple	0.013	0.018	0.999	-0.038	0.064
	Other	0.029	0.033	0.992	-0.065	0.123
Single male	Married couple	-0.023	0.016	0.800	-0.069	0.022
	Single female	-0.010	0.019	1.000	-0.062	0.042
	Unmarried couple	0.003	0.021	1.000	-0.057	0.062
	Other	0.019	0.035	1.000	-0.079	0.118
Unmarried couple	Married couple	-0.026	0.016	0.627	-0.070	0.018
	Single female	-0.013	0.018	0.999	-0.064	0.038
	Single male	-0.003	0.021	1.000	-0.062	0.057
	Other	0.016	0.035	1.000	-0.082	0.114
Other	Married couple	-0.042	0.032	0.870	-0.132	0.048
	Single female	-0.029	0.033	0.992	-0.123	0.065
	Single male	-0.019	0.035	1.000	-0.118	0.079
	Unmarried couple	-0.016	0.035	1.000	-0.114	0.082

* The mean difference is significant at the 0.05 level.

(I) newa16	(J) newa16	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Live with family and frier	Own	-0.020	0.014	0.430	-0.054	0.015
	Rented	-0.039	0.015	0.022	-0.074	-0.004
Own	Live with family and friends	0.020	0.014	0.430	-0.015	0.054
	Rented	-0.019	0.009	0.091	-0.041	0.002
Rented	Live with family and friends	0.039	0.015	0.022	0.004	0.074
	Own	0.019	0.009	0.091	-0.002	0.041

* The mean difference is significant at the 0.05 level.

(I) CombinedH13	(J) CombinedH13	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Under35k	35k to 55k	-0.052	0.021	0.261	-0.117	0.012
	55k to 75k	-0.104	0.021	0.000	-0.167	-0.042
	75k to 100k	-0.156	0.020	0.000	-0.217	-0.095
	100k to 125k	-0.210	0.021	0.000	-0.272	-0.148
	125k to 175k	-0.246	0.020	0.000	-0.307	-0.184
	More than 175k	-0.285	0.021	0.000	-0.348	-0.222
35k to 55k	Under35k	0.052	0.021	0.261	-0.012	0.117
	55k to 75k	-0.052	0.016	0.019	-0.100	-0.004
	75k to 100k	-0.104	0.015	0.000	-0.150	-0.058
	100k to 125k	-0.158	0.016	0.000	-0.206	-0.110
	125k to 175k	-0.194	0.016	0.000	-0.241	-0.146
	More than 175k	-0.233	0.016	0.000	-0.282	-0.184
55k to 75k	Under35k	0.104	0.021	0.000	0.042	0.167
	35k to 55k	0.052	0.016	0.019	0.004	0.100
	75k to 100k	-0.052	0.014	0.005	-0.094	-0.009
	100k to 125k	-0.105	0.015	0.000	-0.150	-0.061
	125k to 175k	-0.141	0.015	0.000	-0.185	-0.097
	More than 175k	-0.181	0.015	0.000	-0.226	-0.135
75k to 100k	Under35k	0.156	0.020	0.000	0.095	0.217
	35k to 55k	0.104	0.015	0.000	0.058	0.150
	55k to 75k	0.052	0.014	0.005	0.009	0.094
	100k to 125k	-0.054	0.014	0.003	-0.097	-0.011
	125k to 175k	-0.090	0.014	0.000	-0.132	-0.048
	More than 175k	-0.129	0.014	0.000	-0.173	-0.085
100k to 125k	Under35k	0.210	0.021	0.000	0.148	0.272
	35k to 55k	0.158	0.016	0.000	0.110	0.206
	55k to 75k	0.105	0.015	0.000	0.061	0.150
	75k to 100k	0.054	0.014	0.003	0.011	0.097
	125k to 175k	-0.036	0.015	0.248	-0.080	0.008
	More than 175k	-0.075	0.015	0.000	-0.121	-0.029
125k to 175k	Under35k	0.246	0.020	0.000	0.184	0.307
	35k to 55k	0.194	0.016	0.000	0.146	0.241
	55k to 75k	0.141	0.015	0.000	0.097	0.185
	75k to 100k	0.090	0.014	0.000	0.048	0.132
	100k to 125k	0.036	0.015	0.248	-0.008	0.080
	More than 175k	-0.039	0.015	0.160	-0.084	0.006
More than 175k	Under35k	0.285	0.021	0.000	0.222	0.348
	35k to 55k	0.233	0.016	0.000	0.184	0.282
	55k to 75k	0.181	0.015	0.000	0.135	0.226
	75k to 100k	0.129	0.014	0.000	0.085	0.173
	100k to 125k	0.075	0.015	0.000	0.029	0.121
	125k to 175k	0.039	0.015	0.160	-0.006	0.084

(I) Region	(J) Region	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Northeast	Midwest	.134*	0.013	0.000	0.100	0.168
	South	.277*	0.012	0.000	0.247	0.307
	West	.240*	0.013	0.000	0.206	0.275
Midwest	Northeast	-.134*	0.013	0.000	-0.168	-0.100
	South	.143*	0.011	0.000	0.114	0.172
	West	.107*	0.013	0.000	0.074	0.140
South	Northeast	-.277*	0.012	0.000	-0.307	-0.247
	Midwest	-.143*	0.011	0.000	-0.172	-0.114
	West	-.036*	0.011	0.006	-0.066	-0.007
West	Northeast	-.240*	0.013	0.000	-0.275	-0.206
	Midwest	-.107*	0.013	0.000	-0.140	-0.074
	South	.036*	0.011	0.006	0.007	0.066

* The mean difference is significant at the 0.05 level.

4e. Share of Population Are Over the Age of 65 Years Tamhane Results

(I) QA12 - How would you describe the location of the home you recently purchased? (Mark only one)	(J) QA12 - How would you describe the location of the home you recently purchased? (Mark only one)	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	Upper Bound
Suburb/Subdivision	Small town	-0.096	0.012	0.000	-0.131	-0.061
	Urban area/Central city	0.012	0.011	0.967	-0.020	0.044
	Rural area	-0.093	0.016	0.000	-0.137	-0.050
	Resort/Recreation area	-0.065	0.035	0.478	-0.162	0.033
Small town	Suburb/Subdivision	0.096	0.012	0.000	0.061	0.131
	Urban area/Central city	0.108	0.015	0.000	0.065	0.151
	Rural area	0.003	0.019	1.000	-0.050	0.055
	Resort/Recreation area	0.032	0.036	0.992	-0.070	0.134
Urban area/Central city	Suburb/Subdivision	-0.012	0.011	0.967	-0.044	0.020
	Small town	-0.108	0.015	0.000	-0.151	-0.065
	Rural area	-0.106	0.018	0.000	-0.156	-0.055
	Resort/Recreation area	-0.077	0.036	0.283	-0.178	0.024
Rural area	Suburb/Subdivision	0.093	0.016	0.000	0.050	0.137
	Small town	-0.003	0.019	1.000	-0.055	0.050
	Urban area/Central city	0.106	0.018	0.000	0.055	0.156
	Resort/Recreation area	0.029	0.037	0.997	-0.076	0.134
Resort/Recreation area	Suburb/Subdivision	0.065	0.035	0.478	-0.033	0.162
	Small town	-0.032	0.036	0.992	-0.134	0.070
	Urban area/Central city	0.077	0.036	0.283	-0.024	0.178
	Rural area	-0.029	0.037	0.997	-0.134	0.076

* The mean difference is significant at the 0.05 level.

(I) QH1 - Which of the following best describes the composition of your household?	(J) QH1 - Which of the following best describes the composition of your household?	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	Upper Bound
Married couple	Single female	-0.032	0.012	0.052	-0.065	0.000
	Single male	-0.058	0.016	0.003	-0.104	-0.013
	Unmarried couple	-0.066	0.016	0.000	-0.110	-0.022
	Other	-0.035	0.031	0.946	-0.122	0.052
Single female	Married couple	0.032	0.012	0.052	0.000	0.065
	Single male	-0.026	0.019	0.826	-0.078	0.026
	Unmarried couple	-0.034	0.018	0.477	-0.085	0.017
	Other	-0.003	0.032	1.000	-0.094	0.088
Single male	Married couple	0.058	0.016	0.003	0.013	0.104
	Single female	0.026	0.019	0.826	-0.026	0.078
	Unmarried couple	-0.008	0.021	1.000	-0.068	0.052
	Other	0.023	0.034	0.999	-0.073	0.119
Unmarried couple	Married couple	0.066	0.016	0.000	0.022	0.110
	Single female	0.034	0.018	0.477	-0.017	0.085
	Single male	0.008	0.021	1.000	-0.052	0.068
	Other	0.031	0.034	0.988	-0.064	0.126
Other	Married couple	0.035	0.031	0.946	-0.052	0.122
	Single female	0.003	0.032	1.000	-0.088	0.094
	Single male	-0.023	0.034	0.999	-0.119	0.073
	Unmarried couple	-0.031	0.034	0.988	-0.126	0.064

* The mean difference is significant at the 0.05 level.

(I) newa16	(J) newa16	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	Upper Bound
Live with family and friends	Own	-0.001	0.014	1.000	-0.035	0.032
	Rented	0.031	0.014	0.088	-0.003	0.064
Own	Live with family and friends	0.001	0.014	1.000	-0.032	0.035
	Rented	0.032	0.009	0.001	0.012	0.052
Rented	Live with family and friends	-0.031	0.014	0.088	-0.064	0.003
	Own	-0.032	0.009	0.001	-0.052	-0.012

* The mean difference is significant at the 0.05 level.

(I) CombinedH13	(J) CombinedH13	Mean Difference (I–J)	Std. Error	Sig.	95% Confidence Lower Bound	Upper Bound
Under35k	35k to 55k	0.055	0.024	0.349	-0.017	0.126
	55k to 75k	0.112	0.022	0.000	0.044	0.181
	75k to 100k	0.130	0.022	0.000	0.064	0.197
	100k to 125k	0.139	0.022	0.000	0.072	0.207
	125k to 175k	0.195	0.022	0.000	0.129	0.261
	More than 175k	0.203	0.022	0.000	0.136	0.270
35k to 55k	Under35k	-0.055	0.024	0.349	-0.126	0.017
	55k to 75k	0.058	0.016	0.009	0.008	0.107
	75k to 100k	0.075	0.016	0.000	0.028	0.123
	100k to 125k	0.085	0.016	0.000	0.036	0.134
	125k to 175k	0.140	0.015	0.000	0.093	0.187
	More than 175k	0.148	0.016	0.000	0.100	0.196
55k to 75k	Under35k	-0.112	0.022	0.000	-0.181	-0.044
	35k to 55k	-0.058	0.016	0.009	-0.107	-0.008
	75k to 100k	0.018	0.014	0.989	-0.024	0.060
	100k to 125k	0.027	0.015	0.742	-0.017	0.071
	125k to 175k	0.083	0.014	0.000	0.041	0.124
	More than 175k	0.090	0.014	0.000	0.047	0.133
75k to 100k	Under35k	-0.130	0.022	0.000	-0.197	-0.064
	35k to 55k	-0.075	0.016	0.000	-0.123	-0.028
	55k to 75k	-0.018	0.014	0.989	-0.060	0.024
	100k to 125k	0.009	0.014	1.000	-0.032	0.050
	125k to 175k	0.065	0.013	0.000	0.026	0.103
	More than 175k	0.072	0.013	0.000	0.032	0.113
100k to 125k	Under35k	-0.139	0.022	0.000	-0.207	-0.072
	35k to 55k	-0.085	0.016	0.000	-0.134	-0.036
	55k to 75k	-0.027	0.015	0.742	-0.071	0.017
	75k to 100k	-0.009	0.014	1.000	-0.050	0.032
	125k to 175k	0.056	0.013	0.001	0.015	0.096
	More than 175k	0.063	0.014	0.000	0.021	0.106
125k to 175k	Under35k	-0.195	0.022	0.000	-0.261	-0.129
	35k to 55k	-0.140	0.015	0.000	-0.187	-0.093
	55k to 75k	-0.083	0.014	0.000	-0.124	-0.041
	75k to 100k	-0.065	0.013	0.000	-0.103	-0.026
	100k to 125k	-0.056	0.013	0.001	-0.096	-0.015
	More than 175k	0.008	0.013	1.000	-0.032	0.047
More than 175k	Under35k	-0.203	0.022	0.000	-0.270	-0.136
	35k to 55k	-0.148	0.016	0.000	-0.196	-0.100
	55k to 75k	-0.090	0.014	0.000	-0.133	-0.047
	75k to 100k	-0.072	0.013	0.000	-0.113	-0.032
	100k to 125k	-0.063	0.014	0.000	-0.106	-0.021
	125k to 175k	-0.008	0.013	1.000	-0.047	0.032

(I) Region	(J) Region	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	Upper Bound
	South	.334*	0.014	0.000	0.298	0.371
	West	.441*	0.014	0.000	0.404	0.477
Midwest	Northeast	-0.218*	0.016	0.000	-0.261	-0.175
	South	.116*	0.011	0.000	0.086	0.146
	West	.222*	0.011	0.000	0.192	0.253
South	Northeast	-.334*	0.014	0.000	-0.371	-0.298
	Midwest	-.117*	0.011	0.000	-0.146	-0.086
	West	.106*	0.008	0.000	0.085	0.127
West	Northeast	-.441*	0.014	0.000	-0.477	-0.404
	Midwest	-.222*	0.011	0.000	-0.253	-0.192
	South	-.106*	0.008	0.000	-0.127	-0.085

* The mean difference is significant at the 0.05 level.

Item 5: Focus Group Guide

1. What are the reasons you chose the current city you are living in?
   a. How did cost of living play into this decision?
   b. How about the cost of housing?

2. Let's talk about your current living situation…
   a. Do you have roommates? Significant other?
   b. Do you rent or own?
   c. What are the reasons you rent as opposed to own?

3. How might your living situation be different than if you didn't have student loan debt?

4. So let's talk now about homeownership. How do you feel about homeownership?
   a. What are the positives?
   b. What are the negatives?

5. (NEW after first group) Are you buying or did you buy a lower priced home than you would have originally if you didn't have student loan debt?

6. (NEW after first group) If anyone lives at home: Do you think that living at home is going to give you an advantage in buying a home, or your future financial …

7. (NEW after first group) That's one way to financially help. The other that way that you can financially help is down payment assistance, though parents. Is there ever the expectation? Would you expect that? Would you want that?

8. ~~(REMOVED after the first group) Okay, now let's switch gears and talk about student loan debt.~~
   a. ~~(For those who rent): How does student loan debt impact your decision to rent as opposed to own?~~
   b. ~~(For those who own): How did student loan debt impact your ability to purchase a home?~~

9. How do you feel about your student loan debt overall?

10. How would your life be different without student loan debt?

11. How has student loan debt affected the timeframe of your major life decisions?
    a. Do you believe your life decisions would follow a similar timeframe or a different timeframe without your student loan debt?

12. Would you have made the same decisions to take on student loan debt if you could turn back the clock? What are the reasons for this?

13. (NEW after first group) So was that the same for everyone in this room that it was expected to go to college? Or was it expected that you could obtain a two year education or no college at all?

14. How does student loan debt influence your employment decisions?

15. What other types of debt do you currently have that may also be influencing your life decisions?

16. Do you feel like your choices are similar among your friends/colleagues or unique to you in terms of dealing with student loan debt? How so?

17. (NEW after first group) Does anyone have any comments on anything else? Anything you want to add?