OBSERVATIONS OF HOMEOWNERSHIP IN THE UNITED STATES SINCE WORLD WAR II: A LOOK AT THE UPS AND DOWNS

By
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Abstract

Jacob Muse: Observations of Homeownership in the United States from World War II to Current Day

(Under the direction of Dr. Bonnie Van Ness)

This thesis investigates the mechanisms that have affected homeownership since World War II. Homeownership rates can reflect people's desire to own homes or not own homes. Therefore, studying the homeownership rates will give me a better opportunity to understand how the residential real estate market operates. Robert Shiller's Homeownership graph, the U.S. Census Bureau's Total Housing Inventory Table and the Federal Reserve Bank of St. Louis' graph of the homeownership rate drove my research. Dating back to World War II, wherever I observed a significant increase or decrease in homeownership, I wanted to explain what was driving the increase or decrease. In conclusion, I observed four factors that seemed to have the most significant effect on homeownership: economy, interest rates/mortgage dynamics, government efforts, and demographics. These factors did not always seem to act in expected manners, and the changing needs or desires of Americans seemed to influence homeownership the most.

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Chapter 1: Introduction

The United States' residential real estate market is driven by people's desire to buy homes or not buy homes. Recently, since the housing market crash, homeownership has been on the decline, and Americans do not seem to have the desire to own homes like they have in the past. I wanted to understand what was driving this decline. Also, I believed it was important to understand what has driven homeownership rates in past years, specifically since World War II. An understanding of past trends would be beneficial because these past trends may shed light onto what is driving American's current homeownership.

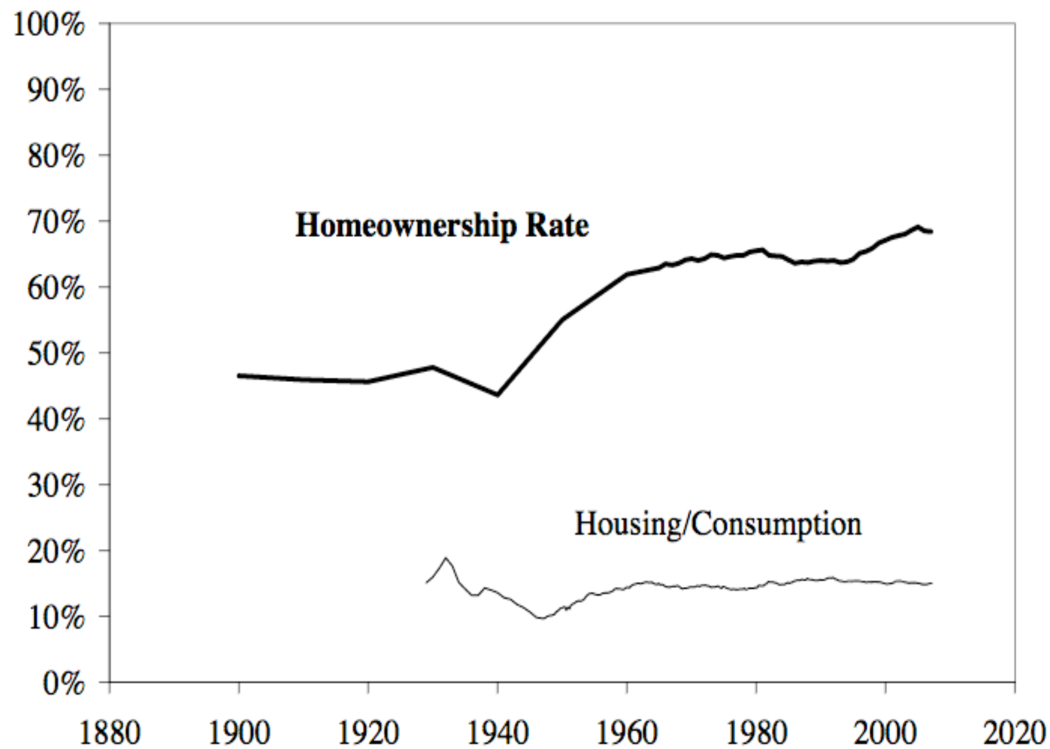
Homeownership rates suggest the demand that people have for homes; and when homeownership is on the incline, it appears that more people want to own homes. A detailed look into why or why not Americans purchase homes allows those in the residential real estate to better understand how to meet the needs of potential homebuyers and be more successful in their profession. Since World War II, homeownership rates have experienced multiple fluctuations due to varying reasons. The severity of the current decline in the United States' homeownership rates suggests a change is occurring. Recently, many Americans are shifting towards renting, despite the increasing cost of renting, which is affecting homeownership. Since the Great Recession of 2007-2009, obvious factors, such as the economy and interest rates, seem to be favorable towards owning a home. Therefore, there must be other factors that are contributing to homeownership, and these factors may have been at work during other times in America's history. After considering the details of the residential market since World War II and the multitude of factors that affect homeownership, there should be a better understanding of what drives homeownership in the United States, which may help explain why homeownership has steadily declined every year since 2006.

Chapter 2: Increase in Homeownership from World War II to the 1980s Crash

The end of World War II brought about great prosperity to the United States economy. Resulting was an increase in homeownership. World War II officially ended in 1945, and the United States was at an interesting point in history. People were accustomed to a bleak economy; one where spending was not the norm. As a result, once the war ended, people had a built up demand for consumer goods. Americans also wanted their safety back and to live the American dream—get a job, buy a house, marry, and raise a family. Americans began to place a strong emphasis on families, and as a result the baby boomer generation was born. These were babies, 76.4 million of them, born between 1946 and 1964. This large addition of population growth would later create a huge surge in housing demand, as they began to buy homes (Myers and Ryu, 2008). Also, with the end of the war, around 11 million soldiers were released from active duty. The government made it possible for these veterans and many other Americans to own a home through the G.I. Bill.

The government put two plans into action, the G.I. Bill and the Housing Act of 1949, which would create a huge increase in homeownership rates. Figure 1 illustrates the enormous increase in homeownership rates.

Figure 1:



Source: Shiller, Robert (2007)

In 1944 with the release of all of these soldiers, came government insured loans through the G.I. Bill. The G.I. Bill provided low down payment requirements that made it easier for veterans to be ready and able to buy homes. Fetters (2010) determined that the Veterans Administration through the G.I. Bill was responsible for a 10% increase in homeownership. Another reason for the increase was the Housing Act of 1949. President Truman gave a statement after signing the Act that informed the nation of its purpose; he said, "it opens up the prospect of decent homes in wholesome surroundings for low-income families now living in the squalor of the slums . . . it equips the Federal Government, for the first time, with effective means for aiding cities in the vital task of clearing slums and rebuilding blighted areas" (Truman, 1949). The government wanted to better the inner cities because they were run down, and many people were leaving the cities.

Increasing suburbanization also bolstered the rise in homeownership rates. The move to the suburbs was a result of a few factors: "racial fears, affordable housing, and desire to leave decaying cities" (Ushistory.org). Housing was more affordable in the suburbs because of high land prices in urban areas that were a result of cities expansion in previous years (Freeman, 1999). As a result of available residential real estate alternatives (i.e. suburbs), Americans were able to buy homes that met their needs. The emphasis placed on residential construction in the suburbs reflected the demand people had for homes in the suburbs. In the 1950s, according to Freeman and the National Real Estate Investor, population swelled 45% in the suburbs, and residential construction in the suburbs accounted for 75% of total construction (Freeman, 1999). The United States residential housing market was undergoing a geographic shift, and new opportunities for housing emerged as a result.

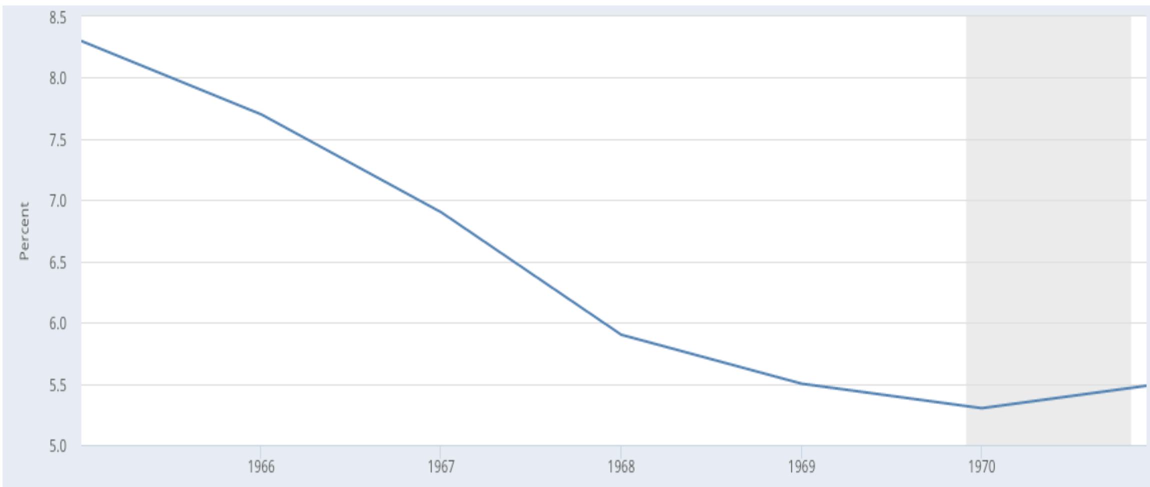
Simultaneously, as Americans were setting out to achieve security and the American dream, the United States economy was prospering. In May 1953, civilian unemployment was at a low of 2.5% (Federal Reserve Bank of St. Louis). The United States' was thriving due to the development that took place during the war; many developments, such as industrial, retail, and aviation took place in only a few months that would have otherwise taken years to occur (Freeman, 1999). Americans now had money to spend that they did not previously have during to the war. Due to all of these reasons, plus the help of loans and the suburbs, demand for housing increased tremendously. The only problem was the real estate market was not prepared for this demand.

The more affordable housing, booming economy, and release of soldiers made it more accommodating for citizens to get a home, but the residential real estate market was not prepared for the influx in demand. The market needed to correct itself to supply homes to meet the sudden surge in demand. The real estate industry had been dedicated to wartime endeavors; what would have been residential development was focused on defense-related plants and factories, and little private development had taken place (Freeman, 1999). The 1950s was the time where residential construction began meeting the housing demand. William Levitt had a major impact in regards to supplying homes. He used mass production techniques that he had developed during the war to construct suburban homes; within one year, he was building 36 houses per day. By the end of the 1950s, there were no less than 15 million houses under construction, which was due in part to the low cost mass building techniques. With supply starting to meet demand came more increases in homeownership.

The housing market was still booming into the 1960s with an upward trend in homeownership (U.S Census Bureau). The 1960s, also, saw its first major federal effort to apply civil rights to housing. The Housing and Urban Development Act of

1965 initiated a leased housing program to make privately owned housing available to low-income families. Simultaneously, with the HUD Act of 1965, annual rental vacancy rates from 1965 until 1970 took a steep dive, which can be seen in Figure 2.

Figure 2: Annual Rental Vacancy Rates



Source: Federal Reserve Bank of St. Louis

Over this 6-year period, rates fell points, from 8.5% to 5.3%. This was a -37.65% change, and I assume this change was due greatly to the Housing and Urban Development Act of 1965. The Housing and Urban Development Act of 1965 allowed low-income families to now enter a residential housing market, where they could afford homes. Also, in 1965, the Census Bureau began to provide more detailed data of Total Housing Inventory in 1965; measured in thousands, there were 64,213 total housing units, and of those, 57,501 (89.5%) were occupied. Out of the 57,501 that were occupied, 36,230 (63%) were owned and 21,271 (37%) were rented. From

1965 to 1969, homeownership rates increased every year; they went from 63% to 64.3%, respectively. This was a 2.06% increase over a five-year period in home ownership. Shortly after, in 1970, detailed data on median home prices became available. Since we now have detailed housing data available, we can look at trends with the availability of this data.

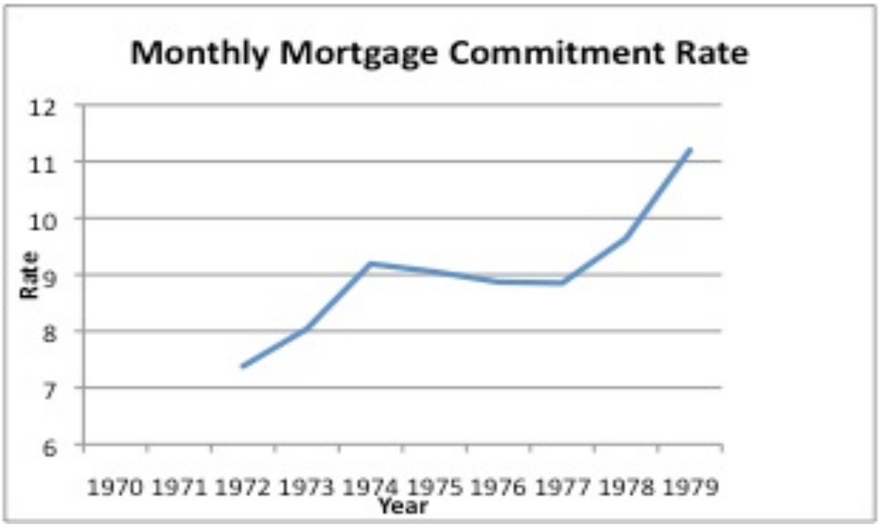
Entering into the 1970s and throughout most of the decade, homeownership rates trended slightly upward. Over the course of the decade, these rates experienced a +1.58% change, with a decline in only one year when rates went from 64.7% to 64.6%. To put those percentages into perspective, this increase resulted in roughly 10.52 million new homeowners over the course of the 1970s. This increase occurred despite the two recessions that occurred: one in 1970 and another from the fourth quarter of 1973 to the second quarter of 1975. In 1970, inflation and unemployment soared. Annual inflation rose to 12.34% in 1974 from its 5.57% level in 1970 (CPI, 2016). There were a multitude of factors that contributed to the recessions: the Vietnam War, the War on Poverty, the 1973-4 oil embargo, and the removal of the gold standard.

The Vietnam War along with the War on Poverty led to high spending for the U.S. government. This spending deteriorated the economy's prosperity because the government had failed to raise taxes for these efforts, which led to escalating inflation (U.S. Department of State). Also, since the government had not been able to raise the money due to not raising taxes, there was greater government borrowing; this meant higher interest rates. The oil embargo also attributed to the inflation. The Organization of Petroleum Exporting Countries issued an embargo that cut off oil supply from Arab countries, which is where the United States received a majority of its oil (Myre, 2013). This embargo resulted in an increase in oil prices. Even after the embargo ended, energy prices remained higher than before ("The U.S. Economy"). Higher energy prices resulted in higher inflation. Though inflation and unemployment were increasing, homeownership did not take a significant hit.

Besides the recessions, I observed three surprising facts pertaining to the increase of the homeownership rate. First, despite a 6.98% increase in median inflation-adjusted home prices, people were still buying homes (S&P Case-Shiller Home Price Index). In 1972, 65% of homes had at least 3 bedrooms, and 23% had 4 bedrooms or more. This was much larger than the 2 or less bedrooms that represented two-thirds of homes in the 1950s (Alexander, 2000). Alexander (2000) also attributes increasing home prices to the increase in quality of life enhancements in homes, such as central air conditioners and dishwashers. Lastly, the most obvious reason for an increase in prices is the rise in inflation that was taking place. After seeing the increase in home size and addition of quality of life enhancements in homes, it would make sense that home prices rose because people were getting more in a home than they were in previous years.

Second, monthly mortgage commitment rates on a 30-year fixed-rate mortgage were increasing, which can be seen in Figure 3. Higher commitment rates suggests higher monthly mortgage payments.

Figure 3:



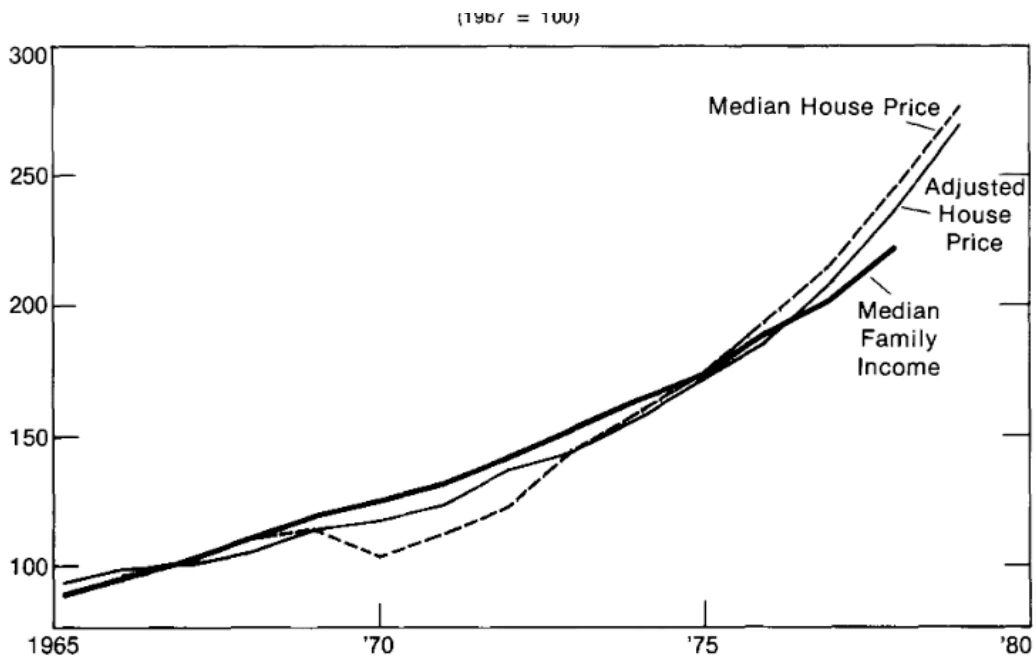
Source: Freddie Mac (2016)

The cost of borrowing was higher, which was due to an increase in the Federal Funds Rate. Even though it was more expensive to take out a mortgage to buy a home, homeownership was increasing.

Third, new housing starts peaked in 1972, despite a recession. In 1972, new privately owned housing units started totaled 2.35 million (U.S. Census Bureau). It was bewildering that amongst a recession, residential housing starts were at the highest level since 1959. Clearly, there were reasons for the increase. Construction was increased because of tax policies and baby boomers. Tax policies were created that boosted returns on all real estate investment income, which led to overbuilding (Alexander). Also, baby boomers began entering the housing scene, particularly in college towns. Colleges and universities did not have sufficient housing when baby boomers began entering college in vast amounts, so off campus living became increasingly popular (Alexander). With the new demand for off campus living came many multifamily unit starts. There were 1.05 million multifamily starts in 1972 that accounted for 44.45% of the total new privately owned housing units started (U.S. Census Bureau). A new demand had risen and private residential construction was ready to meet that demand.

Baby boomers also aided in the homeownership increase besides just occupying homes in college towns. In 1978, the baby boomers ranged between 14 and 32 years old. Also, between 1970 and 1980, the population of those 25 years and older increased by 22.9 million, which was due to the influx of the baby boomer generation (Myers & Ryu, 2008). This growth was more than twice the amount seen between 1960 and 1970. According to Zillow (2015), between 1974 and 1979, the median age of a homebuyer was 29 years old. Since many of the baby boomers were around this 29-year-old mark, then many were now entering the housing market, which increased the pool of potential homebuyers. Also, despite increasing home prices and unemployment, homeownership was still relatively as affordable as it had been in the recent decades. In 1980, Glenn H. Miller (1980) did a study on housing affordability. Below, Figure 4 shows a comparison between house prices and family income. This data for median house prices is only for houses actually sold during that year. Only in the second half of the decade did he find that home prices had risen more rapidly than family income. This suggests affordability was not an issue from 1970 to 1975, but housing affordability soon became a problem in the late 1970s into the 1980s. The 1970s ended with an upward trend in homeownership, but this increase soon changed with the recessions of the early 1980s.

Figure 4



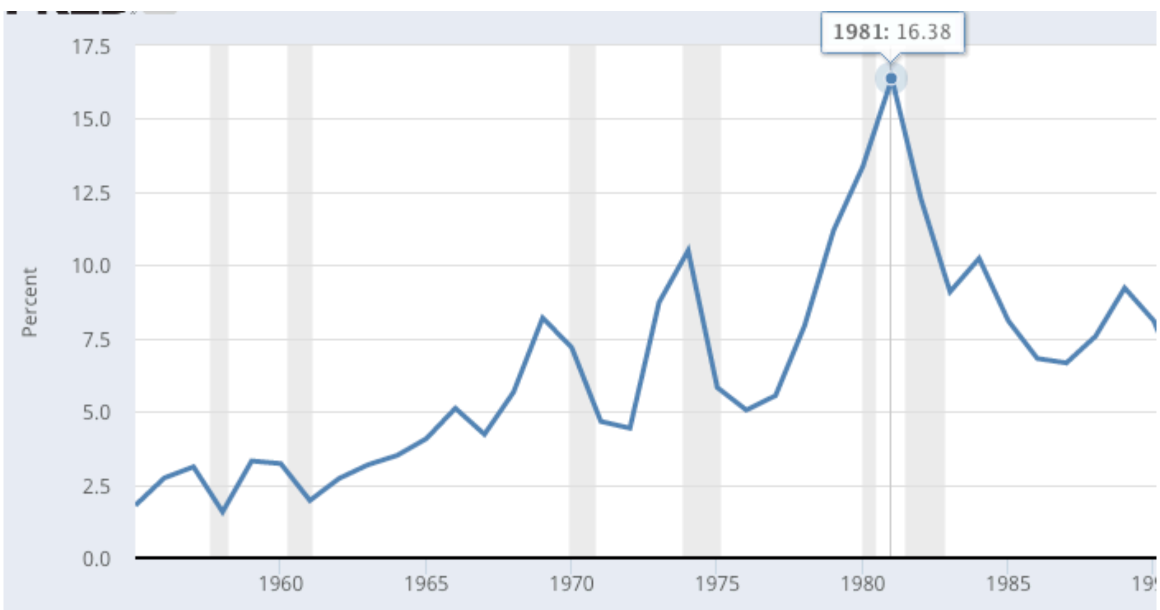
Source: Miller, Glenn (1980)

Chapter 3: Homeownership During the 1980s And Until The Formation Of Our Most Recent Housing Bubble

The beginning of the 1980s was marked by the worst economic downturn since the Great Depression (Sablik, 2013). This economic downturn was reflected in the U.S. homeownership rates. From 1980 to 1986, homeownership rates fell every year. In 1980, 65.6% of households were owner-occupied, but by 1986, only 63.8% were owner-occupied; this was a decrease of 1.8% (U.S Census Bureau). A decrease over seven years had not been seen since the Great Depression. I attribute this decline in the homeownership rates to the decreasing affordability of homes and mortgages and also an overall troubled economy.

The early 1980s recession was a result of a strict monetary policy in hopes to reduce rapidly rising inflation. Inflation had been high during the 1970s, and it continued into the early 1980s. Therefore, the government decided to combat this inflation by raising the Federal Funds Rate (FFR). Figure 5 shows how greatly the FFR increased from the late 1970s until its peak in 1981.

Figure 5: Federal Funds Rate



Source: Federal Reserve Bank of St. Louis

In 1981, the Federal Funds Rate reached 16.38%. As a result, "high interest rates put pressures on sectors of the economy reliant on borrowing" (Sablik, 2013). Many homebuyers and mortgage lenders are reliant on borrowing. As a result of these pressures, conventional mortgages were more expensive. More expensive mortgages made it harder for many Americans to purchase a home. To put it in perspective, Figure 6 shows the monthly mortgage payment for various years before the recession, during the recession, and after the recession.

Figure 6: Average Monthly Payment for 30-Year Fixed Rate Mortgage

	1975	1980	1981	1982	1983	1987
Interest	9.05%	13.74%	16.63%	16.04%	13.24%	10.21%
Median Home Price	$141,662	$160,656	$154,440	$149,395	$150,002	$171,841
Loan Amount	$113,330	$128,525	$123,552	$119,516	$120,002	$137,473
Monthly Payment	$916	$1,496	$1,724	$1,611	$1,350	$1,229

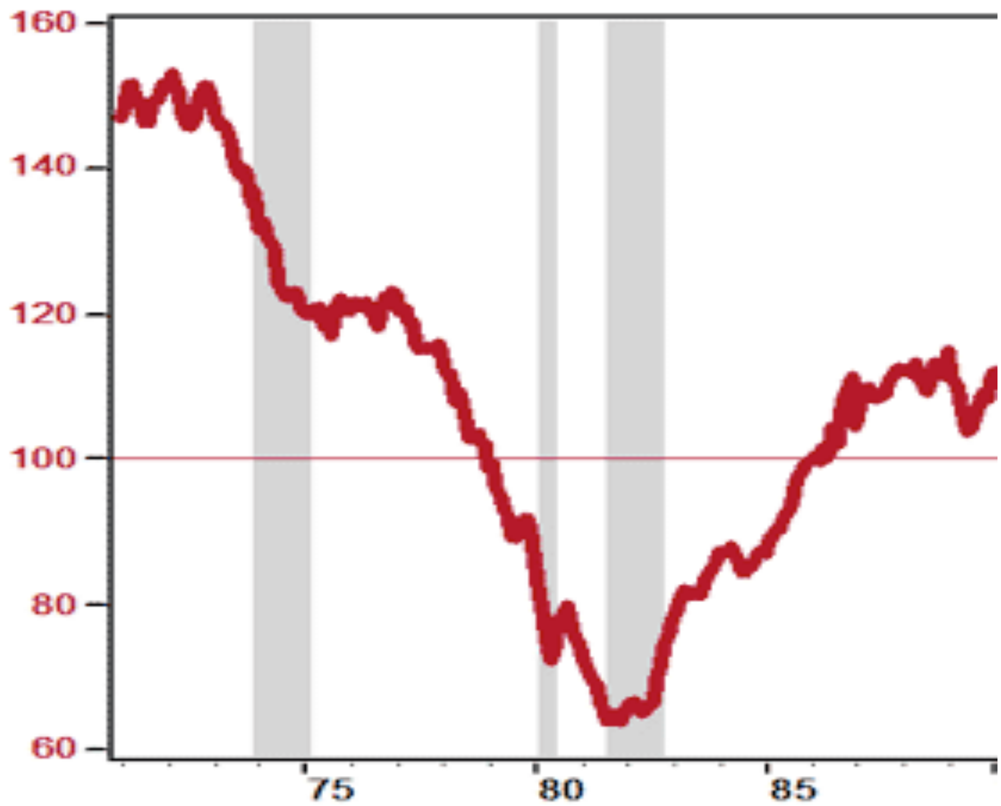
Source: Mac, Freddie & S&P Case-Shiller Home Price Index

Using real median home prices from the S&P Case-Shiller Home Price Index and mortgage interest rates from Freddie Mac, I can calculate monthly payments after a 20% down payment. Figure 6 shows that a monthly mortgage payment in 1980 was approzimately 63% more than it was five years prior. Even five years after the recession, monthly mortgage payments were 34% higher than in 1975. Although, average mortgage payments had started to become more affordable, they were still high due to extremely high interest rates. These high interest rates made it more difficult for Americans to purchase a home.

We can also get another look at how unaffordable homes were during most of the 1980s. The Housing Affordability Index (HAI) shows the affordability of housing for a typical family; a value of 100 means a median-income family has sufficient income to purchase a median-priced existing home (Dr. Econ, 2003). Incorporated in the HAI are changes in key variables that affect home affordability:

housing prices, interest rates, and income (Dr. Econ, 2003). Figure 7 displays the HAI.

Figure 7



Source: Dr. Econ (2003)

Figure 7 shows that, roughly between 1979 and 1987, a median-income family had insufficient income to purchase a typical home. Home prices were not the reason for this decreasing affordability. From a peak in 1979 until 1983, inflation-adjusted home prices fell; afterwards, prices remained fairly stable until 1985, and then they rose until 1989 (S&P Case-Shiller Home Price Index). The stability of home prices suggests that home prices were not one of the key variables affecting affordability.

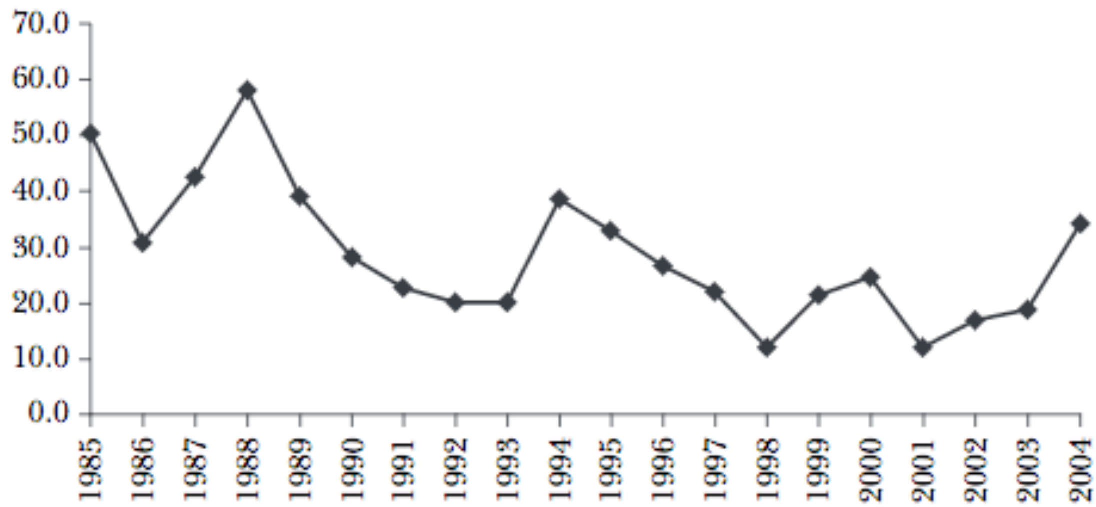
Therefore, I attributed income and interest rates to be the cause of unaffordable homes. With this decrease in affordability of homes, one would expect homeownership rates to fall.

Also, with the recession and increasing interest rates came an increase in unemployment. In 1982, the Civilian Unemployment Rate peaked at 9.7%, which was the highest level since 1948 (Federal Reserve Bank of St. Louis). More people unemployed meant fewer people who had the necessary financials to service a mortgage. Therefore, increased unemployment would put a damper on homeownership. After looking into these many factors, we see that the decrease in homeownership from 1980 until 1986 can be attributed mainly to high interest rates, but also a struggling economy.

Another event worth mentioning from the 1980s is the introduction of adjustable-rate mortgages (ARMs). I believe these mortgages affected homeownership in the 1980s and also in later years. ARMs came about to help Savings and Loan Institutions (S & Ls). S & Ls are conventional residential mortgage lenders. Since 1934, public policy had encouraged S & Ls to make progressively longer term fixed-rate mortgages with progressively smaller down payments (Kaufman, 1995). In a fixed-rate mortgage situation, if interest rates increased, then the lenders would lose money. So when interest rates increased rapidly in the late 70s and into the 80s, 85% of all S & Ls were losing money by 1982 (Kaufman, 1995). As a result, regulators intervened and introduced ARMs. During times of rising interest rates, like the 1980s, an adjustable-rate mortgage makes your initial monthly mortgage payment more affordable. However, these payments may not stay affordable. If interest rates increase, then mortgage rates adjust, and payments become more expensive. Vice versa, if interest rates decrease, then mortgage rates adjust downward, and payments may become more affordable, which is why some borrowers like ARMs. Other borrowers like ARMs because a low initial rate allows borrowers to afford an initial monthly payment that they might not be able to afford under a fixed-rate mortgage. Lastly, banks like ARMs because ARMs allow banks to reduce part of their interest rate risk, but there can be a trade off. ARMs can be much riskier than conventional 30-year mortgages due to low teaser rates and uncertain interest rates, so these mortgages expose borrowers to higher default risk. Borrowers may be more likely to default on their loans if rates increase, or their payments become more expensive. Essentially ARMs helped Savings and Loan Institutions reduce their interest rate risk in a time of unstable interest rates and allowed borrowers an alternative to conventional fixed-rate mortgages.

These alternative mortgages seemed to have increased homeownership because they made it appear that many borrowers could afford the mortgages, even if they could not in the long run. Borrowers took advantage of these ARMs in the 1980s, and ARMs became viable options for borrowers (Peek, 1990). Figure 8 shows adjustable-rate mortgage's total percentage of total loans in the second half of the 1980s.

Figure 8: ARM's Percentage of Total Loans



Source: Green, Richard & Wachter, Susan (2005)

Figure 8 shows that ARMs use was increasing as a percentage of total loans in the latter half of the 1980s. I believe the use of ARMs along with much help from lower interest rates aided in ending the decline in homeownership in the 80s because it made mortgages more affordable. The introduction of ARMs seemed like a good decision in the 1980s, but proved to have negative effects in later years when interest rates were much lower.

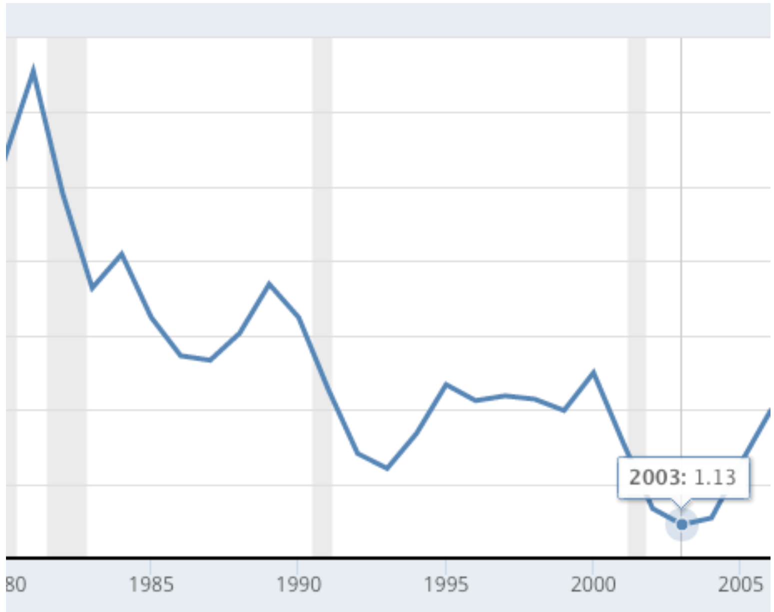
Following the significant drop in the homeownership rate in the beginning of 1980s was fairly stagnant growth from 1986 until 1994. Homeownership ranged from 63.8% to 64.5% during that time period (U.S Census Bureau). In the later half of the 1990s, the stagnant growth ended, and the formation of a housing bubble began.

Chapter 4: The Housing Bubble of the 21st Century

In the late 1990s, the housing industry in the United States was on the verge of a housing bubble that ultimately burst in 2006. This bubble was not the first the United States had seen, but it was a major one and arguably the largest since the Great Depression. Home prices were fairly stable throughout most of the 1990s; the S&P Case-Shiller Home Price Index shows that home prices increased by roughly 8.3 percent from the 1st quarter of 1990 to the 1st quarter of 1997. Shortly after, home prices increased rapidly; they peaked in the 2nd quarter of 2006, and prices were over 132% higher than in the 1st quarter of 1997 (Holt, 2009). For roughly nine years, home prices continually increased. Simultaneously, despite increasing home prices, homeownership increased every year from 1994 until 2004 and remained high for 2005 and 2006 (U.S. Census Bureau). Many causes contributed to this bubble, and many people believe that the bursting of this housing bubble is the cause for the conditions of our current residential real estate market. It seems that four major factors contributed the most to the housing bubble and credit crisis that resulted with some factors contributing more than others (Holt, 2009). These four factors are monetary policy, adjustable-rate mortgages, relaxed standards for mortgages, and irrational exuberance.

Entering into the 1990s, the Federal Reserve made borrowing cheaper than it had been in recent years in an attempt to strengthen the economy. The Fed's monetary policy post-1980s resulted in the Federal Funds Rate being much lower than it had been recently, which can be seen in Figure 9.

Figure 9: Federal Funds Rate 1980-2006



Source: Federal Reserve Bank of St. Louis

The resulting short-term interest rates due to the FFR made it more appealing for potential homebuyers to get an adjustable-rate mortgage (ARM).

An ARM was more appealing than a fixed-rate mortgage (FRM) because of the rapid increase in home prices and the structure of interest rates. ARMs' initial monthly payments are tied to short-term interest rates, while FRM's initial monthly payments are tied to longer-term interest rates. Home prices were increasing faster than household income, so many homebuyers were unable to afford mortgage payments under a FRM, but an ARM could provide a buyer with a lower initial monthly payment since short-term interest rates were lower than long-term interest rates (Holt, 2009). The average commitment rate for 30-year FRMs had fallen, but it was not as low as short-term interest rates. These two rates are illustrated in Figure 10.

Figure 10: Commitment Rate for 30-Year FRM vs. Initial Commitment Rate for ARM

Year	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
FRM	7.93	7.81	7.60	6.94	7.44	8.05	6.97	6.54	5.83	5.84	5.87	6.41
ARM	5.84	5.30	5.46	5.35	4.97	6.24	3.89	1.67	1.13	1.35	3.21	4.96

Source: Mac, Freddie & Federal Reserve Bank of St. Louis

In every year from 1995 until the crash, the rate for beginning payments on ARMs was significantly lower, but there was a problem: "when the interest rate on the mortgage adjusted upward (typically after two years), the higher mortgage payments proved unmanageable for many home buyers" (Holt, 2009). Again, like the 1980s, ARMs allowed more people to get mortgages, which increased demand and drove up home prices; but ARMs also resulted in an increase in homeownership. ARMs also played another role in increasing homeownership and home prices.

Alternatives to standard ARMs were also available during this time period. There were interest-only ARMs, 40-year amortization ARMs, negative amortization ARMs, and pay-option ARMs. They had even lower initial monthly payments, which is exhibited in Figure 11.

Figure 11: Initial Monthly Payments Under Different Types of Mortgages

Alternative Mortgage Instruments and Associated Initial Monthly Payments

Mortgage Product	Initial Monthly Payment	Payment as a Percentage of FRM Payment
Fixed-rate mortgage (FRM)	$1,079.19	100.0
Adjustable-rate mortgage (ARM)	903.50	83.7
Interest-only/ARM	663.00	61.4
40-year amortization (ARM)	799.98	74.1
Negative amortization ARM	150.00	13.9
Pay-option ARM	<150.00	<13.9

Note: Interest rates used in these calculations were 6.00 percent for FRMs and 4.42 percent for standard ARMs. For purposes of the calculations, we assume a house price of $225,000 and a 20 percent down payment, and that the borrower qualifies for a prime product.

Source: Bernanke, Ben (2010)

Figure 11 shows initial monthly payments from 2003 until 2006. Figure 11 shows how much cheaper these alternatives were than a standard fixed-rate mortgage or even an adjustable-rate mortgage. The availability of these alternative mortgages proved to be very important; and as many have recognized, the alternative mortgages were key contributors to the housing bubble (Bernanke, 2010). Again, these different types of mortgages broadened the pool of borrowers who could afford these initial monthly payments, but there was the possibility that these borrowers would struggle with payments once the payment adjusted later in the loan term. As a result of cheaper ARM alternatives, homeownership continued to increase.

Another factor, relaxed standards for mortgage loans, also increased the number of potential homebuyers who were able to get a mortgage. There is a lot of controversy over what or who actually caused these loose standards. The government seems to be the culprit, according to most. According to Peter Wallison (2009), "the regulators, in both the Clinton and Bush administrations, were the enforcers of the reduced lending standards that were essential to growth in home homeownership and the housing bubble." Fannie Mae and Freddie Mac, a government-sponsored enterprise (GSE), had a lot to do with the relaxed standards and increase in sub-prime mortgage loans. In 1999, the New York Times explained this new change: "Fannie Mae, the nation's biggest underwriter of home mortgages, has been under increasing pressure from the Clinton Administration to expand mortgage loans among low and moderate income people." There did not seem to be any problem with the reduced lending standards because everyone, lenders and borrowers, thought home prices were going to continue to increase. Borrowers were given mortgages approved by regulators under Clinton and Bush that they would never be able to pay over the entire loan term, but they were given these loans on the expectation that accumulating home equity would allow for refinancing into more fitting mortgages. Although these loans allowed for an increase in homeownership in the U.S., they created more sub-prime loans, which carried more risk due to the higher possibility of default than a conventional mortgage would have.

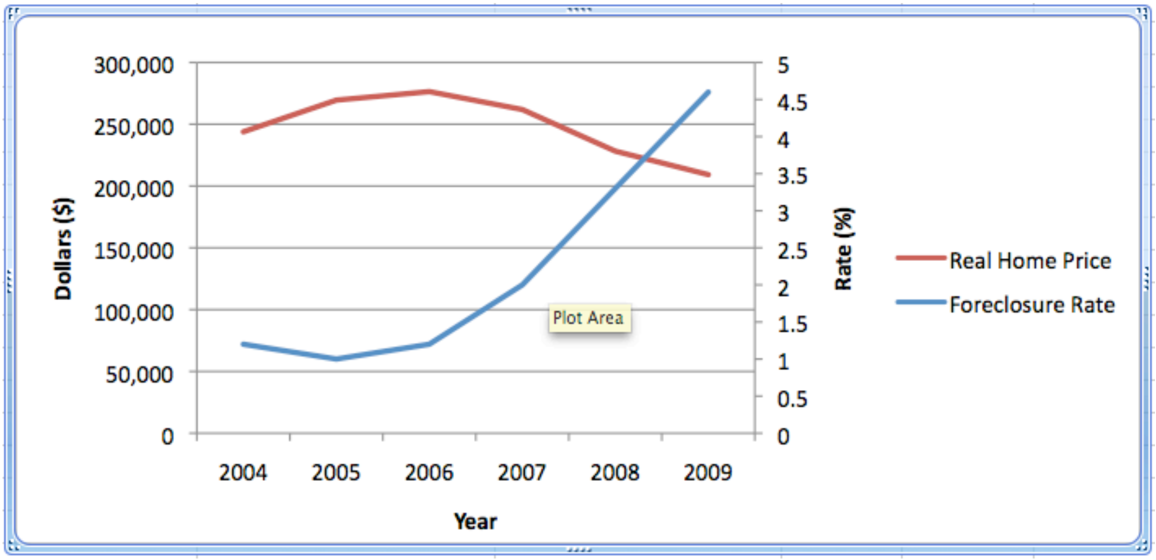
Lastly is the irrational exuberance factor. Robert Shiller (2005) summarizes the term to mean a "heightened state of speculative fervor." Americans thought that home prices would continue to increase; they did not see a decline coming in the foreseeable future. Therefore, people kept buying houses, whether they could really afford them or not, because they believed the value of these homes would continue to increase. If these homeowners couldn't make their payments, then they believed they would be able to sell the house for more than they paid for it. Many people had a lot of faith in rising home prices, and when home prices fell, the United States went was not prepared for a decline in home prices.

Chapter 5: The Bursting of the Housing Bubble

The housing bubble burst in 2006 when home prices started to fall, and foreclosure rates started to increase. As a result, homeownership fell. The increase in the homeownership rate leveled off in 2004, and then in 2006 began a steady decline (U.S Census Bureau). From 2006 to 2009, there was a -2.03 percent change in homeownership. Declining home prices and increased foreclosures were what caused bubble to burst. Many Americans lost their homes and could not afford new ones under changing mortgage conditions.

Homebuyers became unable to service their mortgage payments, which resulted in default. As soon as housing prices stopped rising, foreclosures began rising; nominal home prices dropped 1.4% in the six months from the second quarter of 2006 to the fourth quarter of 2006, and foreclosure start rates increased by 43% simultaneously (Liebowitz, 2008). From 2006 to 2007, the percentage of loans in foreclosure process at year-end went from 1.2% to 2.0%. The foreclosure rate rose even higher in 2008 and 2009 to 3.3% and 4.6%, respectively. Foreclosures increased because home prices had started to decrease, which destroyed equity for many. Simultaneously, as foreclosures were increasing, home prices were declining. Figure 12 shows the relationship between real home prices and foreclosure rates.

Figure 12: Real Home Prices vs. Foreclosure Rates



Source: S&P Case-Shiller Home Price Index

Figure 12 plots home prices along with the foreclosure rate. It appears that in 2006 when real home prices begin falling, foreclosure rates simultaneously begin rising. With decreasing home equity due to falling home prices came an increase in foreclosures. This loss of equity in homes eliminated the option of homeowners being able to borrow against their home equity when they could not meet their monthly mortgage payment (Baker, 2008). Also, many of these homeowners realized they owed more than the value of their home now that prices had decreased, so they walked away from their mortgages (Baker, 2008). With the defaults and falling home prices came a credit crisis.

The banks were hit hard during the bursting of the housing bubble. They were left with many foreclosed homes and defaulted loans, and these foreclosed homes were not easy to sell. Since so many foreclosures were taking place in a small time period, there were many houses on the market. Since supply was much greater than demand, prices fell even further. So not only did banks have trouble selling these homes, they also had to sell at distressed prices. As a result, banks began to tighten lending standards and require larger down payments (Baker, 2008). Tightened lending standards and larger down payments applied to both first-time homebuyers and existing homebuyers (Baker, 2009). As a result, homeownership rates fell into a downward spiral.

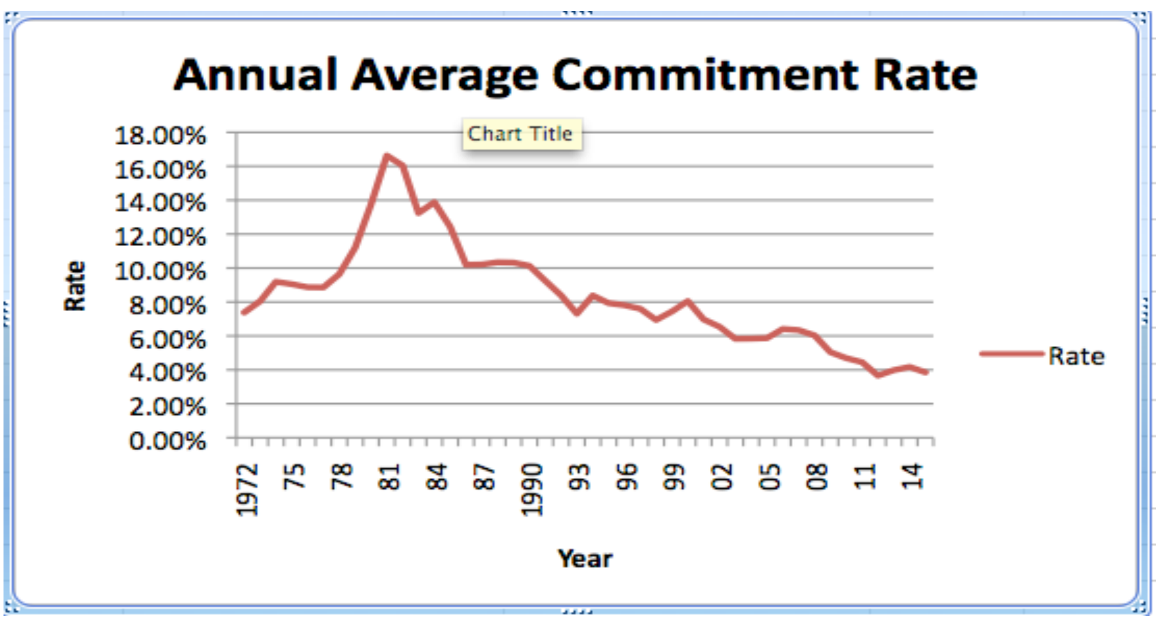
Chapter 6: Post-Housing Crash

The bursting of the real estate bubble has left a substantial impact on our current market in the United States. Once homeownership and home prices started falling drastically in 2006, the residential home market began undergoing a major transition. In 2006, the homeownership rate was 68.8%. Fast-forward to 2015, the homeownership rate is 63.7%, which is a –7.41 percent change since 2006 (U.S. Census Bureau). This decline is the biggest since the Great Depression with no sign of increase over these 10 years, and the United States has seen no sign of homeownership rebounding. From after the Great Depression until now, I have observed four major factors that seem to drive homeownership that may explain the current decline in homeownership: the economy, interest rates/mortgage dynamics, government policies, and demographics. If these factors are not able to explain the current decline, then we may need to consider other factors.

Since the Great Recession, the economy has been improving. GDP has increased every year, except one, since 2006, and GDP's growth rate was at a two-year high of 2.9% in the 3rd quarter of 2016 (Trading Economics, 2017). Also, unemployment began decreasing in 2010 and has decreased all the way to 2015, when the civilian unemployment rate was 5.3%. Another economic factor contributing to our current residential market is home prices. After the peak at $276,403 in median home prices in 2006, prices fell to $186,673 in 2011 (S&P Case-Shiller Home Price Index). Since 2012, home prices have increased to roughly $190,000, but this figure is nowhere near the peak 10 years ago (S&P Case-Shiller Home Price Index). Generally, a strong economy and increasing prices would suggest stronger demand, but there does not seem to be stronger demand as homeownership has been on the decline for the past 10 years. Therefore, the economy does not explain why homeownership rates are still falling.

Interest rates and mortgage dynamics also do not suggest declining homeownership. The Federal Funds Rate has been close to zero since 2009, fluctuating between 0.18% and 0.09% (Federal Reserve Bank of St. Louis). This low FFR suggests very low short-term interest rates. Along with low short-term interest rates are low annual average commitment rates on 30-year fixed-rate mortgages. The average commitment rates on 30-year fixed-rate mortgages are illustrated in Figure 13.

Figure 13: Annual Average Commitment Rates on a 30-Year Fixed-Rate Mortgage



Source: Mac, Freddie (2016)

Figure 13 shows that the annual average commitment rate on 30-year fixed-rate mortgages is the lowest it has been since 1972. The most recent commitment rate in 2015 was 3.85%, which is 1.98% lower than any rate observed in roughly 43 years. With low commitment rates and falling home prices from 2006 until 2011, it would be assumed that mortgages are more affordable than in years past. But these low commitment rates on 30-year fixed-rate mortgages have not seemed to boost homeownership. In the past, with low commitment rates, we have seen an increase in homeownership. But, despite the current cheaper borrowing costs, homeownership has continued to decline.

Another factor that has influenced homeownership rates in the past are mortgage dynamics, specifically qualifications for mortgages. Our current mortgage dynamics would suggest an increase in homeownership rates due to easier qualifications for loans, but that has not been the case since the bursting of the housing bubble or the Recession of 2007-09. Credit requirements have been reduced, which means that it is easier for potential homebuyers to qualify for a loan. Ellie Mae (2015) reported that the average FICO score fell to 723 on all closed loans, which was the lowest score since the group started recording in 2011. Ellie Mae (2015) also reported that lenders are approving borrowers with higher debt-to-income (DTI) ratios. Higher DTI means borrowers have a higher probability of default. The ease in mortgage underwriting standards seems to be the result of government policies. In 2016, John Silvia of Wells Fargo told the New York Post that there has been a “promotion of policy to push firms to seek riskier products to promote growth” (Sperry, 2016). Despite efforts to bolster homeownership, through loosening underwriting standards and slashing credit requirements, the number of Americans buying homes is still declining.

Again, the government has enacted certain home policies following the burst of the housing bubble to try to encourage homeownership growth. The Housing and Economic Recovery Act of 2008 was a policy enacted in 2008 to try to boost homeownership and save homeowners at risk of foreclosure. The Housing and Economic Recovery Act of 2008 consisted of three parts: Federal Housing Finance Regulatory Reform Act of 2008, HOPE for Homeowners Act of 2008, and the Foreclosure Prevention Act of 2008. The Federal Housing Finance Regulatory Reform Act of 2008's purpose was to create a new and different regulator for government sponsored enterprises (GSEs), such as Fannie Mae, Freddie Mac, and Federal Home Loan Banks that would ensure safe and sound operations of GSEs. This act also created a program that would help at least 400,000 families at risk of losing their homes to foreclosure by providing new FHA loans, where lenders take deep discounts. Second, the HOPE for Homeowners Act of 2008 allowed distressed homeowners at risk of losing their homes to refinance their loans at significant discounts in return for sharing future price appreciations with the FHA. Lastly, the Foreclosure Prevention Act of 2008 did multiple things. This act increased the FHA loan limit, assisted communities devastated by foreclosures, gave pre-foreclosure counseling, created standard property tax deductions, and created a tax credit for the purchase of homes in foreclosure. Despite the efforts put forth to increase homeownership there does not appear to be an increase in homeownership in the roughly eight years since these programs have been introduced. There is one program that was introduced in late 2015, by Fannie Mae that may help increase homeownership in years to come. This program is HomeReady.

HomeReady was designed to help low- to moderate-income borrowers through a new, alternative type of mortgage. HomeReady's mission is "to help lenders confidently serve today's market of creditworthy, low- to moderate-income borrowers, with expanded eligibility for financing homes in low-income communities" (Fannie Mae, 2015). This mortgage has many features. HomeReady offers low down payments, where borrowers can get up to 97% loan-to-value financing for home purchases using flexible sources of funds. Flexible sources of funds means that borrowers are not required to use their own funds; borrowers can use non-borrower household members' income instead. Also, HomeReady supposedly uses flexible credit. Using rental unit and boarder income is one example of the flexible credit options. Rental unit and boarder income means that a homeowner can use rental income from the property as qualifying income for a HomeReady mortgage. HomeReady mortgages make getting a mortgage easier for low- to moderate-income families, but it is yet to be determined if borrowers will be able to service these loans in the long run. Since the project was introduced roughly a year ago, it is hard to know the effects on homeownership. So far, no government policies have seemed to result in an increase in homeownership rates.

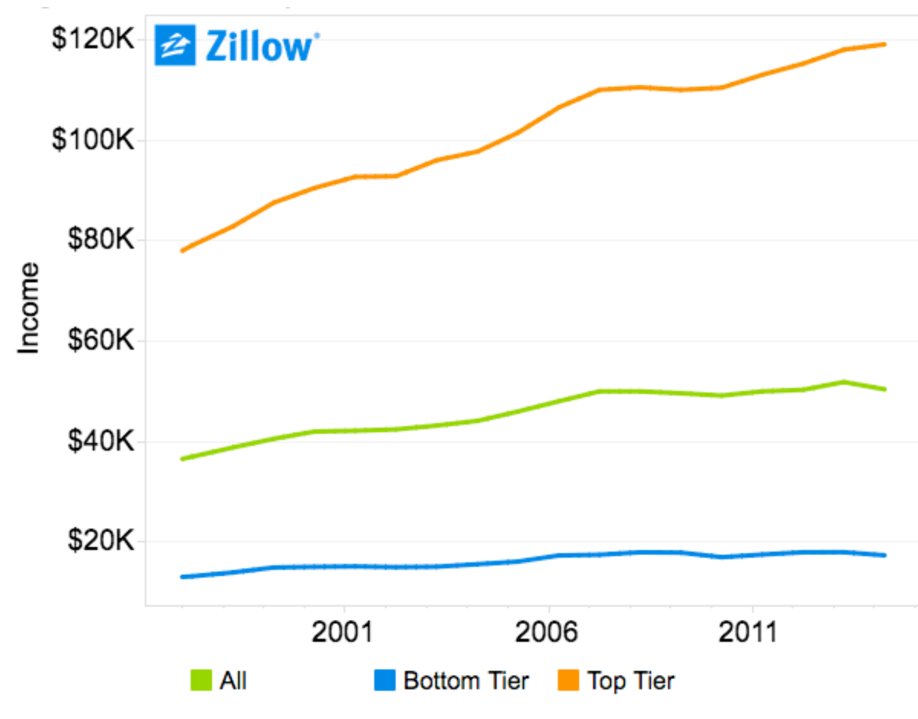
Demographics is the last of the four major factors: economy, interest rates/mortgage dynamics, government policies, and demographics; and it is the only factor that seems actually be able to describe the decrease in homeownership. Demographics consist of characteristics that describe the population, in this case the

United States' population. Within demographics, I will consider the changing mindset of Americans and affordability related to income.

Many Americans are changing their views toward homeownership. A group changing the dynamics of homeownership is the Millenials. Millenials are those born between 1980 and the mid-2000s, and they seem to be placing less emphasis on owning a home than past generations. The oldest Millenials would have been around 26 years old when the housing market crashed and the Great Recession started. As a result, the forefront of Millenials were entering the housing market in troubled times. For that reason alone, they would have altered views towards homeownership, since they witnessed, first hand, how many people lost homes and lost money when the housing market crashed. These Millenials also have financial troubles of their own; they had outstanding student loan debt surpassing one-trillion in mid-2014, and many rely on parents for financial support more so than generations in the past have (White House Council of Economic Advisers, 2014). The share of 18-34 year olds living with their parents has increased from 28% in 2007 to 31% in 2014 (White House Council of Economic Advisers, 2014). Also, Millenials tend to get married later; in 2013, only 30% of 20-34 year olds were married compared to 77% in 1960 (White House Council of Economic Advisers, 2014). The White House Council of Economic Advisers (2014) found that Millenials are delaying family formation and less likely to be homeowners than young adults in previous generations. The changing dynamics of America's youngest generation may be contributing to the current decline in homeownership.

Many think that housing affordability is an issue contributing to our current decline in homeownership rates, but that is not the case. Housing is actually more affordable than it was from 1985-2000. According to Svenja Gudell (2016), at the end of 2015, the average American making the nation's median annual income ($55,589) trying to buy the typical American home ($186,000) could expect to pay 15% of their income towards a monthly mortgage payment. The average percentage income an American would have paid from 1985-2000 was 21%; so overall, homes are actually quite affordable compared to past years (Gudell, 2016). Although, homes are collectively more affordable, there is, however, an affordability issue among Americans who are making the least amount of income. These low income Americans may be contributing to a decline in homeownership. Figure 14 shows the income problem that has arisen.

Figure 14: Income by Tier

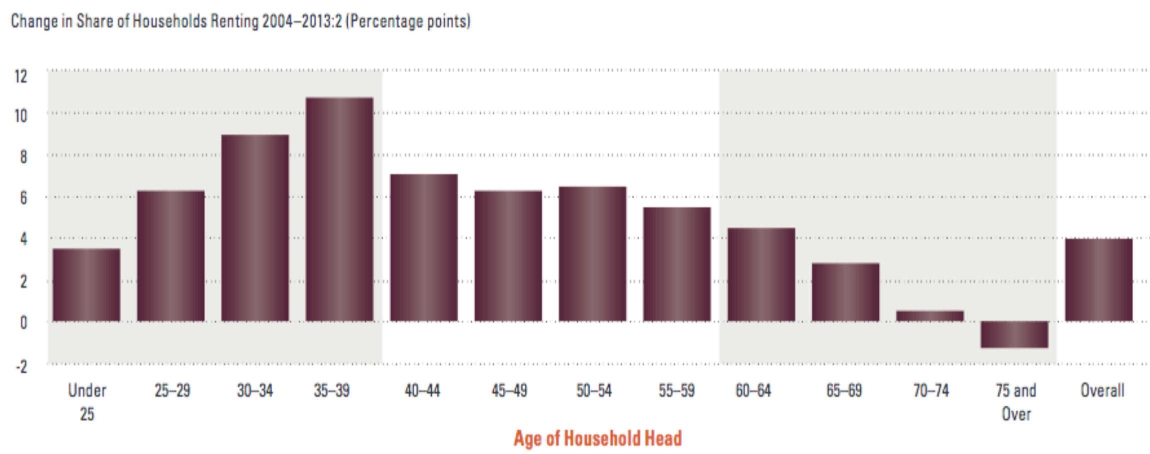


Source: Gudell, Svenja (2016)

Figure 14 illustrates that bottom tier Americans are experiencing roughly no income growth, which makes it harder for them to purchase a home than top tier Americans. By 2014, low-income households purchasing a lower-priced home spent 14% points more of their income on a mortgage than high-income people purchasing a higher-priced home (Gudell, 2016). So while housing affordability does not seem to be an issue as a whole, it may be a problem for some demographics. Low-income households struggling to afford mortgages may be contributing to the current decline in homeownership rates in the U.S.

Americans also have a different view towards renting than in recent years. In 2015, renters made up 36.3% of total housing inventory compared to 31.1% in 2005, just prior to the crash (U.S Census Bureau). Renters are not just increasing in a particular age group; renters are increasing among most age groups. The increase in renters among all age groups is illustrated in Figure 15.

Figure 15: Change in Share of Households Renting (2004-2103)

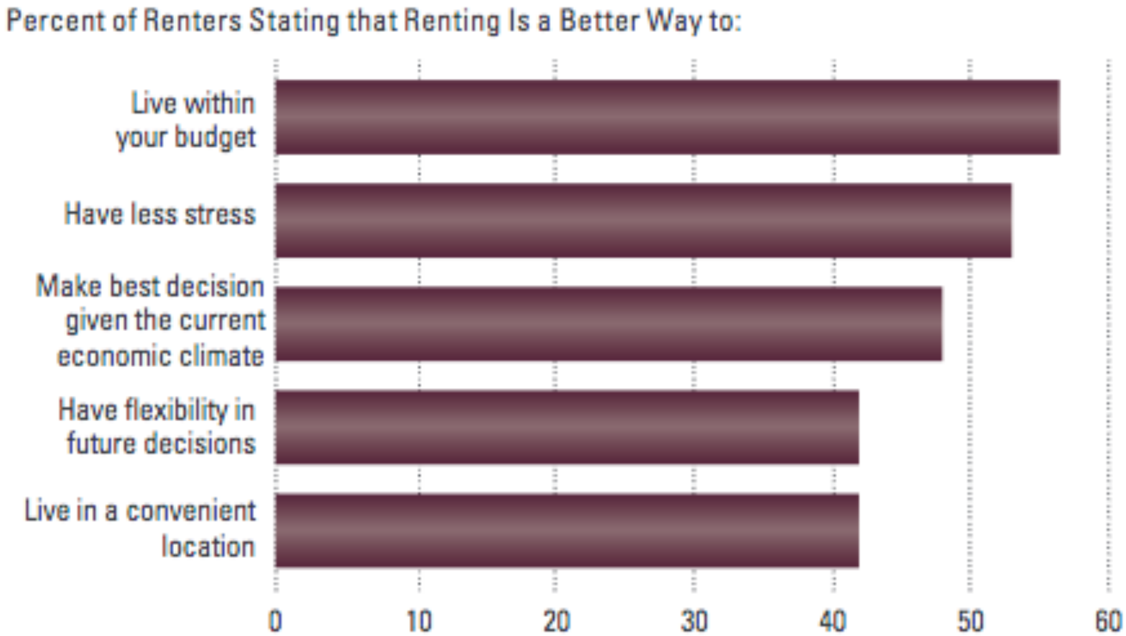


Source: Joint Center for Housing Studies of Harvard University (2013)

Figure 15 shows that the change in share of households renting from 2004-2013 has increased in every age group except for those aged 75 and over. Something must be causing this increase in renters. At first thought, one might think that renting is a cheaper alternative, but that is not necessarily true. According to Svenja Gudell (2016), renters are paying 30% of their income towards rent, compared to the 15% the average American can expect to pay towards a monthly mortgage payment on a typical American home. So, on average, raw monthly mortgage payments are cheaper than raw monthly rental payments. The raw monthly rental payments do not include additional payments associated with renting, such as upkeep, renters' insurance, maintenance fees, and amenities. Also, the raw monthly mortgage payments do not include additional payments, such as property taxes and insurance. Zillow conducted a study where they found that 26% of renters said they struggled to pay their rent, or that their rent was sometimes difficult to pay but doable (Terrazas, 2016). However, there is one factor that may make rent seem more affordable to the average American. With renting, you have no down payment; there may be upfront costs, but they are not comparable to a down payment on a home. Since rents are not an overall cheap alternative, there must be other reasons for increasing renters in America.

In 2013, the Joint Center for Housing Studies of Harvard University (JCHS) conducted research on the current rental market in the United States. The JCHS (2013) found that the increase in rental housing was the result of four factors: wave of foreclosures, economic upheaval, risks of homeownership, and renewed appreciation for benefits of renting. The wave of foreclosures displaced many homeowners and made renting more accommodating, while the economic upheaval strained many household budgets, which turned Americans towards renting (JCHS, 2013). When the home prices declined so rapidly and foreclosures started happening in 2006 and thereafter, many Americans lost faith in the housing market. Americans saw firsthand the risks of homeownership: the potential loss of wealth from falling home prices, the high costs of relocating, and the financial and personal stress that can be caused from homeownership (JCHS, 2013). Figure 16 shows in more detail why more Americans are choosing to rent.

Figure 16: Why Many Americans Are Choosing to Rent



Source: JCHS (2013)

Figure 16 shows that renting grants many benefits to Americans that they believe they cannot achieve through homeownership. In regards to our current residential real estate market, the recent turmoil in for-sale housing markets and the broader economy has created a favorable alternative, which is renting; renting seems to provide a sense of comfort in or at least an alternative to the high priced risk associated with homeownership (JCHS, 2013).

After looking into homeownership since the bursting of the housing bubble, I believe that a change in demographics, specifically changing attitudes of Millenials and increasing renters, has contributed to the United States' decline in homeownership.

Chapter 8: Conclusion

In conclusion, since World War II, there have been many factors at work affecting the United States' homeownership rates. The economy, interest rates, and government policies seem to act in an expected manner, except when changing demographics are occurring.

Immediately following World War II, homeownership drastically increased, due to built up demand, a thriving economy, and government policies. The increase in homeownership lasted all the way until the major economic downturn that took place at the beginning of the 1980s. The resulting decrease in homeownership lasted for six years from 1980 until 1986. The decrease in homeownership was the result of a struggling economy and high interest rates that resulted in unaffordable housing. The decline in homeownership ended due to the use of alternative mortgage options and lower interest rates; and shortly after a housing bubble began forming. Along with increasing home prices, homeownership rates saw a massive increase starting in the late 1990s due to many factors: monetary policy, adjustable-rate mortgages, and irrational exuberance. Then, once the bubble burst, the United States' current residential real estate market began forming.

Since the bubble bursting in 2006, the United States has experienced only declines in homeownership. So far, this decline has spanned ten years; the United States has not seen this significant of a decline since the Great Depression. The beginning of the 1980s experienced a major decline in homeownership rates but not quite to the extent of our current decline. Unlike the 1980s, when low interest rates helped increase homeownership, our current low interest rates have not helped bolster homeownership. Also, in the past, government policies and a stable economy have seemed to suggest an increase in homeownership, but currently we are not experiencing an increase due to these two factors. The current decline is attributed to changing demographics, which has also been observed in the past century. Once, after World War II, Americans shifted towards the suburbs, which helped increase homeownership rates. And second, baby boomers entering the housing market in 1980s result in an increase in homeownership. In contrast, the current demographic change is resulting in a decrease in homeownership. Therefore, demographics can have either a positive or negative affect on homeownership. Since looking at homeownership rates since the Great Depression, there are obvious factors, such as the economy, interest rates, government policies, and demographics, which do affect homeownership. However, demographics seem to be the only factor, out of the major four factors, that acts in an unpredictable way. Therefore, those in the residential real estate market now have a better understanding of what tends to influence homeownership in the United States; but Americans' changing demographics and resulting needs, in regards to housing, will always need to be put into consideration.

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