



Recent Trends in Homeownership

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The homeownership rate began to trend upward in 1995 after years of being relatively constant, near 64 percent. This article describes recent changes in the share of U.S. housing that is owner-occupied and explores the reasons for the surprising rise over the past decade. Explanations that have been offered include demographics, low mortgage rates, changes in housing policy, and innovations in the mortgage financial market. Of all these explanations, the most plausible one is that innovations in the financial markets increased access to mortgage finance, mainly by reducing downpayment constraints and allowing younger people to buy homes. (JEL D10, R21, R31)

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The United States has a relatively high rate of homeownership; only a few countries—Ireland, Spain, and Italy—have much higher rates.¹ This article describes recent changes in the share of U.S. housing that is owner-occupied, with an explanation for its surprising rise over the past decade.

Figure 1 shows the homeownership rate in the United States during the period from 1930 to the present. During the Great Depression, when the homeownership rate fell, the government began to adopt policies to promote homeownership. Toward the end of World War II, the homeownership rate began to rise. In fact, the rate rose steadily until reaching 64 percent in 1965. For the next 30 years, despite a wide variety of policies at all levels of government aimed at stimulating homeownership, this rate seemed stuck permanently near the 64 percent level. However, in 1995, the trend turned upward and reached 69 percent in 2004.

In 2003, there were 120.8 million housing units in the United States; 14.9 million of these

were vacant or seasonal, while 105.9 million were occupied as primary residences. Of the occupied units, 72.2 million were owner-occupied. (The homeownership rate is computed by dividing the number of owner-occupied housing units by the number of units occupied as primary residences.) To get some idea of the magnitude of a 5-percentage-point increase in the homeownership rate over the past decade, note that each year, on net, a half million renters would have had to become homeowners.

This article investigates various explanations for the turnaround that began in 1995. We examine changes in tax policy and other government programs in the economy (including mortgage interest rates, relative home prices, and household income) and innovations in the mortgage market that may account for the steady rise in homeownership over the past decade.

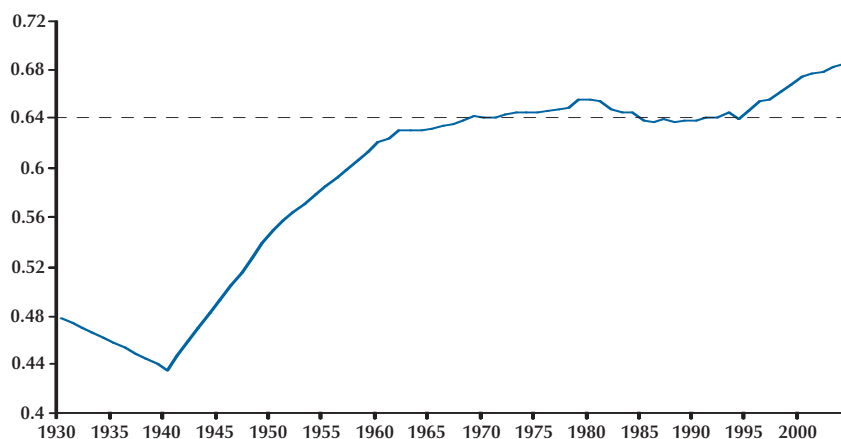
HOMEOWNERSHIP RATE BY DEMOGRAPHIC CHARACTERISTICS

To try to understand why the homeownership rate has increased, we examine its change from

¹ See *The Economist* (2002) for a cross-country comparison of homeownership rates.

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Figure 1**U.S. Homeownership Rate, 1930 to 2004**

SOURCE: Colton (2003) for the early years, which include interpolated data, and Housing Vacancy Survey, Table 12, U.S. Census Bureau, 2005, for data after 1960.

Table 1**Homeownership Rates by Age**

Age group	Rate in 1985	Percent change in homeownership rate		Rate in 2004
		1985 to 1994	1994 to 2004	
U.S. total	63.9	0.2	7.8	69.0
Less than 35 years	39.9	-6.5	15.5	43.1
35 to 44 years	68.1	-5.3	7.3	69.2
45 to 54 years	75.9	-0.9	2.7	77.2
55 to 64 years	79.5	-0.3	3.0	81.7
65 years and over	74.8	3.5	4.8	81.1

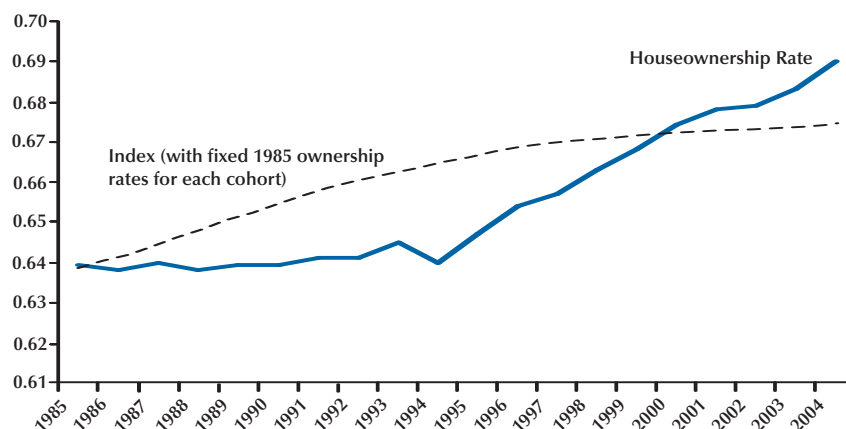
SOURCE: Data come from the Housing Vacancy Survey, Table 15, U.S. Census Bureau, 2005.

various demographic perspectives. Table 1 includes information about homeownership rates by age. The top row shows that the U.S. homeownership rate in 1985 was 63.9 percent. It rose a mere 0.2 percent during the decade ending in 1994. This relatively flat trend masked considerable divergence among age groups. For most groups in the period 1985 to 1994, homeownership rates fell. The younger the group, the greater was the decline. Only for the oldest group, aged

65 years and older, did homeownership rise—to 77.4 percent by 1994.

The rate of homeownership among the oldest group continued to rise—up 4.8 percent to 81.1 by 2004. The homeownership rates for all the younger groups, after 1994, stopped falling and began to rise as well. The turnaround was greatest for the two youngest groups, which are dominated by first-time buyers.

An obvious question is whether changes in

Figure 2**The Effect of Demographics on the Homeownership Rate, 1985 Weights**

SOURCE: Housing Vacancy Survey, Table 15, U.S. Census Bureau, 2005.

Table 2**Homeownership Rates by Family Status**

	Rate in 1985	Percent change in homeownership rate		Rate in 2004
		1985 to 1994	1994 to 2004	
United States	63.9	0.2	7.8	69.0
Married-couple families	78.2	0.8	6.6	84.0
Other families				
Male	57.8	-8.7	12.9	59.6
Female	45.8	-3.5	15.2	50.9
Nonfamily households				
Male	38.8	11.1	17.2	50.5
Female	51.3	6.2	9.9	59.9

SOURCE: Data come from the Housing Vacancy Survey, Table 15, U.S. Census Bureau, 2005.

the U.S. age distribution, such as the baby boom effect, could account for the increase in participation in the housing market. We construct a fixed-weight index holding ownership rates for each age cohort constant at the 1985 rate. The relative shares of each cohort in the population of residents are changing over time.² Figure 2 shows that this index, based on changing shares of the age cohorts, predicts that the average homeownership rate

would have grown more rapidly before 1995 than what is actually observed. The fixed weight index grew from 63.9 in 1985 to 66.5 in 1994 and then more slowly to 67.4 in 2004. Figure 2 clearly

² The 1985 index in Figure 2 was created by taking the ownership rates for each age group in 1985 as fixed weights and then calculating a fixed-weight index of homeownership that changes because the relative share of each age group changes over time.

Table 3
Homeownership Rates by Ethnic Group

	Percent change in homeownership rate		
	Rate in 1994	1994 to 2004	Rate in 2004
United States	64.0	7.8	69.0
Non-Hispanic white	70.0	8.6	76.0
Black	42.3	16.1	49.1
American Indian	51.7	7.5	55.6
Asian or Pacific Islander	51.3	16.6	59.8
Hispanic or Latino	41.2	16.7	48.1

SOURCE: Data come from the Housing Vacancy Survey, Table 20, U.S. Census Bureau, 2005.

demonstrates that age demographics cannot be the primary explanation for the rise in the homeownership rate that began in 1995.

Table 2 decomposes homeownership trends by family status. The top row repeats the information for U.S. total households. The second row includes households with families headed by a married couple. This group has the highest levels of homeownership. All other groups are much lower. For families headed by a single parent, male-led families had higher homeownership than did female-led families. However, female-led families have purchased homes at a higher rate over the past two decades, so the two rates have tended to converge. It is also interesting to note that the opposite pattern exists for non-family households; that is, female-led households started at a higher rate than male-led households, but the homeownership rate for male-led households rose faster and closed some of the gap.³

Table 3 reports results by ethnic group using data that begin in 1994. The top row reports statistics for the total U.S. population. Since 1994, the average U.S. homeownership rate has risen 7.8 percent. The second row shows the rate for the non-Hispanic white population. Here the rates are highest. The lowest rates are for black and

Hispanic (or Latino) households. However, these two groups had much faster growth in homeownership rates, almost double those of white households. American Indian homeownership rates are between those of white and black households. However, the increase was slightly below total U.S. growth.

Not surprisingly, homeownership rates are lowest for young, minority, and low-income households, and hence they offer the greatest scope for increasing the overall average. This point is important for public policymakers because, to achieve significant progress in promoting homeownership rates, it makes sense to focus policies on groups with the lowest participation.

GOVERNMENT POLICIES TO PROMOTE HOMEOWNERSHIP

The government has long had a policy of promoting homeownership. The tax code is skewed to favor homeownership, the government sponsors agencies that promote homeownership among military veterans and low-income families, and both the Clinton and George W. Bush administrations have promoted programs designed to help young and low-income homebuyers.

Tax Law

One of the programs supporting homeownership is the home mortgage interest deduction.

³ Households are classified as family households if two or more of the occupants are related and as non-family if none of the occupants are related.

Homeowners who itemize their tax returns have been able to deduct interest payments on home mortgage loans from their taxable income since the passage of the 16th amendment in 1913. All interest payments on consumer loans were deductible until the 1986 tax reform, which eliminated the deduction for all interest payments except those to service home mortgage debt. This reform has actually increased the value of the home mortgage interest deduction, as homeowners can substitute mortgage debt for other types of debt.

The government has never taxed imputed in-kind service flows from homeownership. Landlords must pay taxes on the rental income net of maintenance and depreciation costs. If the same house is owner-occupied, there is no tax on the imputed rental income.

In 1951, Congress enacted legislation that allowed homeowners to exclude capital gains from the sale of a principal residence if they purchased another residence costing at least as much within two years. Beginning in 1964, taxpayers could take a one-time exclusion of a capital gain of \$125,000 if they were at least 55 years old. The purpose was to protect elderly taxpayers from a heavy burden associated with becoming a renter or moving into a smaller residence. In 1997, the Clinton administration sponsored legislation that allows homeowners to take a tax-free capital gain up to \$250,000 on the sale of a principal residence every other year. This feature of the tax code is not likely to help young, low-income, and first-time homebuyers.

The TAXSIM program at the National Bureau of Economic Research constructs average marginal tax rates for U.S. taxpayers in different categories. One of the calculations is the average marginal subsidy rate for the mortgage interest payment deduction. Since 1986, the average marginal subsidy has been relatively constant, around 23 percent: That is, the average taxpayer deducts 23 cents from his tax bill for the last dollar of mortgage interest that is paid.⁴ By itself, this subsidy cannot explain the recent change in the homeownership trend, as there has not been a change

in this policy over this time horizon. Glaeser and Shapiro (2003) have argued that the home interest rate mortgage deduction does not increase homeownership. Rather, they find that the deductibility of the mortgage interest and property tax payments encourage those who are already homeowners to buy larger and more expensive homes.

The federal government also supports homeownership by authorizing state and local governments to issue tax-exempt mortgage revenue bonds. The National Council of State Housing Authorities reports that funds from such bond issues have supported an average of 100,000 home purchases for low-income buyers over the past two decades. In principle, the programs are large enough to be important for homeownership rates. There is, however, no evidence of a rise in the use of these bonds since 1995 and, although there have been few empirical studies on this issue, Benjamin and Sirmans (1987) and Government Accounting Office (1988) suggest that the subsidy is capitalized in the home price so that there is no measurable benefit to the homebuyer.

The Secondary Mortgage Market

During the Great Depression, the federal government created two agencies to increase funds available to finance mortgages.⁵ First, in 1934, the government created the Federal Housing Administration (FHA), which insured long-term fixed-rate mortgages. In 1938, it created the Federal National Mortgage Association (Fannie Mae) to purchase FHA-insured mortgages, the beginning of a secondary market for home mortgages. The development of such a market enhances liquidity, thus lowering the liquidity premium paid by borrowers. In addition, the government created the Veterans Administration (VA) program at the end of World War II to help veterans purchase homes. Fannie Mae began purchasing VA-insured loans in 1948. There was a rapid rise in homeownership following World War II, with the homeownership rate rising from around 40 percent before the war to 64 percent by 1965. Colton (2003) argues that both the VA and FHA programs contributed to this large rise and that

⁴ See Table 9 in Feenberg and Poterba (2004).

⁵ For a detailed history of housing finance, see Ryding (1990).

their success was largely due to guarantee provisions that allowed new households and veterans to buy homes without a downpayment.

In 1968, Congress restructured Fannie Mae as a government-sponsored enterprise (GSE) and created the Government National Mortgage Association (Ginnie Mae) to assume some of Fannie Mae's functions. Ginnie Mae was authorized to guarantee principal and interest payments on its securities that were backed by VA and FHA loans. Ginnie Mae began to offer guaranteed mortgage-backed securities in 1970. It was in this year that the federal government chartered the Federal Home Loan Mortgage Corporation (Freddie Mac) to develop a secondary market for conventional mortgages. Freddie Mac began issuing mortgage-backed securities in 1971, and Fannie Mae followed a decade later with its first issue of mortgage-backed securities in 1981. The securitization of mortgage debt increased its marketability and should have reduced the wedge between mortgage interest rates and other interest rates. Through the 1960s to the end of the 1980s, the 5-year moving average of the difference between the contract interest rate on new homes and the 10-year constant maturity yield on Treasury bonds fell from 1.5 percentage points in 1965 to half a percentage point at the end of the 1980s. Since then, however, it has risen steadily and has averaged 1.5 percent in the past five years.

Of course, there are many reasons why the spread between mortgage rates and Treasury yields will vary. Analysts looking for the interest rate-lowering effects of the GSEs look at the spread between interest rates on conforming and jumbo loans from comparable mortgage contracts. Conforming loans are those that meet the standards set by the GSEs. Jumbo loans are those that exceed the maximum size of loans that the GSEs will purchase. This spread depends on many factors surrounding the particular terms of a loan and the market forces affecting the non-GSE lenders. In a definitive study, Passmore, Sherlund, and Burgess (2005) estimate that the average interest rate benefit of the GSEs is between 15 and 18 basis points. Sanders (2005) compares these results with other recent studies. He concludes that, although the results of Passmore, Sherlund, and

Burgess are on the low side in the literature, other comprehensive studies also find small effects. But, more importantly, for the trend in homeownership rates, Sanders shows that the unadjusted spread between jumbo and conforming loans has fluctuated between 10 and 50 basis points since 1990, with no apparent trend.⁶

Affordable Housing Programs

The Department of Housing and Urban Development (HUD) has three affordable housing programs: HOZ, HOME, and SHOP. The Homeownership Zone (HOZ) program has helped communities reclaim vacant and blighted properties, increase homeownership, and promote economic revitalization by creating entire neighborhoods of new, single-family homes, called Homeownership Zones. There have been two competitive funding rounds. The first was in federal fiscal year 1996 and authorized \$30 million in subsidies for about 2,000 new and rehabbed units in six cities. The other, in federal fiscal year 1997, authorized about \$12.7 million in subsidies in five cities for just under 1,400 new and rehabbed units. No further funding has been authorized under this program.

The Home Investment Partnerships Program (HOME) was created under Title II of the National Affordable Housing Act of 1990. It has become a key funding source for supporting HUD's homeownership goals. HOME provides grants to state and local governments to increase the homeownership rate among lower-income and minority households, as well as to revitalize and stabilize communities. HOME funds may be used to support the following eligible activities: homebuyer programs, rehabilitation of owner-occupied units, rental housing development, and tenant-based rental assistance. According to a study commissioned by HUD, between 1992 and 2002, \$3.1 billion in HOME funds helped 270,000 low-income households buy homes.⁷ During the first few years, most of the funds were used to assist renters and

⁶ We do not address issues involving the costs and benefits of having the GSEs in the market. See Poole (2005) for a discussion of risks that have grown with the size of the GSEs.

⁷ See Turnham et al. (2004).

owners of rental units. In 1992, only 7 percent of the funds and 3 percent of the housing units assisted were owner-occupied. By 2002, the percentages rose to 31 percent of the funds and 39 percent of the housing units.

In December 2003, President Bush signed into law a new initiative under HOME—the American Dream Downpayment Initiative Act (ADDI)—that authorizes up to \$200 million in formula grants to help first-time homebuyers with the biggest hurdle to homeownership: downpayment, closing costs, and rehabilitation costs.⁸ To be eligible for ADDI assistance, individuals must be first-time homebuyers interested in purchasing single-family housing. Individuals who qualify for ADDI assistance must have incomes not exceeding 80 percent of the median area income. The maximum downpayment grant is \$10,000 or 6 percent of the purchase price of a house, whichever is greater. HUD analysts expect the subsidy to be around \$7,500 on average for each homebuyer that participates in the program. The Bush administration expects ADDI to fund approximately 40,000 households annually.

The Self-Help Homeownership Opportunity Program (SHOP) provides funds for nonprofit organizations to purchase home sites and develop or improve the infrastructure needed to set the stage for “sweat equity” and volunteer-based homeownership programs for low-income families. This program targets families who are willing to contribute their own time and effort into home improvement. Grants are provided by the federal government to nonprofit organizations, enabling them to acquire land and improve infrastructure to build new homes. An example is Habitat for Humanity. For fiscal year 2003 funding was \$25 million.

Overall, these programs are too small to have had a measurable effect on homeownership rates. Even if all these programs together succeeded helping 50,000 renters become homeowners each year, that number would be an order of magnitude smaller than the number of households that became homeowners during each year of the past decade. With only 50,000 a year, it would

take approximately 25 years to increase the homeownership rate by just 1 percentage point.

HOMEOWNERSHIP AND ECONOMIC CONDITIONS

The decision of buying or renting is an important one that depends on the costs and benefits of owning versus renting a home. Housing affordability indices attempt to account for the main financial factors that influence the decision: mortgage interest rates, housing prices, and family income.

Housing Costs

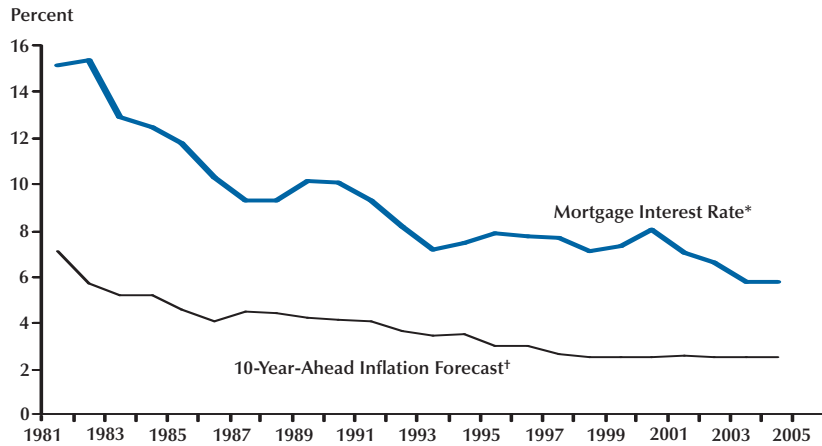
The mortgage interest rate is an important factor in the cost of a home. Figure 3 plots the average mortgage rate on loans used to buy existing homes and the 10-year-ahead inflation forecast. At 15 percent in 1981, the mortgage rate has fallen rather steadily to around 6 percent in 2005. The expected inflation rate also fell over this period, and so the real mortgage rate did not fall as quickly as did the nominal rate; but the real rate also fell from about 8 percent in 1981 to 3.5 percent in 2005. Two percentage points of that decline have occurred since 2000.

We look at the partial effect of house prices and interest rates on housing affordability by constructing two counterfactual historical indices: The indices shown in Figure 4 are quarterly payments on interest and principal for a conventional loan with a 20 percent downpayment. The first index is based on the actual time series of house prices with the mortgage rate fixed at 10 percent—the rate observed in 1990:Q1. The second index is similar to the first, but the house price is fixed at the 1990:Q1 level and the payments are based on the actual time series of mortgage interest rates. The third index uses actual time series for both the house price and the mortgage interest rate. It shows that the cost effect of the falling interest rate has been more than offset by the rising house price.

The Office of Federal Housing Enterprise Oversight publishes a house price index (HPI)

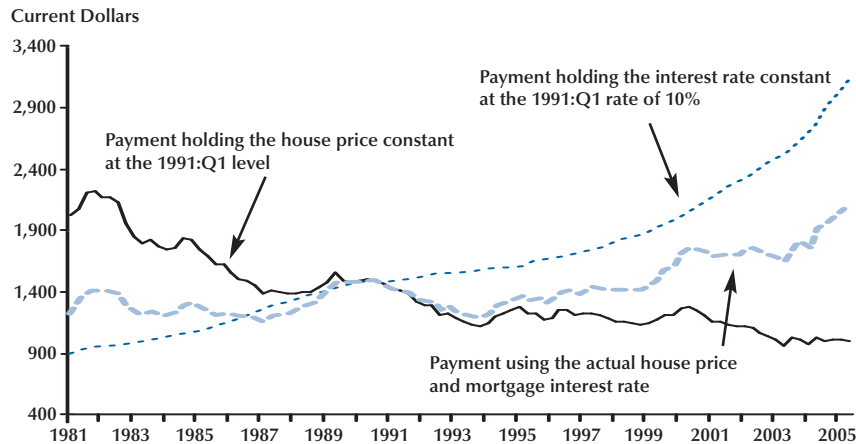
⁸ In 2003, the ADDI appropriation was \$74.5 million. In 2004, HUD announced \$161.5 million in funding for the ADDI.

Figure 3
The Mortgage Interest Rate and Expected Inflation



SOURCE: *Effective rate on loans closed on existing homes: Federal Home Loan Bank Board. †Inflation forecast from the survey of professional forecasters: Federal Reserve Bank of Philadelphia.

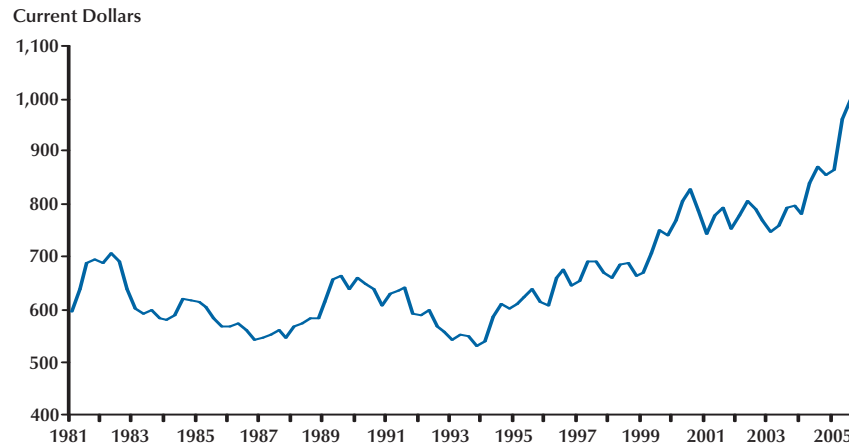
Figure 4
Hypothetical Payments for Principal and Interest



SOURCE: The House Price Index (HPI) is published by the Office of Federal Housing Enterprise Oversight (OFHEO) using data provided by the Federal National Mortgage Association (Fannie Mae) and the Federal Home Loan Mortgage Corporation (Freddie Mac). The mortgage rate is the effective rate on loans closed on existing homes, compiled by the Federal Home Loan Bank Board.

Figure 5

Actual Monthly Payment for Principal and Interest of Median First-Time Buyer



SOURCE: National Association of Realtors.

using data provided by Fannie Mae and Freddie Mac. It is a broad measure of the movement of single-family house prices. The HPI is a weighted repeat sales index, meaning that it measures average price changes in repeat sales or refinancings on the same properties. It is based on transactions involving conforming, conventional mortgages purchased or securitized by Fannie Mae or Freddie Mac. Only mortgage transactions on single-family properties are included. The mortgage rate is the effective rate on loans closed on existing homes compiled by the Federal Home Loan Bank Board.

Figure 4's dotted line (fixed mortgage rate) shows that rising house prices contributed to a dramatic rise in the payment. The solid line shows the effect of declining interest rates. The next effect is the dashed line, which lies between the two. The rising house price only offset the effect of lower interest rates through 1999. Since then, the rising price dominates and payments have risen rather sharply. This finding is consistent with Painter and Redfearn (2002), who examine the role of interest rates in influencing long-run ownership rates and find that interest rates play little direct role in changing ownership rates.

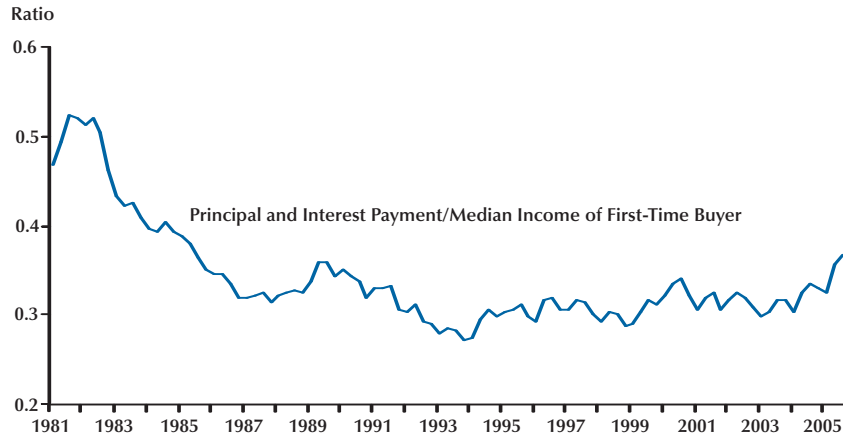
Affordability for First-Time Buyers

Using data on first-time homebuyers from the American Housing Survey (AHS), we plot the actual monthly payment for principal and interest of the median first-time buyer in Figure 5. Here the payments were relatively flat until 1995, when they began to trend upward. We use these data in Figure 6, with the median income of first-time homebuyers, to show the principal and interest payments as a share of income.

Perhaps we should not be surprised to see that the income of the first-time buyers rose almost as fast as did the size of the payment. The question is whether the median income of first-time homebuyers was representative of the population. In Figure 7, we plot the AHS affordability index. This index is equal to 100 when median family income qualifies for an 80 percent mortgage on a median-priced existing single-family home. A rising index indicates that more buyers can afford to enter the market. As the figure shows, there was an erratic decline in the affordability index from 92 percent at the end of 1993 to 63 percent in 2005.

Figure 6

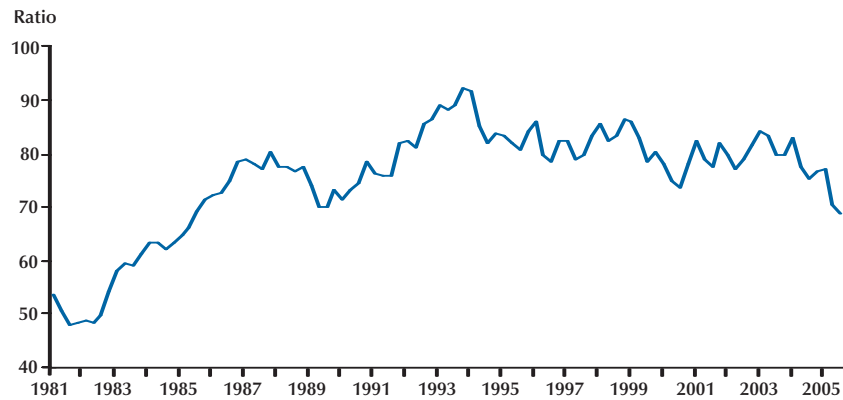
First-Time Housing Cost as a Share of Income



SOURCE: National Association of Realtors.

Figure 7

Affordability Index

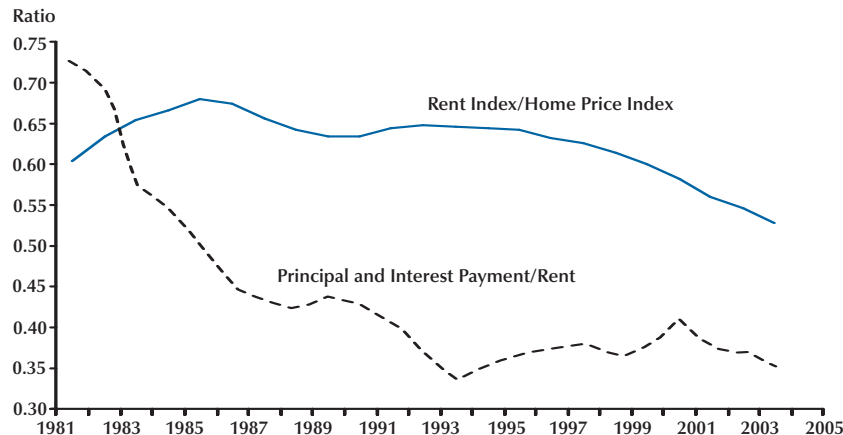


NOTE: Index = 100 when median family income qualifies for an 80 percent mortgage on a median-priced existing single-family home. Rising index indicates more buyers can afford to enter the market.

SOURCE: National Association of Realtors.

Figure 8

Relative Cost of Renting vs. Buying



SOURCE: The rent index is from Supplemental Table 2.4.5U of the NIPA. The home price index is Freddie Mac's Conventional Mortgage Home Price Index. The rent/payment and interest cost data come from the American Housing Survey.

Rent or Buy?

Another important factor in deciding whether to rent or buy is the monthly rental payment relative to the monthly principal and interest payment.⁹ Figure 8 presents two alternative measures of the relative cost of renting versus owning. The ratio of rental index to home price index, shown in the solid line, is the ratio of the rental index from the National Income and Product Accounts (NIPA) to Freddie Mac's conventional mortgage home price index. This relative price of renting rose to a peak in 1985 and has been on a generally downward trend since 1995. The message from this index is that we cannot look to the relative cost of renting as an explanation for the post-1995 rise in homeownership rates. That message is mixed when we look at the ratio of the median payment of principal and interest to the median rent payment. Here the relative size of the house payment fell by half, from 0.73 in 1981 to 0.35 in 1994. After 1994, however, it was relatively flat, fluctuating at or below 0.40. None of these macro-

economic factors explains the rising trend in the homeownership rate in an obvious way. On this point, one of the surprising aspects of the 2001 recession was the ongoing strength in consumption growth and, in particular, housing demand.

FINANCIAL INNOVATIONS

Historically, the U.S. mortgage market was shaped by the FHA's introduction of mortgage insurance that promoted the use of 30-year fixed-rate mortgages and low downpayments.¹⁰ More recently, a series of financial innovations have also contributed to the ability of younger households to buy homes with little or no downpayment. Using a quantitative general equilibrium model of the housing tenure choice (whether to buy or rent), Chambers, Garriga, and Schlagenhauf (2005) find that innovations affecting the size of the downpayment are the most important factor explaining the rise in homeownership, especially for young and first-time buyers.

⁹ There is an extensive literature (see Rosen, 1979) demonstrating that households are more likely to own their residence as the user cost decreases.

¹⁰ For a survey of the FHA contribution to innovations in the U.S. mortgage market, see Pennington-Cross and Yezer (2000).

Table 4
Trends in Downpayment Percentages

Year	Type of buyer	Type of loan	
		FHA (%)	Other loans (%)
1995	First-time	21.6	29.8
	Repeat	22.0	33.3
	Total	23.2	33.5
1999	First-time	13.8	22.1
	Repeat	16.7	24.3
	Total	16.0	25.7
2001	First-time	16.3	24.1
	Repeat	26.5	28.5
	Total	22.6	27.0

SOURCE: Data were constructed using micro data from the American Housing Surveys: 1995, 1999, and 2001.

Table 5
Private Mortgage Insurance Premia

Downpayment percentage	Mortgage length in years			
	30	25	20	15
3-4.99	0.90	0.81	0.81	0.79
5-9.99	0.78	0.56	0.28	0.21
10-14.99	0.52	0.56	0.23	0.19
15-19.99	0.32	0.56	0.23	0.19

SOURCE: Data were downloaded in September 2004 from Jack Guttentag's interesting website at the University of Pennsylvania: www.mtgprofessor.com.

Mortgage Contracts

A lower downpayment constraint should affect the distribution of homeownership as well as the overall homeownership rate. The American Housing Survey collects information on the size of downpayments, and Table 4 shows the median downpayment as a percentage of the loan size for first-time and repeat buyers. Data categorized as FHA or non-FHA loans are shown for three years, 1995, 1999, and 2001. Between 1995 and 1999, we see a drop in the downpayment percentage. The average repeat homebuyer has a larger downpayment because capital gains from the prior

home are usually used in the downpayment for the new home.

Why did the downpayment percentage fall? One explanation is the increased use of private mortgage insurance (PMI). Fannie Mae and Freddie Mac require mortgage insurance when the loan-to-value ratio exceeds 80 percent. As a result, borrowers are able to purchase a more expensive home than they might otherwise be able to afford.

To illustrate how PMI works, Table 5 shows an example of 2004 insurance premiums for alternative downpayment percentages and mortgage

Table 6**A Loan with Mortgage Insurance vs. a Combo Loan**

Mortgage rate (%)	Combination loan annual payment (\$)	Loan with mortgage insurance annual payment (\$)
5	6,412	6,929
7	7,906	8,405
11	11,203	11,677

NOTE: This table is taken from Chambers, Garriga, and Schlagenhauf (2005). The values in this table are calculated for a 30-year “80-15-5” \$100,000 combo mortgage and a 30-year \$100,000 loan with a loan-to-value ratio of 95 percent and PMI. The insurance premia are from Table 5.

terms. For Fannie Mae and Freddie Mac loans, the premium rate is applied to the original balance and holds for ten years, after which it falls uniformly to 0.20 percent of the original loan balance unless it is already less than 0.20 percent, in which case the premium remains unchanged. Premiums are annual rates paid monthly. To obtain the monthly premium in dollars, multiply the premium rate in Table 5 by the loan balance and divide by 1,200. According to the table, if a homebuyer purchases a home with less than 5 percent down, then the premium rate is 0.90. For a \$100,000 loan, the monthly insurance premium is $\$90,000/1,200 = \75 . Under federal law, premiums are automatically terminated when the loan balance falls to 78 percent of the original property value and may terminate earlier, at the borrower’s initiative, when the balance reaches 80 percent of the appreciated value.

Another explanation for the rising trend in homeownership may be the development of the “80-20”—also known as the no downpayment loan—or the “80-15-5” combo loan. In both of these mortgage products, the buyer takes out two loans. The “80-20” loan corresponds to the traditional loan-to-value rate of 80 percent, while the second loan is for the 20 percent downpayment. The loan on the additional 20 percent has an interest rate that is approximately 2 percent higher than the primary mortgage rate. The “80-15-5” program has a 5 percent downpayment along with a second mortgage for the remaining 15 percent.

In Table 6, we examine the annual cost of a \$100,000 30-year fixed-rate “80-15-5” combo mortgage and a \$100,000 fixed-rate mortgage where the loan-to-value ratio is 95 percent and PMI is purchased. These two mortgage products have the same loan-to-value ratio and hence are comparable. The first loan product does not require PMI. As can be seen, the annual payment associated with a combo loan is lower than the annual payment associated with a loan with mortgage insurance for the three mortgage rates we considered.¹¹ The reason the loan with PMI is more expensive is that the insurance premium is figured on the entire loan value.

Private Programs to Lower Downpayment Requirements

A number of private programs exist to reduce closing costs, which can range up to 6 percent of the selling price of the home. The primary programs are the Nehemiah Program, the AmeriDream Downpayment Assistance Program, HART Action Resource Trust, Consumer Debt Solutions, Inc., and Partners in Charity. Since all of these programs are similar, we will focus on the Nehemiah Program. This program provides gift funds for downpayment and closing costs to qualified homebuyers using an eligible loan program such

¹¹ We also consider the tax benefits associated with each mortgage product to see if tax considerations from the mortgage deduction play a role. We found that the mortgage interest rate deduction did not change the conclusion that the annual payment associated with the combo mortgage product is lower.

as an FHA or conventional loan that allows gifts from charitable organizations. Gift funds range from 1 percent to 6 percent of the final contract sales price, depending on the particular needs of the homebuyer. The home purchaser's monthly payment for principal, interest, taxes, and insurance cannot exceed 29 percent of income. Any home on the market can be a Nehemiah participating home as long as the seller agrees to the Nehemiah participation requirements. The seller must contribute 3 percent of the sales price of the house to the Nehemiah Corporation and pay a processing fee of \$499. The benefits to the seller include access to a wider market of homebuyers and less need to negotiate the selling price. The contribution by the seller to Nehemiah may be tax deductible as a cost of the sale.

The Subprime Market

Another innovation in the mortgage market is the use of risk-based pricing to serve homebuyers who have poor credit ratings. Chomsisengphet and Pennington-Cross (2006) describe the evolution of the subprime mortgage market in which lenders make loans to households with poor credit histories. Lenders are compensated with higher mortgage interest rates—about 2 percentage points higher during the period from 1995 to 2003—higher origination fees, larger downpayments, and prepayment penalties. The use of subprime mortgages has grown rapidly since 1995 and may account for some of the increase in the homeownership rates since then.

Transaction Costs

Another possible explanation for rising homeownership rates is declining transaction costs, especially for low-income households. In early 1990 the initial fees and charges for a 30-year conventional loan were 2 percent of the loan amount. Financing this expense raised the effective mortgage rate by about 0.3 percentage points. By the summer of 2001, these charges had fallen to half a percent of the loan amount and added only about 0.06 percentage points to the effective mortgage rate. Since then, the initial fees and charges have fluctuated between 0.3 and 0.6 percent of the loan

amount. The data show that these costs declined rather steadily between 1990 and 2001, so this explanation does not seem likely.¹²

CONCLUSION

In this paper, we examined the behavior of the homeownership rate—a statistic that has been a target of public policymakers. It is interesting that the previous large increase in the homeownership rate occurred after World War II and the Korean War. Then, the government guaranteed the payments of principal and interest so that returning war veterans did not have to make a downpayment. Relaxing this constraint was the only channel through which the VA program helped veterans become homeowners. After years of being relatively constant, near 64 percent, the homeownership rate began to increase again. We examine a number of explanations of this change that have been offered, including demographics, low mortgage rates, changes in housing policy, and innovations in the mortgage financial market. Of all these explanations, we find that the most plausible explanation is that innovations in the financial markets increased access to mortgage finance, mainly by reducing downpayment constraints and allowing younger people to buy homes.

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¹² These data come from the Federal Housing Finance Board's Monthly Interest Rate Survey.

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