HOMEOWNERSHIP, RACE, AND THE AMERICAN DREAM

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ABSTRACT

In recent years, much of U.S. federal housing policy has focused on two complimentary goals: to increase U.S. homeownership rates while also narrowing enormous and longstanding racial gaps in homeownership. Against this backdrop, the U.S. homeownership rate rose to historic highs in the 1990s, reaching 67.3 percent in 2001, but substantial racial gaps persist. This paper uses data from six years of the Survey of Consumer Finances to analyze these patterns. Findings indicate that household socioeconomic characteristics explain nearly all of the gain in homeownership in the 1990s. These factors also explain all but 8 of the 26 percentage point white-black gap in homeownership in 2001 and all but 12 of the 28 percentage point white-Hispanic gap. Of the remaining "unexplained" white-minority gap in homeownership, credit barriers account for no more than 5 percentage points in all of the survey years from 1983 to 2001. These findings suggest that policy makers will need to look beyond mortgage market innovation if their goals are to substantially increase homeownership rates while also reducing racial disparities in homeownership.

1. Introduction

Over much of the last decade, federal housing policy has focused on two complementary goals. One is to elevate aggregate homeownership rates, while the other is to narrow sizable and persistent racial gaps in homeownership. In 1994, President Clinton made these goals a cornerstone of his administration's housing policy, writing to HUD Secretary Henry Cisneros:

> *"Homeownership is the American Dream. Our nation has embraced this dream since the National Housing Act of 1949 made a decent home and a suitable living environment for every American family a goal of national policy. … Homeownership strengthens families and stabilizes communities. … Today, I am requesting that you lead an effort to dramatically increase homeownership in our nation over the next six years. … Your program should include strategies to ensure that families currently underrepresented among homeowners - particularly minority families, young families, and low-income families - can partake of the American Dream."*
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> *Letter from President Clinton to HUD Secretary Henry Cisneros, November 3, 1994.*

In this letter, President Clinton clearly articulates his belief that homeownership is good for families, neighborhoods, and the economy. President Clinton also emphasizes that special attention should be paid to homeownership rates among underrepresented and disadvantaged groups, including minorities, young people, and low-income families.

Like his predecessor, President Bush has also made homeownership an important goal of domestic housing policy. Moreover, even more clearly than the Clinton Administration, President Bush has focused attention on long-standing disparities in homeownership rates between white and non-white households.[1] On June 18, 2002, for example, President Bush released the following statement:

> *"The goal is that everybody who wants to own a home has got a shot at doing so. The problem is we have what we call a homeownership gap in America. Three-quarters of Anglos own their homes, and yet less than 50 percent of African Americans and Hispanics own homes. That*

[1] In their efforts to boost homeownership rates, Presidents Clinton and Bush have both continued a tradition of Federal support for homeownership. For many years, for example, Federal tax policy has heavily subsidized homeownership through deductions for mortgage interest and property tax payments, and the failure to tax imputed rent (e.g. Rosen (1979, 1985)). Homeownership attainment has also been boosted by the creation of government-sponsored institutions in both the primary and secondary mortgage markets, including for example, Freddie Mac and Fannie Mae. See also, Haurin et al (2003) for an extensive review of homeownership policies.

ownership gap signals that something might be wrong in the land of plenty. And we need to do something about it."

President George Bush, June 18, 2002

This paper draws on data from the Survey of Consumer Finances to analyze the determinants of both aggregate homeownership trends and long-standing racial gaps in homeownership. Our period of study covers the years from 1983 to 2001. Homeownership rates over this period are shown in Table 1 and also are plotted in Figure 1 to facilitate review.[2] Observe that homeownership rates edged up 1 percentage point from 1983 to 1989, and then rose a remarkable 3.5 percentage points over the subsequent twelve years to an all time high of 67.3 percent in 2001.[3] Despite these dramatic increases, in 2001, white-black and white-Hispanic homeownership gaps stood at roughly 26 and 30 percentage points, respectively. Moreover, the white-minority gap in homeownership has changed little since 1983. Partly in response to those patterns, President Bush has set a goal of 5.5 million new minority homeowners by 2010.[4]

Numerous explanations have been offered for the dramatic increase in homeownership in the 1990s and the ongoing and sizable gap in homeownership rates between white and non-white households. On the one hand, the sharp increase in homeownership over the past decade coincided with several important changes in the U.S. economy, including the aging of the baby boomers, the economic boom of the 1990s, and the decline in mortgage interest rates to historically low levels. At the same time, a

[2]All values in Table 1 are weighted so as to be representative of the U. S. population.

[3]This rise is consistent with widely reported increases in homeownership rates in the Consumer Population Survey. See, for example: http://www.census.gov/hhes/www/housing/hvs/q103tab5.html.

[4]The following White House Press Release announced President Bush's goal of increasing the number of minority homeowners: "Today, President Bush announced a new goal to help increase the number of minority homeowners by at least 5.5 million before the end of the decade. The President's aggressive housing agenda will help dismantle the barriers to homeownership by providing down payment assistance, increasing the supply of affordable homes, increasing support for self-help homeownership programs, and simplifying the home buying process & increasing education. The President also issued "America's Homeownership Challenge" to the real estate and mortgage finance industries to join in his effort to increase the number of minority homeowners by taking concrete steps to tear down the barriers to homeownership that face minority families." Source: White House Press Release, June 17, 2002 http://www.whitehouse.gov/news/releases/2002/06/20020617.html

number of studies have argued that the relatively lower economic status of minorities has limited their ability to become homeowners (see, for example, Wachter and Megbolugbe [1992], Gyourko and Linneman [1996], Coulson [1999], Gabriel and Painter [2003], Haurin et al (2003)).

The 1990s also were characterized by the introduction of a host of new mortgage products that had the effect of relaxing loan underwriting standards. Those products were designed to facilitate access to homeownership, particularly among households that might have previously lacked sufficient downpayment.[5] In addition, prominent newspaper accounts in the late 1980s along with an influential study by the Federal Reserve Bank of Boston heightened concerns regarding systematic and unfair denial of mortgage credit to minorities (see Munnell et al (1996), Yinger and Ross (2003), Turner et al. (2002)).[6] These concerns further contributed to innovations in mortgage finance as policy makers and industry leaders attempted to eradicate racial bias from mortgage lending.[7]

A central goal of this paper is to evaluate whether and to what extent changes in population socio-economic status versus policy and industry initiatives account for recent trends in homeownership. To conduct our analysis, we draw on household level data from the Federal Reserve Board's Survey of Consumer Finances for the years 1983, 1989, 1992, 1995, 1998, and 2001. These surveys are independent cross-sections and provide exceptionally rich information on individual household financial and demographic characteristics, including access to credit. Notably, the SCF permits the identification of those households for whom credit constraints may be binding. With these data, we are able to apply

[5]For example, Zero Down™ is an affordable mortgage product newly offered by Bank of America that is now available in numerous states. It is a is a conventional mortgage that requires zero downpayment. In addition, closing costs can come from a gift, the seller, or can be financed (see Bank of America (1998)).

[6]In May 1988, the *Atlanta Constitution* published a four part series, "The Color of Money," while the *Detroit Free Press* published a similar series in July 1988. Those and like analyses of Home Mortgage Disclosure Act (HMDA) data showed that mortgage application rejection rates for African Americans in 1990 were about 2-1/2 times larger than those for white households with similar income (see Canner and Smith (1991) for details on the HMDA data).

[7]For example, beginning in 1990, lenders were required by HMDA to report the location of residential loans made along with the income, race, and gender of loan applicants and whether the loan application was withdrawn (by the applicant), approved, or denied. See Rehm (1991a, 1991b) and Munnell et. al. (1996) for further discussion of the HMDA data.

identical model specifications to analyze the determinants of changes in homeownership rates and racial gaps in homeownership over the 1983 to 2001 period.

Results indicate that nearly all of the increase in homeownership in the 1990s can be attributed to changes in the demographic and economic attributes of the population, rather than to policy initiatives or innovations in mortgage finance. By the end of the 1990s, differences in socio-demographic attributes explain all but 8 percentage points of the 26 percentage point white-black gap in homeownership and all but 10 percentage points of the 28 percentage point white-Hispanic gap. Of the remaining differentials, credit barriers account for no more than 5 percentage points of the white-black and white-Hispanic gaps in homeownership in each of the 1983-2001 survey years. An important implication of these findings is that much of the gain in homeownership in the 1990s appears to have been driven by underlying factors that had little to do with government and industry initiatives.

To establish these and related results, the following section describes the SCF data. Section 3 analyzes changes in aggregate homeownership rates over the 1983 to 2001 period based on a series of probit models of observed homeownership behavior. Section 4 analyzes racial gaps in homeownership taking credit barriers into account. Section 5 provides robustness checks and Section 6 concludes.

2. Data

Data for the analysis are taken from the Survey of Consumer Finances (SCF) for the years 1983, 1989, 1992, 1995, 1998, and 2001. These surveys are independent cross-sections with the exception of the 1983 and 1989 surveys for which a portion of the 1983 families appear again in 1989. In addition, beginning in 1989, a sophisticated procedure is used to impute missing values and also to protect the confidentiality of respondents. In part, this includes the creation of five "implicates" of the data, where each is an alternate version of the entire dataset but with slightly different imputations. Kennickell (1998) provides details on how to interpret and work with the Implicates. When estimating the probit models to be presented later in the paper, all five implicates were used and the t-ratios were divided by the square root of 5 to adjust for the "true" sample size. See the 1998 SCF manual and Kennickell (1998) for details.

For a typical SCF sample of about 4,500 households, roughly 3,000 are selected so as to be representative of the entire United States while the remaining households over-represent wealthy families and are drawn from tax files. For the 1983 survey, these sub-samples can be identified and only the representative portion of the sample was used for the analysis to follow. For all other survey years, the public use versions of the SCF do not allow the analyst to separately identify the representative and tax-based samples. However, sampling weights are provided that enable the analyst to weight the data to ensure that results are representative of the United States.[8] In the discussion to follow, all of the probit models were estimated using unweighted data on the assumption that all covariates in the model are exogenous. In contrast, all summary measures including the simulation values were calculated using the sampling weights so as to be representative of the United States. Finally, it should also be noted that all dollar-valued variables were converted to 2001 dollars. In addition, we exclude any observations reporting household income that is negative or above $500,000 (in 2001 dollars).[9] Weighted sample means for all of the variables used in the analyses are presented in the Appendix for each survey year.

3. Aggregate Homeownership Rates

We begin by estimating a simple probit model of whether families currently own or rent their homes. This model is estimated separately for each of the SCF survey years from 1983 to 2001. Partial derivatives associated with the individual probit model coefficients are computed for each observation and the weighted sample means are reported in Table 2.[10] Accordingly, the reported values indicate the

[8]Kennickell (1999) provides a careful discussion of the SCF sampling weights and shows that the sample moments of the weighted SCF data with regard to homeownership rates and race match the Consumer Population Survey (CPS). See also Rosenthal (2002) for further discussion of the SCF.

[9]Especially at the upper end, the SCF includes a small number of extremely high-income households and these individuals are removed from the sample to ensure that they do not unduly influence the results.

[10]When calculating the mean partial derivative for a given covariate we used sampling weights since the sample mean depends on the distribution of individuals in the sample.

percentage point influence of a given household attribute on the propensity for homeownership. The numbers in parentheses are t-ratios from the original probit model coefficients.

As is evident in Table 2, our set of household attributes is extensive, and a number of these attributes have strong and anticipated effects on homeownership.[11] For example, in nearly all of the survey years, the propensity for homeownership is higher for household heads that are married or divorced. Homeownership also increases with the age of the household head, household size, income, receipt of an inheritance, full-time work, and stable employment, the latter of which is inversely related to the number of previous full-time jobs held by the household head. In contrast, the propensity for homeownership is reduced if the household head is in poor health or of minority status.

The estimates in Table 2 are used to shed light on the first major goal of this paper: to assess the extent to which changes in household socio-economic status contributed to the increase in homeownership rates in the 1990s. To accomplish that goal, we run two sets of simulations. In the first case, we compute homeownership rates by using data from each individual survey year holding constant the year 2001 probit model coefficients. This simulation sheds light on the degree to which changes in household attributes contributed to change in homeownership rates holding constant household behavior and market conditions as embodied in the 2001 coefficients. In the second case, we hold constant the year 2001 data, but apply that data to probit model coefficients from each of the survey years. This simulation sheds light on the degree to which changes in household behavior and market conditions contributed to the change in homeownership rates, holding constant the 2001 socioeconomic characteristics of the population.

Figure 2a plots the predicted homeownership rates from these two simulations. Consider first the simulation in which we hold constant the year 2001 model coefficients while varying the sample composition across years. In that simulation, the predicted homeownership rate falls from 63.8 percent in 1983 to 61.6 percent in 1989, but then rises continuously to a peak of 67.2 in 2001. This implies that

[11]See, for example, Wachter and Megbolugbe [1992], Coulson [1999], Rosenthal [2002], Gabriel and Painter [2003]).

changes in the demographic and financial attributes of the population boosted homeownership rates by 5.6 percentage points during the 1990s. A very different pattern emerges when we hold constant the year 2001 sample but apply the estimated model coefficients from the different survey years. In that case, changes in market conditions and the behavior of individuals – as reflected in the model coefficients – imply a sharp increase in homeownership rates from 1983 to 1989; thereafter, predicted homeownership rates trend down slightly over the decade of the 1990s.

Summarizing the patterns in Figure 2a, it is clear that the increase in aggregate homeownership rates observed in the 1990s can be fully explained by changes in the socio-economic status of the population over that period. In contrast, coefficient estimates from the probit models provide little evidence that changes in the behavior of prospective homeowners – as might result from innovations in the mortgage market, falling interest rates, and changes in other market conditions – served to boost homeownership during the 1989-2001 period.

4. Racial Gaps in Homeownership

As described in the Introduction, recent years have also witnessed ongoing controversy and policy debate about long-standing and sizable racial gaps in homeownership. These concerns have contributed to a multitude of industry and policy initiatives, including measures designed to ease underwriting standards that have restricted access to mortgage credit. Against that backdrop, this section evaluates the extent to which household attributes and mortgage credit barriers have contributed to racial disparities in homeownership.

We begin by recognizing that we observe the true ("notional") demand for homeownership only for those families that are not credit constrained. Table 2, in contrast, reports estimates of homeownership based on all households in the population, including those who may be credit constrained. Those estimates reflect *actual* homeownership behavior. Differencing the notional *demand* for homeownership from *actual* homeownership behavior enables us to isolate the effects of credit barriers on homeownership attainment.

Isolating the influence of credit barriers in this manner requires that we first identify *a priori* a group of families that are not credit constrained. The SCF makes this possible. Specifically, families are

asked a battery of questions about whether their recent loan applications have been accepted, partially rejected, or fully rejected. Families are also asked whether they have successfully reapplied for credit, and whether they have chosen not to apply for credit because they thought they would be rejected.[12] Using these questions, we identify a set of families who report having had no difficulty obtaining their preferred level of credit in the last five years for the 1989 to 2001 surveys, and the last three years for the 1983 survey.[13] In the discussion to follow, these individuals are characterized as *unconstrained*, while all other families are characterized as *possibly* constrained.

Having stratified families into unconstrained (NotCC = 1) and possibly constrained (NotCC = 0) groups, we estimate the demand for homeownership over only the unconstrained households. Because these households may be unusual, we must also control for sample selection. Accordingly, we estimate a 3-celled bivariate probit model that controls for the potentially endogenous selection of households into the unconstrained group while simultaneously estimating the demand for homeownership. The corresponding likelihood function for this model is as follows:[14]

$$L = \sum\{(1\text{-NotCC})\cdot\log[F(-xc)] + \text{NotCC}\cdot\text{OWN}\cdot\log[G(xb,xc,\sigma_{\text{NotCC,own}})] \quad (1)$$

$$+ \text{NotCC}\cdot (1\text{-OWN})\cdot\log[G(-xb,xc,-\sigma_{\text{NotCC,own}})]\} ,$$

where $F(\cdot)$ and $G(\cdot)$ are the standard unit and bivariate normal distributions, respectively, c governs the likelihood that an individual is unconstrained, and b governs whether a family wants to own its home (OWN = 1). It is important to note that (1) simultaneously estimates $\sigma_{\text{NotCC,own}}$, the correlation between the error terms in the latent indexes that underlie NotCC and OWN. This feature of the model controls for

[12]These survey questions have been previously used to study both the frequency and impact of credit constraints by Jappelli (1990), Cox and Jappelli (1993), Duca and Rosenthal (1993,1994), and Rosenthal (2002).

[13]To be precise, individuals are coded as unconstrained if they report that they had not had any loan request turned down or partially rejected, and also had not been discouraged from applying for credit in the previous years.

[14]Boyes, Hoffman, and Low (1989) estimate a similar three-celled bivariate probit model for the credit card market.

unobserved attributes common to the credit constraint and homeownership latent equations and in so doing ensures that our estimate of *b* is unbiased.[15,16]

Estimates of the demand for homeownership based on the model in (1) are presented in Table 3[17]. As before, to facilitate interpretation, Table 3 reports partial derivatives along with the original model t-ratios. Differencing those estimates from values reported in Table 2 enables us to isolate the effects of credit constraints on homeownership attainment. These results are reported in Table 4 for each of the covariates in the model. However, because of their policy significance, we focus on the race related estimates. To facilitate review of these estimates, Figure 2b plots the partial derivatives from Tables 2 through 4 that correspond to African American status in each of the survey years. Analogous plots for Hispanic status are provided in Figure 2c.

Several patterns stand out in Figures 2b and 2c. In 1983, the notional *demand* for homeownership among African Americans and Hispanics was roughly 10 and 21 percentage points lower than that of white households, respectively. Those very large disparities narrowed markedly to 7.1 and 7.8 percentage points in 2001. It is noteworthy that this narrowing of racial differences in demand was broadly consistent with changes in the savings behavior of white and minority renters over the survey period. SCF data reported in Figure 3 suggest that the fraction of black and Hispanic renters saving to purchase a home rose sharply over the study period to levels equal to or in excess of those recorded for white renters.[18] By 2001, some 22 percent of Hispanic renters were saving to buy a home, compared with 16

[15]As is well established (e.g., Maddala, 1983), if the error terms associated with the latent indexes corresponding to OWN and NotCC are uncorrelated, then one could estimate *b* with a simple probit model over just that portion of the sample for which NotCC = 1. More generally, however, common omitted variables that influence both the likelihood that NotCC equals 1 and the likelihood that OWN equals 1 would cause estimates of *b* to suffer from sample selection bias. The likelihood function in (3.1) controls for that problem by simultaneously estimating $\sigma_{NotCC,own}$ along with the other parameters in the model.

[16]An issue of identification does remain because it is difficult to argue that variables that belong in the credit equation do not also belong in the housing tenure equation. Accordingly, we include all of the variables in the credit equation in the homeownership equation, and vice versa. As such, we rely on the non-linearity of the probit function to identify the model. For a more detailed discussion of bivariate probit models with censoring see Maddala (1983) or Tunali (1986).

[17]Findings from the credit constrained equation are of secondary interest and are reported in the Appendix.

[18]For each survey year, we characterized a family as saving to purchase a home if either their first or second most

percent and 17 percent for black and white renters, respectively. In contrast, in 1983, only 6.8 percent of blacks and 8.5 percent of Hispanics were saving to purchase a home, compared with some 12.4 percent of white households.

In Figure 2b, observe also that in the early 1980s, the observed or *actual* propensity for homeownership among blacks was roughly 11 percentage points lower than among comparable white households in the same period. That differential narrowed over subsequent years to about 8 percentage points in the late 1990s. An analogous but even more dramatic pattern was evidenced for Hispanics: the white-Hispanic difference in the *actual* propensity for homeownership in Figure 2b narrowed sharply from 25 percentage points in 1983 to just under 12 percentage points in 2001.

To what extent do credit barriers account for the estimated racial differentials in homeownership attainment? Figures 2b and 2c plot estimates from Table 4 that address this question by plotting the difference between the *demand* and *actual* measures of homeownership. In each survey year from 1983 to 2001, credit barriers accounted for no more than 5 percentage points of the white-minority gap in homeownership rates for both blacks and Hispanics. These findings are striking and suggest that from a policy perspective, credit barriers account for only a limited portion of the minority homeownership deficit over the 1989-2001 period. Instead, findings in Figures 2b and 2c suggest that differences in household demographic and economic traits have accounted for most of the racial gap in homeownership.

5. Robustness and Residential Location

Although the list of regressors included in our underlying probit models is extensive, an obvious omission is the absence of information related to residential location. It is well known, for example, that minorities are disproportionately concentrated in central city locations, and those locations may be less conducive to homeownership. Unfortunately, information on residential location is largely omitted from the public use versions of the SCF. However, for 1992, 1995, and 1998, the SCF does provide sufficient information on residential location to check for robustness. For those survey years, for each respondent it is

important reason for saving was for future home purchase.

possible to identify the Census region of residence (Northeast, North Central, South, and West), and also the density of development in the individual's neighborhood, a proxy for central city versus suburban location. This latter measure reports whether neighborhood homes are less than 20 feet apart, 20 to 100 feet apart, or more than 100 feet apart.

In order to assess the robustness of our results to residential location, we re-estimated all of the models and simulations for the three survey years in which the residential location variables were present. Estimates of the partial derivatives for the housing tenure covariates in the probit and bivariate probit specifications are presented in the Appendix, while Figures 4a, 4b, and 4c provide updated plots of the patterns in Figures 2a, 2b, and 2c, respectively. Two points are important to take note of in these plots. First, the patterns in Figure 4a continue to suggest that the increase in homeownership in the 1990s was driven by changes in the socio-demographic attributes of the population, not changes in market conditions. Second, the patterns in Figures 4b and 4c also continue to suggest that credit barriers account for relatively little of the white-minority gap in homeownership rates. Indeed, upon controlling for residential location, for African Americans, the influence of credit barriers remains below 5 percentage points for all of the survey years, while for Hispanics, the influence of credit barriers is largely eliminated in the latter half of the 1990s. Overall, these findings suggest that the primary conclusions from our analysis are robust to controls for region of the country and neighborhood density of development.

6. Conclusion

After stagnating during the 1980s, U.S. homeownership rates rose sharply during the 1990s to a historic high of 67.3 percent in 2001. At the same time, substantial gaps in homeownership rates between white and minority households have persisted, averaging roughly 26 percentage points for blacks and 28 percentage points for Hispanics over the 1983-2001 period. In the past decade, these events have coincided with a boom in the national economy, declining interest rates, aging of the baby boomers, and other demographic shifts. Further, the homeownership outcomes have been recorded in the wake of

federal policy and industry initiatives intended both to boost homeownership overall and to narrow ongoing racial disparities in homeownership.

This paper uses data from the Survey of Consumer Finances to analyze the determinants of trends in aggregate homeownership rates and also long-standing racial gaps in homeownership. Results indicate that changes in population demographic and financial attributes account for all of the increase in homeownership between 1989 and 2001. This implies that innovations in mortgage finance and declining interest rates, while clearly important for a host of reasons, likely were not the primary drivers of the rise in homeownership during the 1990s.

Our findings also demonstrate that by the end of the 1990s, demographic and financial attributes accounted for all but 8 percentage points of the white-black gap in homeownership, and all but 12 percentage points of the white-Hispanic gap. Moreover, for each survey year from 1983 to 2001, credit barriers accounted for no more than 5 percentage points of the white-black and white-Hispanic differences in homeownership rates. These findings suggest that policy makers will have to look beyond mortgage market innovation if their goal is to substantially reduce racial disparities in homeownership.

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Table 1
Homeownership Rates
Sample Composition: Household Heads Aged 18 Through 65[a]

	1983	*1989*	*1992*	*1995*	*1998*	*2001*
All Households	0.628	0.638	0.639	0.645	0.660	0.673
White Households	0.673	0.704	0.703	0.704	0.716	0.737
Black Households	0.440	0.424	0.436	0.427	0.461	0.475
Hispanic Households	0.314	0.419	0.399	0.429	0.441	0.442

[a]All estimates are based on data from different years of the Survey of Consumer Finances and are weighted to be representative of the United States. Excludes families with total family income (in $2001) below zero, above $500,000, or missing.

Table 2: Actual Propensity for Homeownership Without Controlling for Borrowing Constraints[a]

	1983	*1989*	*1992*	*1995*	*1998*	*2001*
Some college	-0.0240	0.0243	0.0284	0.0028	0.0014	-0.0460
	(-0.54)	(0.98)	(1.40)	(0.14)	(0.08)	(-2.61)
College degree	-0.0403	-0.0220	-0.0191	-0.0330	-0.0279	-0.0258
	(-0.88)	(-0.85)	(-0.91)	(-1.60)	(-1.42)	(-1.33)
Married	0.1181	0.1767	0.1962	0.1432	0.1770	0.0984
	(2.40)	(5.71)	(7.47)	(6.24)	(8.33)	(4.86)
Divorced	-0.0042	0.1033	0.0201	0.0392	0.0504	0.0631
	(-0.08)	(3.62)	(0.80)	(1.59)	(2.28)	(2.98)
Age X *Dummy for Under 35*	0.0092	0.0056	0.0064	0.0031	0.0038	0.0073
	(2.23)	(2.40)	(3.04)	(1.48)	(2.04)	(3.94)
Age X *Dummy for Between 35 and 55*	0.0102	0.0071	0.0088	0.0057	0.0060	0.0083
	(3.60)	(4.41)	(5.96)	(3.97)	(4.79)	(6.65)
Age X *Dummy for Over 55*	0.0092	0.0079	0.0080	0.0068	0.0064	0.0077
	(4.85)	(7.33)	(8.16)	(6.92)	(7.50)	(8.81)
Household size	0.0300	0.0322	0.0089	0.0244	0.0193	0.0228
	(2.14)	(4.70)	(1.31)	(3.79)	(3.06)	(3.85)
Male	-0.0019	0.0110	-0.0468	-0.0346	-0.0109	0.0074
	(-0.06)	(0.41)	(-2.04)	(-1.55)	(-0.52)	(0.38)
African American[b]	-0.1122	-0.0739	-0.0999	-0.1075	-0.0751	-0.0844
	(-2.35)	(-2.78)	(-4.19)	(-4.81)	(-3.37)	(-4.14)
Hispanic[b]	-0.2536	-0.1298	-0.1470	-0.1597	-0.1239	-0.1187
	(-2.89)	(-3.67)	(-4.80)	(-4.78)	(-4.48)	(-4.74)
Other Race (including Asian)[b]	-0.0914	-0.0440	-0.0831	-0.1362	-0.1401	-0.1129
	(-0.65)	(-1.01)	(-2.32)	(-3.37)	(-3.57)	(-2.68)
Head in bad health	0.0228	-0.0379	-0.0038	-0.0667	-0.0760	-0.0652
	(0.35)	(-1.09)	(-0.12)	(-1.99)	(-2.25)	(-2.24)
Spouse in bad health	-0.1042	-0.0559	-0.0758	-0.0519	-0.0953	-0.0078
	(-1.17)	(-0.96)	(-1.40)	(-0.97)	(-2.09)	(-0.17)
Total family income (in $2001)	0.0052	0.0052	0.0044	0.0045	0.0047	0.0045
	(4.73)	(7.61)	(8.81)	(8.09)	(10.71)	(11.22)
Total family income squared (in $2001)	-1.12E-05	-1.18E-05	-9.90E-06	-1.03E-05	-9.33E-06	-8.73E-06
	(-3.39)	(-7.37)	(-8.29)	(-8.33)	(-9.78)	(-9.64)
Family has received an inheritance	-0.0103	0.0779	0.0950	0.0747	0.1013	0.1057
	(-0.18)	(3.26)	(4.38)	(3.51)	(4.90)	(5.08)
Head works full-time	0.0570	0.0708	0.1067	0.1164	0.0463	0.0323
	(1.34)	(2.24)	(4.28)	(4.87)	(2.02)	(1.44)
Spouse works full-time	-0.0019	0.0278	0.0112	0.0557	0.0200	0.0555
	(-0.04)	(0.99)	(0.48)	(2.56)	(0.99)	(2.83)
Spouse works part-time	0.0719	0.0838	0.0145	0.0257	0.0283	0.0693
	(1.00)	(2.11)	(0.46)	(0.81)	(0.84)	(2.26)
Head's # full-time jobs lasting > 1 year	-0.0087	-0.0076	-0.0163	-0.0118	-0.0074	-0.0056
	(-1.18)	(-1.66)	(-4.34)	(-3.39)	(-2.65)	(-1.93)
Constant	-0.6382	-0.6106	-0.5139	-0.4530	-0.4545	-0.5403
	(4.86)	(-7.92)	(-7.58)	(-6.63)	(-7.38)	(-8.59)
Number of obs	3,652	2,892	3,547	3,894	3,837	3,821
Log likelihood	-1,812.3	-6,652.4	-8,676.3	-9,571.6	-8,878.2	-8,816.1

[a] Reported coefficients were obtained by calculating the partial derivative of a given variable for each observation in the sample and then averaging over observations applying sampling weights to ensure results are representative of the United States (see the text for details). The t-ratios in parentheses are those for the untransformed model coefficients. Observations with annual income below zero, above $500,000 (in year 2001 dollars), or missing were excluded from each sample.

[b] Omitted category is White.

Table 3: Demand for Homeownership Controlling for Borrowing Constraints[a]

	1983	*1989*	*1992*	*1995*	*1998*	*2001*
Some college	-0.0074	0.0166	0.0239	0.0290	-0.0022	-0.0395
	(-0.14)	(0.60)	(1.08)	(1.30)	(-0.11)	(-2.07)
College degree	-0.0392	-0.0451	-0.0287	-0.0453	-0.0214	-0.0344
	(-0.80)	(-1.61)	(-1.28)	(-2.05)	(-1.01)	(-1.74)
Married	0.1036	0.1353	0.1637	0.1005	0.1636	0.0932
	(1.79)	(3.97)	(5.04)	(3.63)	(6.38)	(4.28)
Divorced	-0.0156	0.0819	0.0524	0.0364	0.0598	0.0745
	(-0.27)	(2.63)	(1.87)	(1.35)	(2.45)	(3.36)
Age X Dummy for Under 35	0.0029	0.0014	0.0018	-0.0001	0.0010	0.0003
	(0.63)	(0.56)	(0.80)	(-0.04)	(0.49)	(0.17)
Age X Dummy for Between 35 and 55	0.0050	0.0031	0.0046	0.0020	0.0031	0.0024
	(1.44)	(1.72)	(2.89)	(1.26)	(2.13)	(1.84)
Age X Dummy for Over 55	0.0047	0.0036	0.0038	0.0034	0.0034	0.0024
	(1.80)	(2.94)	(3.48)	(3.02)	(3.25)	(2.61)
Household size	0.0318	0.0308	0.0172	0.0287	0.0251	0.0221
	(1.93)	(3.58)	(2.27)	(3.82)	(3.35)	(3.26)
Male	-0.0102	-0.0019	-0.0332	0.0019	-0.0147	0.0107
	(-0.29)	(-0.06)	(-1.32)	(0.08)	(-0.65)	(0.54)
African American[b]	-0.0984	-0.0372	-0.0637	-0.0622	-0.0315	-0.0712
	(-1.52)	(-1.15)	(-2.12)	(-2.13)	(-1.15)	(-3.09)
Hispanic[b]	-0.2131	-0.0718	-0.1194	-0.1448	-0.1035	-0.0778
	(-2.16)	(-1.62)	(-3.10)	(-3.77)	(-3.27)	(-2.97)
Other Race (including Asian)[b]	-0.1444	-0.0093	-0.0880	-0.0781	-0.1408	-0.0751
	(-0.91)	(-0.17)	(-2.38)	(-1.65)	(-3.35)	(-1.70)
Head in bad health	-0.0170	-0.0058	-0.0214	-0.0712	-0.0399	-0.0771
	(-0.25)	(-0.16)	(-0.66)	(-2.03)	(-1.18)	(-2.69)
Spouse in bad health	-0.0884	-0.0943	-0.0894	-0.0836	-0.0908	0.0315
	(-0.93)	(-1.63)	(-1.61)	(-1.48)	(-1.74)	(0.64)
Total family income (in $2001)	0.0043	0.0048	0.0038	0.0035	0.0036	0.0032
	(3.44)	(6.23)	(6.55)	(5.76)	(7.07)	(7.75)
Total family income squared (in $2001)	-9.19E-06	-1.04E-05	-8.37E-06	-7.65E-06	-7.47E-06	-6.50E-06
	(-2.85)	(6.20)	(-6.66)	(-5.96)	(-6.95)	(-7.17)
Family has received an inheritance	-0.0084	0.0550	0.0815	0.0455	0.1008	0.0949
	(-0.13)	(2.22)	(3.68)	(2.04)	(4.59)	(4.55)
Head works full-time	0.0107	0.0441	0.0582	0.0754	0.0632	-0.0124
	(0.21)	(1.23)	(2.07)	(2.77)	(2.28)	(-0.54)
Spouse works full-time	0.0118	0.0062	-0.0014	0.0399	0.0072	0.0417
	(0.23)	(0.21)	(-0.05)	(1.58)	(0.32)	(1.98)
Spouse works part-time	0.0676	0.0710	-0.0086	0.0081	0.0429	0.0710
	(0.85)	(1.66)	(-0.25)	(0.23)	(1.14)	(2.17)
Head's # full-time jobs lasting > 1 year	-0.0041	-0.0059	-0.0074	-0.0031	-0.0077	0.0014
	(-0.48)	(-1.20)	(-1.68)	(-0.76)	(-1.81)	(0.51)
Constant	-0.2773	-0.2499	-0.2016	-0.1811	-0.2269	-0.1194
	(-1.45)	(-2.79)	(-2.56)	(-2.21)	(-2.82)	(-1.72)
Rho	-0.5988	-0.8774	-0.6644	-0.6662	-0.5610	-0.6939
	(-1.63)	(-10.07)	(-5.25)	(-6.40)	(-3.93)	(-6.90)
Uncensored obs (not credit constrained)	2,925	2,321	2,639	2,914	2,830	2,851
Censored obs (possibly constrained)	727	571	908	980	1,007	970
Log likelihood	-0.7872	-0.7905	-0.8198	-0.8084	-0.7834	-0.7760

[a]Reported coefficients were obtained by calculating the partial derivative of a given variable for each observation in the sample and then averaging over observations applying sampling weights to ensure results are representative of the United States (see the text for details). The t-ratios in parentheses are those for the untransformed model coefficients. Observations with annual income below zero, above $500,000 (in year 2001 dollars), or missing were excluded from each sample.

[b]Omitted category is White.

Table 4: The Influence of Credit Barriers on Homeownership: Demand Minus Actual[a]

	1983	*1989*	*1992*	*1995*	*1998*	*2001*
Some college	0.0166	-0.0077	-0.0045	0.0262	-0.0037	0.0065
College degree	0.0011	-0.0231	-0.0095	-0.0123	0.0066	-0.0086
Married	-0.0146	-0.0414	-0.0326	-0.0427	-0.0134	-0.0052
Divorced	-0.0114	-0.0214	0.0322	-0.0028	0.0094	0.0114
Age X *Dummy for Under 35*	-0.0063	-0.0042	-0.0046	-0.0032	-0.0028	-0.0070
Age X *Dummy for Between 35 and 55*	-0.0052	-0.0040	-0.0042	-0.0037	-0.0029	-0.0059
Age X *Dummy for Over 55*	-0.0045	-0.0043	-0.0042	-0.0034	-0.0030	-0.0053
Household size	0.0018	-0.0014	0.0083	0.0043	0.0057	-0.0006
Male	-0.0083	-0.0129	0.0136	0.0366	-0.0038	0.0033
African American[b]	0.0138	0.0367	0.0361	0.0453	0.0436	0.0133
Hispanic[b]	0.0405	0.0579	0.0276	0.0149	0.0205	0.0409
Other Race (including Asian)[b]	-0.0531	0.0348	-0.0049	0.0580	-0.0007	0.0378
Head in bad health	-0.0398	0.0321	-0.0175	-0.0045	0.0361	-0.0119
Spouse in bad health	0.0159	-0.0384	-0.0136	-0.0317	0.0045	0.0393
Total family income (in $2001)	-0.0010	-0.0004	-0.0007	-0.0010	-0.0010	-0.0013
Total family income squared (in $2001)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Family has received an inheritance	0.0019	-0.0230	-0.0135	-0.0292	-0.0005	-0.0108
Head works full-time	-0.0463	-0.0267	-0.0485	-0.0410	0.0169	-0.0448
Spouse works full-time	0.0137	-0.0217	-0.0127	-0.0158	-0.0128	-0.0138
Spouse works part-time	-0.0043	-0.0128	-0.0232	-0.0176	0.0146	0.0017
Head's # full-time jobs lasting > 1 years	0.0045	0.0016	0.0089	0.0088	-0.0002	0.0070
Constant	0.3609	0.3607	0.3122	0.2719	0.2276	0.4210

[a]Estimates were obtained by subtracting values in Table 2 from those in Table 3.

[b]Omitted category is White.

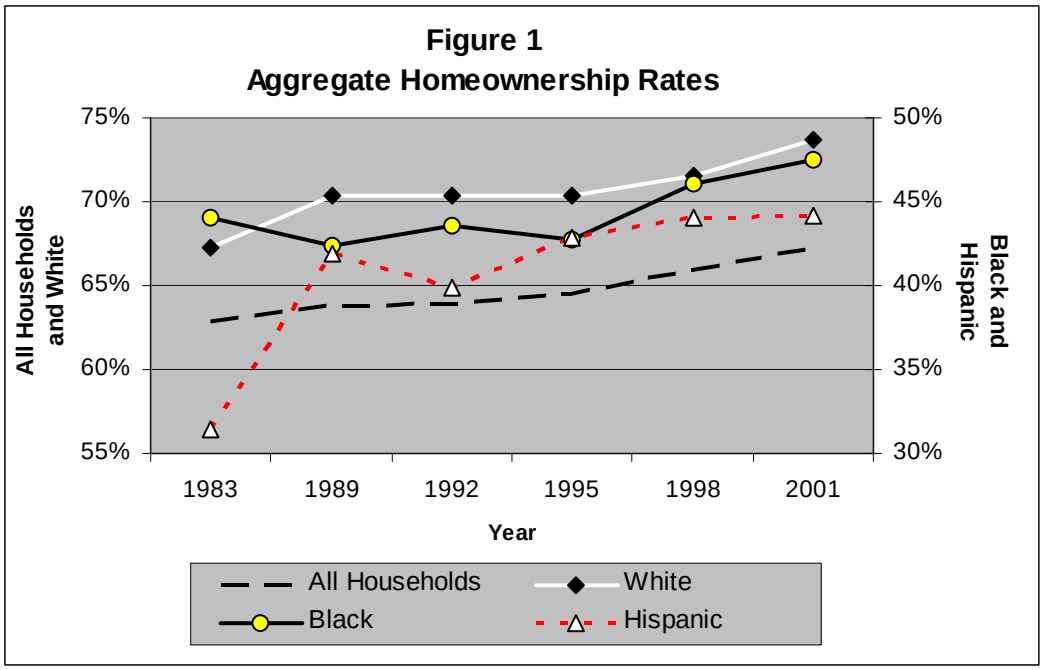


Figure 1
Aggregate Homeownership Rates
75%
70%
65%
60%
55%
50%
45%
40%
35%
30%
All Households and White
Black and Hispanic
1983
1989
1992
1995
1998
2001
Year
All Households
White
Black
Hispanic

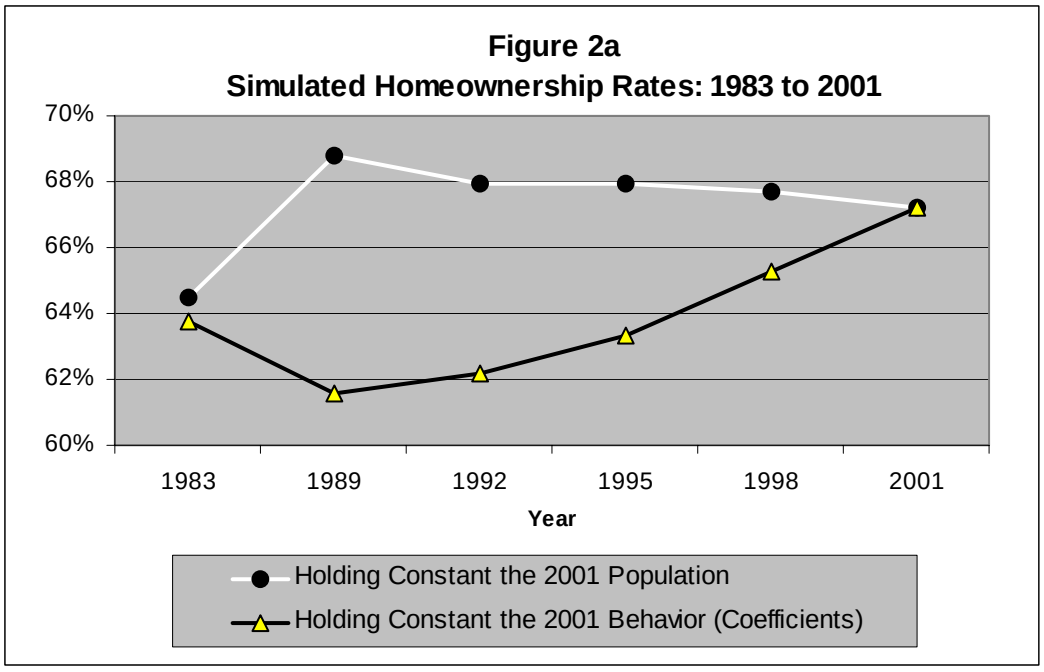


Figure 2a
Simulated Homeownership Rates: 1983 to 2001
70%
68%
66%
64%
62%
60%
1983
1989
1992
1995
1998
2001
Year
Holding Constant the 2001 Population
Holding Constant the 2001 Behavior (Coefficients)

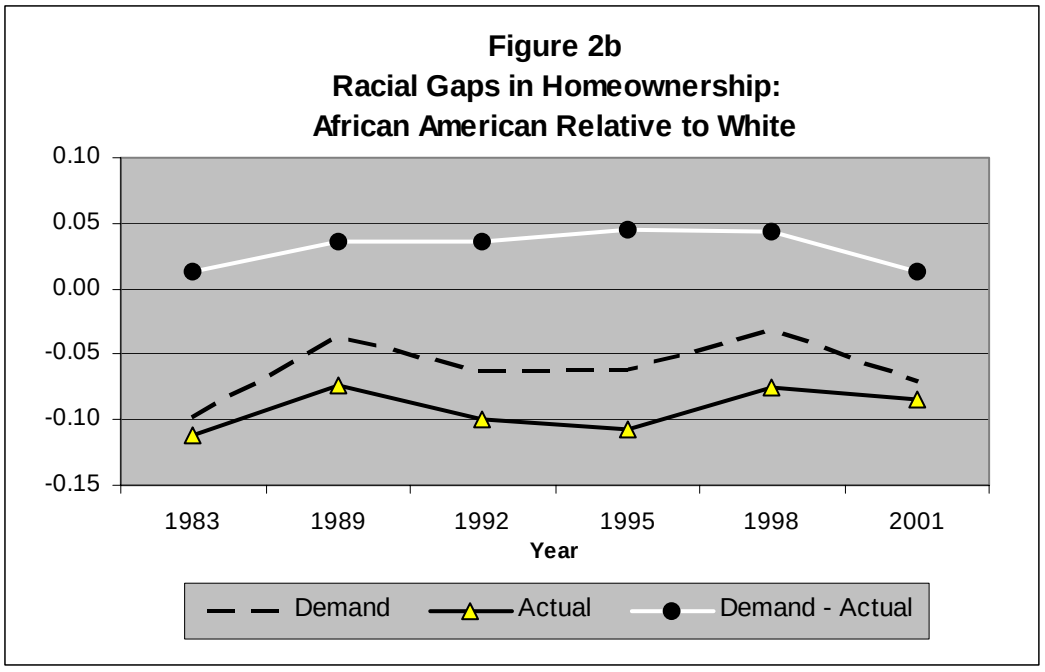


Figure 2b
Racial Gaps in Homeownership:
African American Relative to White
0.10
0.05
0.00
-0.05
-0.10
-0.15
1983
1989
1992
1995
1998
2001
Year
Demand
Actual
Demand - Actual

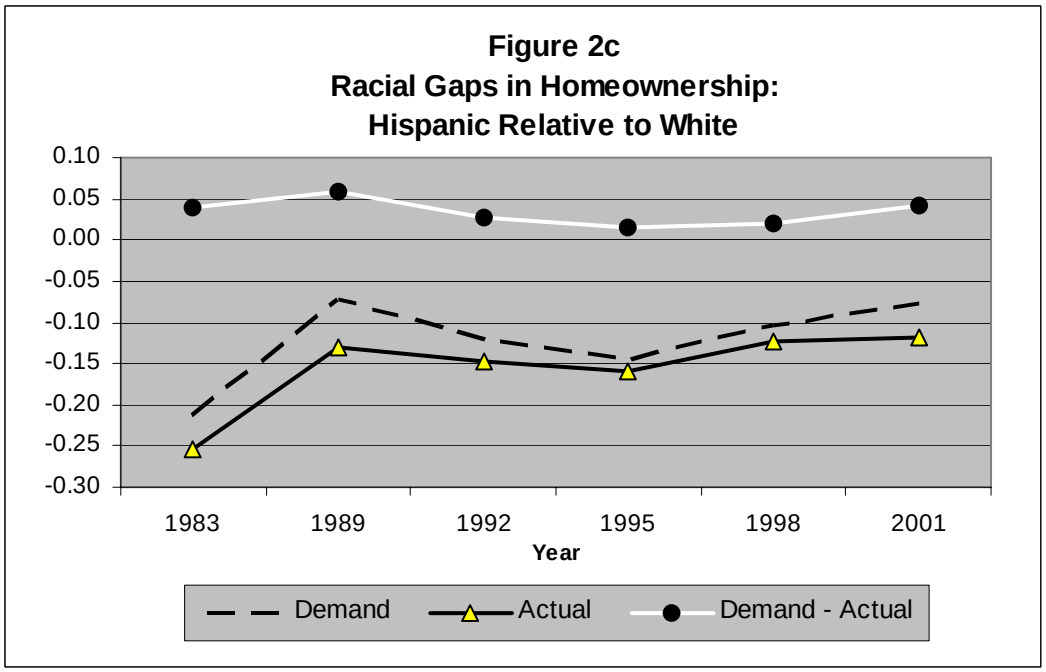


Figure 2c
Racial Gaps in Homeownership:
Hispanic Relative to White
0.10
0.05
0.00
-0.05
-0.10
-0.15
-0.20
-0.25
-0.30
1983
1989
1992
1995
1998
2001
Year
Demand
Actual
Demand - Actual

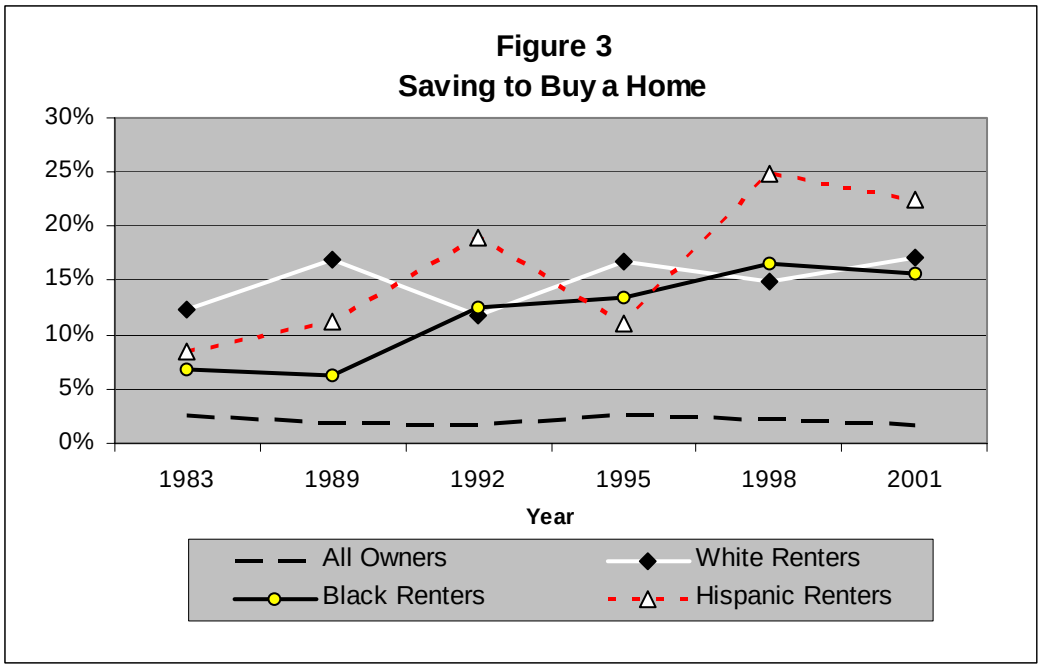


Figure 3
Saving to Buy a Home
30%
25%
20%
15%
10%
5%
0%
1983
1989
1992
1995
1998
2001
Year
All Owners
White Renters
Black Renters
Hispanic Renters

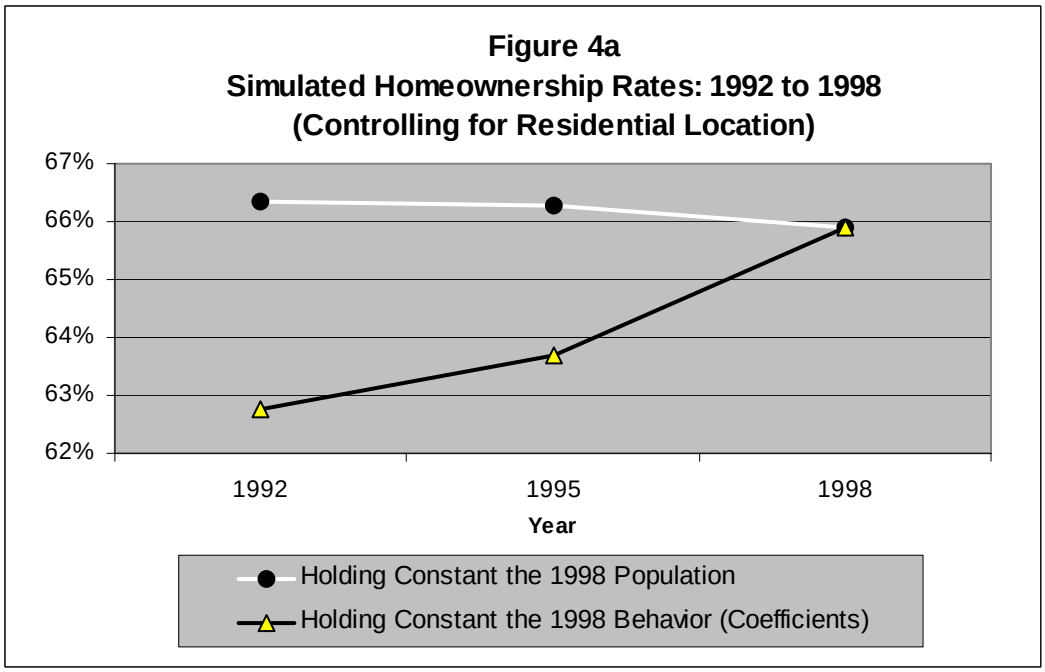


Figure 4a
Simulated Homeownership Rates: 1992 to 1998
(Controlling for Residential Location)
67%
66%
65%
64%
63%
62%
1992
1995
1998
Year
Holding Constant the 1998 Population
Holding Constant the 1998 Behavior (Coefficients)

Figure 4b
Racial Gaps in Homeownership:
African American Relative to White
(Controlling for Residential Location)

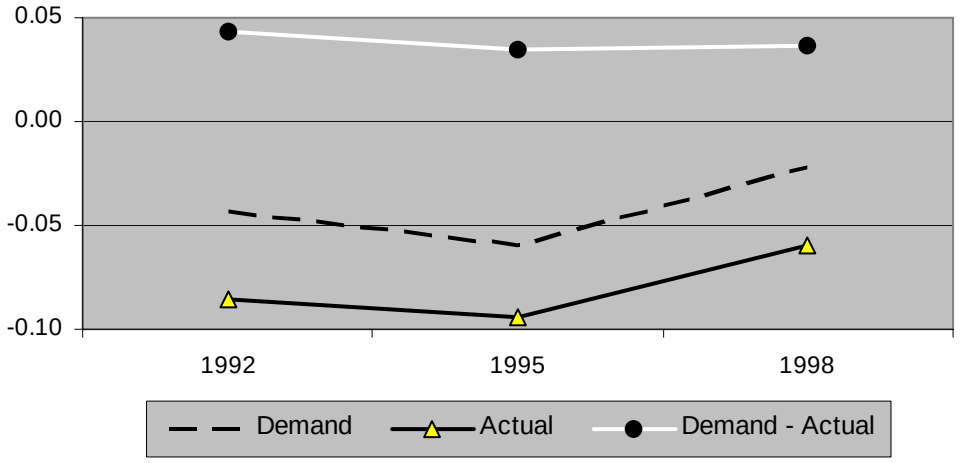
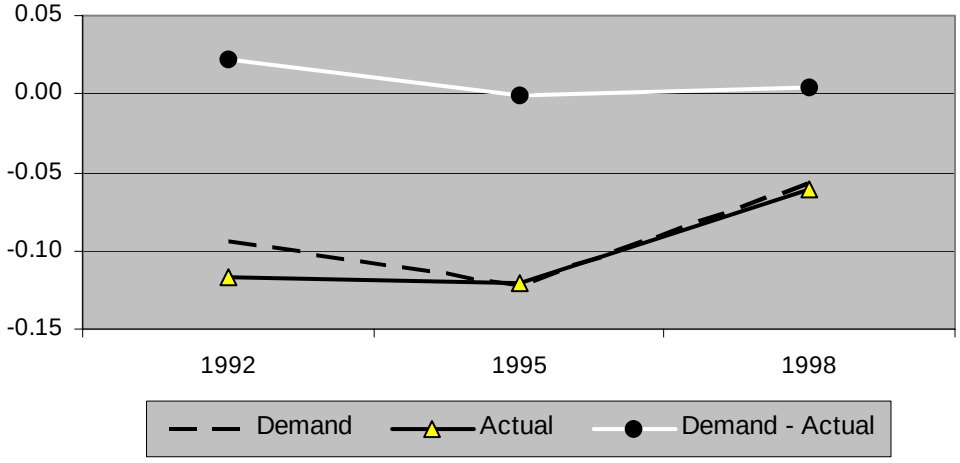


Figure 4c
Racial Gaps in Homeownership:
Hispanic Relative to White
(Controlling for Residential Location)



Appendix: Supplemental Tables

Table A-1: Sample Variable Mean Values
(All values are weighted to be representative of the United States)

	1983	1989	1992	1995	1998	2001
Homeownership Rate	0.628	0.638	0.639	0.645	0.660	0.673
Percent Not Credit Constrained	0.794	0.761	0.723	0.714	0.714	0.728
Less Than College	0.599	0.566	0.504	0.504	0.486	0.482
Some college	0.177	0.200	0.211	0.236	0.237	0.228
College degree	0.225	0.234	0.284	0.261	0.277	0.290
Married	0.605	0.552	0.540	0.523	0.518	0.525
Divorced	0.119	0.123	0.119	0.130	0.127	0.134
Age X *Dummy for Under 35*	9.606	8.718	8.273	7.858	7.294	6.988
Age X *Dummy for Between 35 and 55*	11.300	12.008	12.980	13.944	14.186	14.594
Age X *Dummy for Over 55*	25.436	27.196	27.196	26.628	27.224	27.342
Household size	2.758	2.730	2.617	2.576	2.586	2.564
Male	0.454	0.718	0.722	0.710	0.719	0.729
African American	0.130	0.128	0.127	0.129	0.119	0.131
Hispanic	0.037	0.079	0.075	0.057	0.072	0.080
Other Race (including Asian)	0.012	0.045	0.046	0.039	0.032	0.028
Head in bad health	0.070	0.077	0.070	0.064	0.052	0.058
Spouse in bad health	0.031	0.028	0.023	0.023	0.022	0.026
Total family income (in $2001)	44.897	34.940	37.197	39.652	45.980	54.362
Total family income squared (in $2001)	3,717	2,823	3,114	3,289	4,529	6,119
Family has received an inheritance	0.087	0.234	0.206	0.210	0.202	0.177
Head works full-time	0.633	0.615	0.593	0.604	0.633	0.648
Spouse works full-time	0.257	0.249	0.252	0.270	0.282	0.297
Spouse works part-time	0.063	0.088	0.093	0.086	0.075	0.078
Head's # full-time jobs lasting > 1 year	3.009	2.195	2.033	2.062	2.298	2.337
Homes on block missing in the data[a]			0.121	0.046	0.028	
Homes on block < 20 feet apart[a]			0.381	0.450	0.463	
Homes on block 20 to 100 feet apart[a]			0.366	0.366	0.377	
Homes on block > 100 feet apart[a]			0.132	0.138	0.133	
Northeast[a]	0.212		0.202	0.197	0.192	
Northcentral[a]	0.254		0.243	0.240	0.240	
South[a]	0.334		0.346	0.351	0.357	
West[a]	0.199		0.208	0.212	0.211	

[a]Information on neighborhood density is not available in 1983, 1989, and 2001. Information on Census region is not available in 1989 and 2001.

Table A-2: Bivariate Probit Model Credit Constraint Coefficients Corresponding to Table 3[a]

	1983	*1989*	*1992*	*1995*	*1998*	*2001*
Some college	-0.1059	-0.0354	-0.0621	-0.0597	-0.1002	-0.153
	(-1.46)	(-0.81)	(-1.91)	(-1.97)	(-3.27)	(-5.14)
College degree	-0.0083	0.0857	0.0073	0.0971	0.0573	0.1289
	(-0.11)	(1.86)	(0.22)	(2.95)	(1.78)	(3.89)
Married	0.2877	0.0439	0.2972	0.2263	0.106	0.1247
	(3.25)	(0.73)	(6.86)	(5.86)	(2.77)	(3.35)
Divorced	0.0639	-0.1901	-0.2595	-0.1498	-0.2553	-0.2434
	(0.69)	(-3.57)	(-6.22)	(-3.55)	(-6.36)	(-6.61)
Age X *Dummy for Under 35*	0.0336	0.0378	0.0161	0.03	0.038	0.0293
	(4.68)	(8.77)	(4.92)	(9.15)	(11.79)	(8.80)
Age X *Dummy for Between 35 and 55*	0.0323	0.0312	0.0179	0.0308	0.034	0.0274
	(6.45)	(10.25)	(7.83)	(13.69)	(15.39)	(12.19)
Age X *Dummy for Over 55*	0.033	0.0331	0.023	0.0299	0.0335	0.0286
	(9.57)	(15.42)	(14.68)	(19.09)	(21.55)	(17.71)
Household size	-0.0365	-0.054	-0.0633	-0.0657	-0.0838	-0.0395
	(-1.72)	(-4.54)	(-6.10)	(-6.68)	(-8.70)	(-3.91)
Male	-0.0024	0.0179	-0.1944	-0.2162	-0.0176	0.0034
	(-0.04)	(0.33)	(-5.23)	(-5.88)	(-0.49)	(0.10)
African American[b]	-0.4258	-0.4348	-0.4501	-0.5621	-0.4157	-0.3752
	(-5.47)	(-9.24)	(-11.88)	(-15.34)	(-10.89)	(-10.72)
Hispanic[b]	-0.1399	-0.266	-0.3127	-0.2051	-0.0257	-0.0669
	(-1.01)	(-4.22)	(-6.30)	(-4.07)	(-0.54)	(-1.54)
Other Race (including Asian)[b]	-0.2643	-0.3625	0.0712	-0.2643	0.1143	-0.2328
	(-1.28)	(-4.37)	(1.12)	(-4.18)	(1.65)	(-3.18)
Head in bad health	0.015	-0.3044	-0.0591	-0.1022	-0.0638	-0.2659
	(0.12)	(-4.61)	(-1.02)	(-1.69)	(-1.06)	(-5.11)
Spouse in bad health	-0.2263	0.2986	-0.1397	-0.1658	-0.6475	-0.1809
	(-1.52)	(2.88)	(-1.42)	(-2.19)	(-7.69)	(-2.21)
Total family income (in $2001)	0.0084	0.0057	0.0064	0.0066	0.0063	0.0056
	(4.76)	(5.42)	(9.21)	(8.89)	(9.26)	(8.80)
Total family income squared (in $2001)	-1.51E-05	-1.22E-05	-1.29E-05	-1.28E-05	-9.94E-06	-6.97E-06
	(-3.17)	(-5.17)	(-8.02)	(-6.46)	(-5.85)	(-4.13)
Family has received an inheritance	-0.1416	0.1373	-0.1095	-0.0318	-0.0318	0.0382
	(-1.52)	(3.43)	(-3.25)	(-0.97)	(-0.98)	(1.12)
Head works full-time	0.1346	0.1846	0.1385	0.1043	-0.0755	0.0693
	(1.88)	(3.28)	(3.52)	(2.73)	(-1.95)	(1.75)
Spouse works full-time	-0.0763	-0.1474	-0.1492	0.0449	-0.0887	-0.1243
	(-0.95)	(-3.23)	(-4.10)	(1.29)	(-2.67)	(-3.64)
Spouse works part-time	0.0415	-0.1509	0.0924	-0.0329	-0.0537	-0.1633
	(0.33)	(-2.53)	(1.82)	(-0.69)	(-1.06)	(-3.33)
Head's # full-time jobs lasting > 1 year	-0.056	-0.0497	-0.0576	-0.0547	-0.0371	-0.043
	(-4.68)	(-6.27)	(-10.12)	(-9.36)	(-8.23)	(-8.08)
Constant	-0.6499	-0.6243	-0.0784	-0.5591	-0.6887	-0.6022
	(-2.99)	(-4.37)	(-0.74)	(-5.30)	(-6.61)	(-5.44)
Rho	-0.5988	-0.8774	-0.6644	-0.6662	-0.561	-0.6939
	(-3.65)	(-22.56)	(-11.74)	(-14.30)	(-8.78)	(-15.42)
Uncensored obs (not credit constrained)	2,925	2,321	2,639	2,914	2,830	2,851
Censored obs (possibly constrained)	727	571	908	980	1,007	970
Log likelihood	-0.7872	-0.7905	-0.8198	-0.8084	-0.7834	-0.7760

[a]Reported coefficients are the actual coefficients from the bivariate probit model, not the partial derivatives. Numbers in parentheses are the t-ratios. Observations with annual income below zero, above $500,000 (in year 2001 dollars), or missing were excluded from each sample.

[b]Omitted category is White.

Table A-3
Actual Propensity for Homeownership Without Controlling for Borrowing Constraints: Includes Controls for Census Region and Neighborhood Density[a,b]

	1983	*1992*	*1995*	*1998*
Some college	-0.0071	0.0363	0.0106	0.0150
	(-0.36)	(1.79)	(0.55)	(0.83)
College degree	-0.0284	-0.0087	-0.0160	-0.0087
	(-1.39)	(-0.42)	(-0.78)	(-0.44)
Married	0.1009	0.1833	0.1326	0.1575
	(4.66)	(7.00)	(5.85)	(7.52)
Divorced	-0.0075	0.0240	0.0337	0.0461
	(-0.32)	(0.96)	(1.39)	(2.13)
Age X *Dummy for Under 35*	0.0087	0.0061	0.0024	0.0034
	(4.79)	(2.94)	(1.17)	(1.89)
Age X *Dummy for Between 35 and 55*	0.0100	0.0085	0.0053	0.0056
	(7.95)	(5.80)	(3.66)	(4.55)
Age X *Dummy for Over 55*	0.0089	0.0077	0.0064	0.0060
	(10.72)	(7.97)	(6.47)	(7.21)
Household size	0.0272	0.0097	0.0255	0.0178
	(4.43)	(1.44)	(3.94)	(2.84)
Male	-0.0035	-0.0489	-0.0354	-0.0081
	(-0.24)	(-2.16)	(-1.61)	(-0.40)
African American[b]	-0.0960	-0.0857	-0.0940	-0.0592
	(-4.47)	(-3.56)	(-4.21)	(-2.67)
Hispanic[b]	-0.1801	-0.1166	-0.1213	-0.0604
	(-4.51)	(-3.85)	(-3.66)	(-2.14)
Other Race (including Asian)[b]	-0.0327	-0.0747	-0.1197	-0.0954
	(-0.51)	(-2.11)	(-2.92)	(-2.49)
Head in bad health	0.0119	-0.0041	-0.0777	-0.0724
	(0.43)	(-0.13)	(-2.35)	(-2.25)
Spouse in bad health	-0.1124	-0.0908	-0.0558	-0.0727
	(-2.92)	(-1.72)	(-1.06)	(-1.59)
Total family income (in $2001)	0.0054	0.0045	0.0045	0.0047
	(10.93)	(8.93)	(7.99)	(10.98)
Total family income squared (in $2001)	-1.16E-05	-9.97E-06	-1.05E-05	-9.95E-06
	(-7.65)	(-8.19)	(-8.48)	(-10.16)
Family has received an inheritance	-0.0110	0.0910	0.0647	0.0976
	(-0.44)	(4.25)	(3.06)	(4.75)
Head works full-time	0.0497	0.0966	0.0977	0.0434
	(2.65)	(3.87)	(4.10)	(1.91)
Spouse works full-time	-0.0065	0.0013	0.0425	0.0123
	(-0.32)	(0.05)	(1.97)	(0.61)
Spouse works part-time	0.0725	0.0120	0.0184	0.0302
	(2.27)	(0.38)	(0.58)	(0.90)
Head's # full-time jobs lasting > 1 year	-0.0062	-0.0151	-0.0107	-0.0068
	(-1.88)	(-4.07)	(-3.01)	(-2.44)

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Table A-3 cont.
Actual Propensity for Homeownership Without Controlling for Borrowing Constraints: Includes Controls for Census Region and Neighborhood Density[a,b]

	1983	*1992*	*1995*	*1998*
Homes on block 20 to 100 feet apart	0.0716	0.0920	0.0957	0.1170
	(2.56)	(5.53)	(5.84)	(7.59)
Homes on block > 100 feet apart	0.0878	0.1277	0.1359	0.1036
	(5.55)	(4.84)	(5.40)	(4.25)
NorthEast	-0.0082	0.0265	-0.0402	0.0251
	(-0.36)	(1.10)	(-1.69)	(1.11)
NorthCentral	0.1133	0.0177	0.0482	0.0867
	(5.27)	(0.74)	(2.12)	(3.96)
South	0.0820	0.0436	0.0441	0.0576
	(3.85)	(1.95)	(2.07)	(2.86)
Constant	-0.7339	-0.5732	-0.4909	-0.5423
	(-12.14)	(-8.29)	(-6.99)	(-8.71)
Number of obs	3652	3547	3894	3837
Log likelihood	-1763.3	-8519.2	-9314.0	-8594.4

[a]Reported coefficients were obtained by calculating the partial derivative of a given variable for each observation in the sample and then averaging over observations applying sampling weights to ensure results are representative of the United States (see the text for details). The t-ratios in parentheses are those for the untransformed model coefficients. Observations with annual income below zero, above $500,000 (in year 2001 dollars), or missing were excluded from each sample.

[b]Omitted variables are White, homes on block 0 to 20 feet apart, West Region.

Table A-4
Demand for Homeownership Controlling for Borrowing Constraints: Includes Controls for Census Region and Neighborhood Density[a]

	1983	*1992*	*1995*	*1998*
Some college	-0.0022	0.0287	0.0292	0.0140
	(-0.09)	(1.30)	(1.30)	(0.68)
College degree	-0.0315	-0.0225	-0.0365	-0.0067
	(-1.38)	(-1.02)	(-1.66)	(-0.32)
Married	0.1078	0.1538	0.0909	0.1527
	(3.92)	(4.71)	(3.37)	(6.04)
Divorced	-0.0141	0.0607	0.0306	0.0597
	(-0.53)	(2.20)	(1.14)	(2.47)
Age X *Dummy for Under 35*	0.0041	0.0017	-0.0003	0.0013
	(1.81)	(0.77)	(-0.13)	(0.65)
Age X *Dummy for Between 35 and 55*	0.0065	0.0044	0.0019	0.0034
	(3.43)	(2.74)	(1.16)	(2.36)
Age X *Dummy for Over 55*	0.0061	0.0036	0.0032	0.0036
	(3.85)	(3.28)	(2.85)	(3.50)
Household size	0.0274	0.0165	0.0289	0.0243
	(3.71)	(2.21)	(3.84)	(3.23)
Male	-0.0127	-0.0348	0.0023	-0.0104
	(-0.79)	(-1.41)	(0.09)	(-0.47)
African American[b]	-0.1063	-0.0429	-0.0598	-0.0224
	(-3.28)	(-1.44)	(-2.09)	(-0.82)
Hispanic[b]	-0.1511	-0.0943	-0.1225	-0.0568
	(-3.32)	(-2.53)	(-3.28)	(-1.740
Other Race (including Asian)[b]	-0.1042	-0.0918	-0.0669	-0.1062
	(-1.41)	(-2.52)	(-1.39)	(-2.57)
Head in bad health	-0.0283	-0.0196	-0.0854	-0.0423
	(-0.97)	(-0.64)	(-2.47)	(-1.31)
Spouse in bad health	-0.1066	-0.0972	-0.0921	-0.0729
	(-2.49)	(-1.77)	(-1.68)	(-1.39)
Total family income (in $2001)	0.0049	0.0039	0.0037	0.0037
	(7.00)	(6.68)	(5.77)	(7.28)
Total family income squared (in $2001)	-1.06E-05	-8.57E-06	-8.13E-06	-7.69E-06
	(-6.09)	(-6.73)	(-6.25)	(-7.23)
Family has received an inheritance	-0.0202	0.0762	0.0347	0.0942
	(-0.68)	(3.45)	(1.58)	(4.29)
Head works full-time	0.0197	0.0496	0.0576	0.0701
	(0.83)	(1.77)	(2.12)	(2.63)
Spouse works full-time	0.0013	-0.0141	0.0284	-0.0035
	(0.06)	(-0.54)	(1.13)	(-0.16)
Spouse works part-time	0.0715	-0.0155	0.0060	0.0356
	(1.95)	(-0.46)	(0.17)	(0.94)
Head's # full-time jobs lasting > 1 year	-0.0046	-0.0063	-0.0019	-0.0086
	(-1.08)	(-1.46)	(-0.49)	(-2.23)
Homes on block 20 to 100 feet apart	0.1010	0.0819	0.0716	0.1124
	(3.06)	(4.49)	(3.94)	(6.27)
Homes on block > 100 feet apart	0.0936	0.1292	0.0884	0.0726
	(4.46)	(4.42)	(3.28)	(2.87)

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Table A-4 cont.
Demand for Homeownership Controlling for Borrowing Constraints: Includes Controls for Census Region and Neighborhood Density[a]

	1983	*1992*	*1995*	*1998*
NorthEast	-0.0125	-0.0372	-0.0520	-0.0075
	(-0.48)	(-3.2)	(-4.51)	(-0.31)
Northcentral	0.0992	-0.0219	0.0141	0.0500
	(3.55)	(-1.87)	(1.28)	(2.09)
South	0.0725	-0.0059	0.0518	0.0550
	(2.82)	(-0.53)	(4.76)	(2.48)
Constant	-0.4985	-0.2179	-0.2112	-0.3328
	(-3.65)	(-5.94)	(-5.6)	(-4.00)
Rho	-0.2645	-0.6857	-0.6690	-0.5467
	(-0.32)	(-5.45)	(-6.66)	(-3.95)
Uncensored obs (not credit constrained)	2,925	2,639	2,914	2,830
Censored obs (possibly constrained)	727	908	980	1,007
Log likelihood	-0.7701	-0.8115	-0.8001	-0.7682

[a]Reported coefficients were obtained by calculating the partial derivative of a given variable for each observation in the sample and then averaging over observations applying sampling weights to ensure results are representative of the United States (see the text for details). The t-ratios in parentheses are those for the untransformed model coefficients. Observations with annual income below zero, above $500,000 (in year 2001 dollars), or missing were excluded from each sample.

[b]Omitted categories are White, homes on block 0 to 20 feet apart, West Region.