

# CSD Working Paper

## Homeownership Across the American Life Course: Estimating the Racial Divide

Thomas A. Hirschl and Mark R. Rank

CSD Working Paper 06-12  
2006



**Center for Social Development**



Washington

WASHINGTON · UNIVERSITY · IN · ST · LOUIS

George Warren Brown School of Social Work

# **Homeownership Across the American Life Course: Estimating the Racial Divide\***

Thomas A. Hirschl  
Department of Development Sociology  
Cornell University  
Ithaca, New York 14853  
tah4@cornell.edu

Mark R. Rank  
George Warren Brown School of Social Work  
Washington University  
St. Louis, Missouri 63130  
markr@gwbmail.wustl.edu

**CSD Working Paper 06-12**

**2006**

\*This research was partially funded by a research grant from the Center for Social Development.

Center for Social Development  
George Warren Brown School of Social Work  
Washington University  
One Brookings Drive  
Campus Box 1196  
St. Louis, MO 63130  
tel 314-935-7433  
fax 314-935-8661  
e-mail: [csd@gwbmail.wustl.edu](mailto:csd@gwbmail.wustl.edu)  
<http://gwbweb.wustl.edu/csd>

**HOMEOWNERSHIP ACROSS THE AMERICAN LIFE COURSE:  
ESTIMATING THE RACIAL DIVIDE**

**ABSTRACT**

Homeownership has historically been viewed as a fundamental piece of the American Dream, with up to 70 percent of households owning their home as of 2006. Yet it has also been demonstrated that nonwhites are less likely to own a home and that the value of their homes is much less than that for whites, even when social class is taken into account. This paper explores the overall life course patterns of homeownership and the importance of racial differences in understanding those dynamics. Based upon a life table methodology, we examine the homeownership patterns for individuals between the ages of 25 to 55 using 36 waves of the Panel Study of Income Dynamics. Our findings indicate that although the vast majority of nonwhites will eventually become homeowners, there is nevertheless a significant racial divide in the patterns of homeownership. Nonwhites are less likely than whites to become homeowners, are more likely to purchase their first home at a later age, are less likely to have acquired as much equity in their home, and are less likely to own their home outright. The implications of these findings are discussed within the overall context of racial stratification in America.

**HOMEOWNERSHIP ACROSS THE AMERICAN LIFE COURSE:  
ESTIMATING THE RACIAL DIVIDE**

Homeownership is a highly prized status within American society and a symbol of middle class membership (Farley 1996; Jackman and Jackman 1980). A home announces the owner's social status, provides shelter, determines who one's neighbors and community will be, and is a key financial asset in a society that values personal wealth (Rosenbaum 1996).

Homeownership also resonates with the country's agricultural origins where land ownership was considered a democratic ideal, and the Lockean "pursuit of happiness" was actualized by the right to own and enjoy private property (Reid 2004; Schwarz 1997). As such, it has always been an essential component of the American Dream (Cullen 2003).

Not coincidentally, this social ideal has been reinforced by federal and state policies that have encouraged homeownership via income tax codes and public loan programs (Rosen and Rosen 1980; Shapiro 2004; Yearn 1976). Beginning with the Homestead Act of 1862, through the GI Bill in the 1940's and 1950's, and continuing with the significant tax deductions available on home mortgage interest, federal policy has placed a strong emphasis on the importance and rewards of owning a home. Chevan (1989) finds that federal housing policy, in combination with rising demand, fueled the post-World War II increase in homeownership, which by 2006 was nearly 70% of all households (U.S. Census Bureau 2006). These and other lending policies have also allowed Americans to purchase their homes at relatively young ages (often by the late 20's or early 30's) in comparison to their European counterparts (Chiuri and Jappeli 2003). The importance of homeownership is also found in the fact that for most Americans, the home represents their most valuable asset. For example, 44% of all U.S. wealth consists of home equity (U.S. Census Bureau 2001). The percentage of the U.S. population who are homeowners

and the amount of wealth generated from home equity is among the highest in the world (Sanders 2005).

Yet a fundamental caveat to this American success story of homeownership has been the racial divide in its likelihood and financial reward. Although 75% of non-Hispanic whites currently own their home, the percentage of African Americans owning a home is only 47%, while the rate for Hispanic Americans is 49% (U.S. Census Bureau 2006). Substantial evidence suggests that racial minorities continue to face discriminatory barriers to obtaining home mortgages, and that racial residential segregation depresses the value of minority housing (Charles 2003; Charles and Hurst 2002; Krivo and Kaufman 2004; Massey and Denton 1993).

This racial divide in homeownership is fundamental in understanding the overall racial disadvantages found in America (Oliver and Shapiro, 1995; Parcel 1982; Rosenbaum 1996). As Shapiro notes, “Homeownership is by far the single most important way families accumulate wealth. Homeownership also is the way families gain access to the nicest communities, the best public services, and . . . quality education. . . How young families acquire homes is one of the most tangible ways that the historical legacy of race plays out in the present generation and projects well into the future” (2004: 3).

In this paper we examine the life course patterns of homeownership, with an emphasis on exploring the extent of racial differences behind the overall patterns. Three questions are addressed. First, given that homeownership is an expected life course event, what is the timing and age pattern of the event? Second, what are the patterns of transitions into and out of homeownership status? Third, what is the amount of value accrued over time in one’s home, and what percent of the population will eventually own their home outright? We would argue that

understanding these life course patterns and the racial disparities behind them, is fundamental to understanding the overall process of racial stratification in the U.S.

### **CURRENT KNOWLEDGE ABOUT HOMEOWNERSHIP AND RACE**

Not surprisingly, available research confirms a strong relationship between family/household income level and the likelihood of homeownership (Di and Liu, 2004). For example, Struyk and Marshall (1975) identified a positive income elasticity of homeownership versus renting in the Pittsburgh metropolitan area as measured by the 1970 *Census of Population and Housing*. Their study found that the probability of owning versus renting increases as household income increases. Carliner (1974) also found a similar positive income elasticity for the nation as a whole using the 1970 census.

More recently, in a longitudinal analysis using the Panel Study of Income Dynamics (PSID), Reid (2004) detected a substantial income effect upon the likelihood of remaining a homeowner. Well over 70% of high income owners still owned homes 10 years after buying, versus less than 40% of low income owners. Income level is thus a key factor in predicting homeownership both cross-sectionally as well as longitudinally.

However, the relationship between income and homeownership is strongly influenced by the factor of race (Denton 2001). Each of the above three studies found significant and substantially different income effects for whites versus nonwhites. Struyk and Marshall (1975) as well as Carliner (1974) report that, at any given income level, whites were more likely than blacks to be homeowners. Reid (2004) found that white and black homeowners had different survival curves, that is, whites were far more likely to remain homeowners and that this relationship held for both high income owners and low income owners

In a longitudinal study utilizing the 1984-92 waves of the PSID, Boehm and Schlottman (2004) reported that race affects housing decisions along a continuum of ownership stages. Using a continuous time hazard model, race (white versus nonwhite) had a large and statistically significant effect on the likelihood of becoming a first-time, second-time, and third-time home owner. The race effect was net of gender, marital status, age, veteran status, disability status, family size, permanent income, total family wealth, residential status, and education. They also analyzed the likelihood of exiting homeownership and found that, at least among low income families, race was a statistically significant and substantial factor in exits from homeownership.

Race is particularly important in predicting the value of one's home as well as the amount of equity built up over time. Research has indicated that even after controlling for socioeconomic status, the home value for African Americans is considerably less than that for whites (Denton 2001; Horton and Thomas 1998) . In addition, Reid (2004) found that the financial returns to homeownership were quite small for both low- and middle-income minorities. For example, she estimated that the average value of housing for low-income minority homeowners increased only from \$50,000 to \$65,000 over a 10-year period.

The question therefore arises, why has race proven to be such a powerful factor in homeownership independent of socioeconomic status? The bulk of the research has emphasized and documented the importance of discrimination in the housing market as an important part of the answer, rather than the alternative explanation of minorities having a weaker preference for homeownership.

Research has shown that controlling for income, black and Hispanic home buyers learn about fewer available homes than white home buyers, blacks and Hispanics are more likely to be steered into less desirable and segregated residential areas by real estate agents, blacks and

Hispanics are more likely to be turned down for home loans, and black and Hispanic homeowners end up paying higher interest rates on their mortgages than their white counterparts (Charles 2003; Ondrich et al. 1998; Yinger 1995; 1998; 2001). For example, one particularly influential study found that blacks and Hispanics in Boston were 56% more likely to be turned down for a conventional mortgage loan than whites after controlling for credit qualifications and type of loan (Munnell et al., 1996). This amounted to a minority denial rate of 17% compared to 11% for whites. A reanalysis by Ross and Yinger (2002) found similar patterns.

Likewise, Charles and Hurst (2002) analyzed a subsample of black and white renters in the 1991-96 waves of the PSID that included a data supplement of questions about home mortgage application. They found that whites were much more likely to become homeowners over this period, and that the racial difference, net of controls, is explained by the following two factors: 1) blacks were less likely to apply for a mortgage, and 2) were more likely to have their mortgage applications rejected. The authors speculate that the lower rate of mortgage applications by blacks may be driven by “a greater anticipated probability of mortgage application rejection” (282). Thus they surmise that the combination of discriminatory institutional lending practices and anticipation of these practices explains the racial differential in homeownership.

In addition, Shapiro has shown that middle class whites are much more likely to get financial help from parents on their mortgage down payment than their black counterparts (2004). This financial assistance in turn, enables white households to more readily qualify for a home mortgage and to qualify for a larger mortgage, which in turn allows for the purchasing of a higher quality home in a more attractive neighborhood with better quality schools.



Charles summarizes this body of research with the following observation, “Thus, in one way or another, and to a greater or lesser degree, discrimination in the housing market constrains the ability of nonwhites to rent and/or purchase housing. Access to housing is constrained, the search process is more unpleasant (i.e., more visits, more waiting, etc.), home seekers receive far less assistance from lenders in the mortgage application process and are more likely to have their applications denied, and their moving costs are higher” (2003: 196). The result of such housing market discrimination are lower rates of homeownership, less access to certain neighborhoods, poorer quality housing, less equity accrued, and continued residential segregation for African Americans and Hispanic Americans. These, in turn, reduce the ability of racial minorities to build significant wealth which profoundly affects the dynamics of racial stratification in this country.

### **A LIFE COURSE APPROACH TO ESTIMATING RACIAL DISPARITIES IN HOMEOWNERSHIP**

The above body of research has added considerably to our understanding of homeownership and the racial differences that exist. Yet the process and effects of homeownership take place across a lifetime. As such, we would argue that the study of homeownership lends itself quite naturally to a life course framework. By its very nature, homeownership and the value of one’s home unfolds over a period of years and decades, while the effects of such asset-building can best be understood within the context of the entire life course. In addition, a life course approach is essential for detailing the long-term impact of racial disparities found within these processes.

Homeownership is also a worthy subject of life course investigation because, as noted earlier, it has been found to be a key element of household wealth formation (Oliver and Shapiro 1995), a vehicle for promoting economic well-being over the life course (Charles and Hurst 2002: 281), and represents an essential component in the attainment of the American Dream (Cullen 2003). All of these effects unfold over extended periods of time, and as such, are best captured from the perspective of the life course.

The concept of the life course has had a long and distinguished history in the social and applied sciences (Dewilde 2003; Elder 1994; Moen, Elder, and Luscher 1995; Mortimer and Shanahan, 2003; Riley 1999; Settersten and Mayer 1997). It has provided a very useful framework for thinking about how individual lives unfold, and how particular events and transitions affect these trajectories (Elder 1995; Voyer 2004). The term itself refers to “social processes extending over the individual life span or over significant portions of it, especially [with regard to] the family cycle, educational and training histories, and employment and occupational careers” (Mayer and Tuma 1990: 3).

As noted earlier, the event of homeownership is critical in shaping the trajectories of individual lives. For example, where one attends school is often predicated on where one lives. As Shapiro notes, “Educational quality results primarily from where children live and the resources their parents can provide . . . quality schools and substandard schools are not distributed randomly; schools commonly reflect a community’s wealth and class and race compositions” (2004: 167). These advantages or disadvantages in schooling then carry over in terms of acquired human capital, which then impact on children’s earnings ability, and so on.

In this paper we assess various aspects of homeownership through the use of a life table methodology. We calculate a series of cumulative proportions that estimate the percentage of

the population that will become a homeowner between the ages of 25 and 55, the monetary value accrued in one's home over time, and the likelihood of paying off one's mortgage during this stage of adulthood. Of particular concern is examining the extent of racial disparities in each of these areas.

## **DATA AND METHODS**

In order to assess the life-course dynamics of homeownership, we utilize the Panel Study of Income Dynamics (see Hill 1992, for greater detail). The PSID began in 1968 as an annual panel survey (biennial since 1997) that is representative of the U.S. population. The PSID over-sampled black and low income households, and includes in-depth information on family demographic and economic behavior (including homeownership), making it uniquely suited for this study. The PSID initially interviewed approximately 4,800 U.S. households in 1968, which included detailed information on roughly 18,000 individuals within those households. The PSID has since tracked these individuals annually, including those children and adults who eventually broke off from their original households to form new households (e.g., children leaving home, separations, divorce).

Our life table estimations employ sampling weights to ensure that the PSID sample accurately represents the U.S. population. Specifically, we utilize the weights assigned to individuals at age 25 which is the starting age for our life tables. We utilize both the household and individual levels of information from the initial wave of 1968 through 2003, and thus draw upon 36 years of longitudinal information which translates into several hundred thousand individual years of information embedded in the analysis.

The analysis is conducted for individuals aged 25 who are the primary respondent in the household (who may be either a family head or a wife). We begin the life table at age 25 to minimize short term household transitions associated with early adulthood (Hill 1992), and we limit the analysis to heads and wives who have established independent households. If the housing in which the individual resides is reported as owned, then the respondent is coded as having experienced the event of homeownership. After an individual has experienced the event, he/she is removed from the life table calculations at older ages. Individuals may contribute anywhere from 1 to 31 years of information to the life table, depending upon whether they became homeowners, and in what year they turned 25. For example, a PSID individual who was 25 in 1985 and became a home owner in 1996 would contribute 12 person-years to the life table. Period and cohort effects are smoothed out within and across each age interval because some individuals turn 25 in 1968, some in 1978, and so on. Thus the age-specific life table probabilities reflect the contributions of individuals spread over multiple periods and cohorts.

We would argue that the ages of 25 to 55 represent the age range where the vast majority of individuals are most likely to become homeowners. These ages encompass the peak years of child rearing (U.S. Census Bureau 2001), as well as the period when family income tends to be most affluent (Rank and Hirschl 2001). Because homeownership is a positive function of income level, and because married couples with children have a high probability of owning versus renting (Carliner 1974), this age range is when Americans are most likely to become homeowners, and therefore the period of the life course of greatest interest to our study.

For each wave of the PSID, a question was asked as to whether a home was owned. This question allows us to construct a life table analysis with respect to the odds of homeownership, as well the odds of exiting and reentering the state of being a homeowner. In addition, the PSID

also allows us to estimate the likelihood of reaching various levels of economic homeownership value as well as the debt ratio of ownership. This analysis is based upon two questions pertaining to the amount of the remaining mortgage principal and the current market value of the home. However, the mortgage principle question was not asked during the years of 1973, 1974, 1975, and 1982, and therefore our life table estimates of both homeownership value and debt ratio are constrained to the ages of 25 to 50 (as a result of not having enough person years to carry the life tables out to age 55).

A measurement issue also arises for the years 1998, 2000, and 2002 where there are no observations on homeownership status because these are off years of PSID data collection. To fully utilize the existing observations, the following coding rules were applied. First, if the individual is a homeowner in the two adjoining years (say 1997 and 1999), then we code that individual as being a homeowner for the intervening unobserved year (in this example 1998). If, on the other hand, the individual is recorded as being a homeowner in the year after the unrecorded year of observation (e.g., not a homeowner in 1997, but is in 1999), then we assign the year of homeownership as beginning during the midpoint between the two measured years (in this example mid-1998). This approach fails to detect homeownership changes related to short-term fluctuations, but otherwise is equivalent to standard procedures for estimating observation time for cases that are censored on the right (Hosmer and Lemshow 1999).

The life tables are estimated using SAS Proc Lifetest (SAS 2005; see also Allison 1995), and the PSID weights are deployed under the “Frequency” option. Unfortunately weighting invalidates the standard error calculation in the life table which presumes an underlying binomial distribution where the mean cannot be a ratio. Fortunately it is not necessary to use weights in regression analysis to obtain unbiased coefficients and standard errors (Hanushek and Jackson

1977: 152). Thus to conduct tests of statistical significance for the effects of race, education, and gender, we estimate an unweighted Cox Proportional Hazard regression using a covariate vector of race, gender and education (SAS 2005).

Throughout the analyses we are interested in examining the effect of race upon the patterns of homeownership, as well as the effects of socioeconomic status and gender. Race is measured by the categories of white versus nonwhite (within the PSID, nonwhite is overwhelmingly African American, Hill 1992). In order to partially take into account socioeconomic background, we utilize educational attainment at age 25 (Kitagawa and Hauser 1973). Education is used rather than income or wealth because education is not endogenous with respect to the dependent variable homeownership, and occupation is not observed for individuals outside the labor force. Whereas education at age 25 is conceptually distinct from the individual's economic asset level, income and wealth are endogenous with household assets of which home ownership is a key element (Parcel 1982; Oliver and Shapiro 1995). In addition, level of education is very stable beyond the age of 25. Education is divided into the following three categories: less than 12 years of education, 12 years of education, and more than 12 years.

## **RESULTS**

In each of our tables we present the cumulative life table proportions for the total sample, and for each of our subcategories of race, gender, and education. These proportions represent the likelihood that a particular homeownership event will occur by a particular age. Below these life table analyses we provide the partial likelihood coefficients for each of these variables. They represent the overall size and significance of each variable (net of the other two) across the pooled life course.

[Table 1 about here]

Table 1 provides the cumulative probabilities for first time homeownership between the ages of 25 and 55. Over one third (34%) of the sample were homeowners at age 25, while over half were homeowners by age 30. The cumulative life table proportion continues to rise sharply to age 40 when it reaches 83%, and then plateaus upward to 89% by age 55. This pattern confirms the notion that homeownership is a normal life course event in the United States insofar as the vast majority of individuals have been homeowners by their 40<sup>th</sup> birthday.

Table 1 suggests that racial differences in homeownership are present throughout the life course, are statistically significant, and are proportionately most pronounced at younger ages. At age 25 the percentage of white homeowners (38%) is double the percentage of nonwhite homeowners (19%). This differential of roughly 20 percentage points is sustained over the life course, suggesting that the majority of whites as well as nonwhites experience homeownership at some time during their life course, but that whites are in a more favorable position to do so at younger ages.

It is important to note that the racial effect across the life tables is net of social class as measured by education (as shown in the partial likelihood estimates). Because the effects of education are also significant, nonwhites with low educational attainment are doubly disadvantaged. Although the education effect is statistically significant, the magnitude of the effect is much smaller than the race effect. At age 25, high school graduates appear to have a slight advantage in homeownership over both high school drop outs and individuals with some college. This may reflect a decision by college bound individuals to delay homeownership

relative to high school graduates. However by age 40, homeownership rates of individuals with some college have surpassed those of high school graduates. Nevertheless, the homeownership differential between the highest and the lowest categories is less than 15 percentage points for all ages, a lesser magnitude than the race differential. The differential magnitude of race and education can also be seen in the odds ratios across the life course – whites are twice as likely to own a home at any point in the life course compared to nonwhites, whereas those possessing more than 12 years of education are 19% more likely to be homeowners than those with less than 12 years of education.

Finally, Table 1 suggests there are no statistically significant effects of gender on the likelihood of homeownership between the ages of 25 to 55. This pattern of results is consistent with the notion that a high percentage of homes are owned by heterosexual married couples, and that men and women therefore have similar rates. Table 1 suggests that women have a higher rate of ownership at age 25, perhaps because women tend to marry older men who are more likely to own homes compared to younger men (Chevan 1989).

[Table 2 about here]

The risk set for Table 2 is all homeowners, age 25 and over, for whom we could identify the first year of homeownership. We then follow this subsample and record attrition from homeownership status, subsequent to becoming homeowners. Thus a family need not reside in the same home, but rather continue the status of ownership to remain in the risk set. The results suggest that exiting from homeownership is a relatively common event that plateaus after 15 years. Twelve percent exit after only one year of ownership, and 28 percent exit after five years.



The covariate effects are significant for race, gender, and for individuals with some college versus high school drop outs. The gender coefficient suggests that men are more likely than women to exit ownership status, perhaps reflecting differences in divorce settlements that lead to higher rates of female homeownership post-divorce (Espenshade 1979).

[Table 3 about here]

Table 3 provides an analysis of returning to homeownership status, and reflects the behavior of individuals in the sample who were homeowners, and then recorded as not homeowners in a subsequent wave. The risk set thus includes all individuals age 25 and over, and for whom we can identify this double transition. The probabilities indicate high rates of return to ownership, with 31 percent returning after one year, and 60 percent returning after five years. The Cox regression results indicate that nonwhites relative to whites, and high school drops relative to higher educated groups, are less likely to return to homeownership.

The combined results for Tables 1, 2 and 3 corroborate the race specific findings of Reid (2004) and Charles and Hurst (2002). Net of educational attainment and gender, nonwhites are less likely to become homeowners, more likely than whites to exit homeownership, and less likely to return to homeownership after leaving their prior ownership status.

In order to assess race, education and gender differences in the economic value of housing, we estimate a series of life tables for the value of housing at various dollar levels. We compute housing value by subtracting the remaining principal owed on the home from the owner's self-reported market value of the housing. This yields an approximate measure of how much value the homeowner would realize if he/she sold the house in the year in which the survey

was conducted. The life table analysis is conducted for the following thresholds, all inflated to 2003 dollars: \$25,000, \$50,000, \$100,000 and \$200,000. The risk set is defined by all heads and wives who own homes. Individuals stay in the life table risk set until they achieve the given threshold. If the threshold is achieved, the event is noted, and the homeowner is removed from the risk set.

[Table 4 about here]

Table 4 indicates that most homeowners will reach the lowest threshold (\$25k) which begins at 14% at age 25 and rises to 82% by age 50. The next threshold starts at a much lower level (7%), but progresses to 70% by age 50. Less than half of the homeowners achieve a market value of \$100k by age 50, and about one in five (19%) report a market value of \$200k or more by age 50. In summary, most homeowners realize relatively modest amounts of economic value, with a minority realizing higher values.

The race, class, and gender covariates in the bottom half of Table 4 suggest that this pattern of economic value varies greatly within the population. Relative to whites, nonwhite homeowners are less likely to cross each of the four thresholds in the economic value of their homes, and racial disadvantage increases as the value of the home increases. This is particularly apparent at the \$100,000 and \$200,000 levels. Relative to nonwhites, whites are 3.9 time more likely to have acquired at least \$100,000 worth of home equity, and 6.2 times more likely to have acquired \$200,000 worth of home equity.

There are no gender effects on home value at lower thresholds, but an effect favoring women is found at the two higher thresholds. This pattern is consistent with the notion that divorce within high asset families often results in women remaining homeowners.<sup>1</sup>

Finally, individuals with some college are more likely than high school drop outs to realize economic benefits at all four thresholds. High school graduates, on the other hand, have an advantage over drops outs at the two lower levels, but no advantage at the higher levels. In summary, the results suggest that the ability of homeowners to realize economic value of their housing is highly stratified by race, modestly stratified by education, and only marginally stratified by gender.

We estimate a final set of life tables where the thresholds are varying percentages of the home owned. This analysis provides a measure of how much of the home is actually owned versus leveraged by debt. Table 5 suggests that nearly nine out of ten (87%) homeowners achieve at least 25 percent ownership by age 50, and a slightly lower percentage (73%) own half of the value of their home by age 50. Over half of homeowners own 75% of the asset value of their home by age 50, and more than one third own their house outright by age 50.

[Table 5 about here]

The Cox regression results reinforce the premise that being nonwhite is a major disadvantage in achieving ownership at all thresholds of percent ownership. This is in spite of the fact that the value of homes for nonwhites is much less than that for whites as evidenced in

---

<sup>1</sup> See Jacob (1989: 111) for a parallel finding with regard to length of marriage prior to divorce as a predictor of the likelihood of post-divorce home ownership by women.

Table 4. This finding corroborates Parcel's (1982) study showing that blacks in particular are less likely to accumulate housing assets.

The pattern of results for education is somewhat surprising. High school graduates have an advantage over high school drop outs at lower level thresholds of ownership, but no advantage at the two higher thresholds. Individuals with some college have an advantage over drop outs at the lowest threshold (25 percent ownership), no advantage at the next highest threshold (50 percent ownership), and are less likely than high school drop outs to own 75 percent or 100 percent of their homes. When this information is combined with the results in Table 4, it suggests that the higher educated group owns more housing value, but is also more leveraged with indebtedness. Thus the higher economic value of upper class housing appears to be accompanied with greater indebtedness.

## **DISCUSSION**

This paper set out to explore the life course patterns of homeownership, and the racial divide behind those patterns. Homeownership is a valued status in American society, and its distribution within the population is sometimes overlooked as a critical feature of social stratification. Using 36 years of observation from the Panel Study of Income Dynamics, our analysis is based upon a series of constructed life tables that estimate the occurrence of various aspects of homeownership between the ages of 25 and 55.

Our results affirm the notion that homeownership is an expected life course event in which approximately 90 percent of the adult population will become homeowners before they reach the age of 55. Yet there is also considerable fluidity in exiting and reentering the status of homeowner across the life course – 40% of Americans will exit homeownership status within 10

years of first owning a home, while 79% will return to homeownership status within 10 years of having sold their home. In addition, by the age of 50, 70% of homeowners will have acquired at least \$50,000 worth of home equity and slightly over half will own at least 75% of the value of their home. Overall these patterns of behavior suggest that homeownership has broad appeal.

Yet these patterns differ significantly in magnitude between whites and nonwhites. Nonwhites are less likely than whites to become homeowners (although the vast majority will do so), are more likely to purchase their first home at a later age, are more likely to exit homeownership status, are less likely to have acquired as much equity in their home, and are less likely to own their home outright. It is important to note that each of these findings remain robust even after controlling for education and gender.

We would argue that the differential dynamics of homeownership are important components in understanding the economic racial divide in America. As is well known, the wealth disparity between whites and nonwhites is significantly greater than the income disparity. For example, although the median income of both blacks and Hispanics in dollar ratios is approximately 60 cents for every dollar for whites, the median net worth for blacks and Hispanics is approximately 10 cents for every dollar of net worth for whites (Shapiro 2004).

One of the major reasons behind this wealth disparity is the differential patterns of homeownership between whites and nonwhites discussed in this paper. For example, because nonwhites begin homeownership at later ages in the life course, they are less likely to have built up as much home equity. In addition, as a result of differences in parental ability to help with a mortgage down payment, along with the on-going patterns of racial residential segregation and discrimination in the housing market (discussed earlier), the ability to purchase a higher quality home in a more marketable neighborhood is more constrained for nonwhites than for whites.

The result of this is that the amount of equity built up in a home tends to be much less for nonwhites than it does for whites. This is due to the fact that lower quality houses in less desirable neighborhoods tend to appreciate much less in value than higher quality homes in more attractive neighborhoods.

In addition, the fact that nonwhites are more likely to be residing in neighborhoods with lower value housing, often translates into lower quality schooling as well. This, in turn, has been shown to be critical in shaping later life chances such as the acquisition of valuable human capital.

Consequently, the life course patterns of homeownership cast considerable light upon racial stratification in America. The ability to purchase a quality home, at an early age, and in an attractive neighborhood that is appreciating in value, is critical for building one's assets and for enhancing the life chances for one's children. Our analysis suggests that white Americans are much more likely to be able to access this component of the American Dream than nonwhite Americans. Taken as a whole, we would argue that in order to understand the economic racial divide in America, a very important place to turn to are the racial differences in the patterns of homeownership across the life course.

## References

- Allison, Paul D. 1995. *Survival Analysis Using the SAS System: A Practical Guide*. Cary, NC: SAS Institute.
- Boehm, Thomas P. and Alan M. Schlottman. 2004. "The Dynamics of Race, Income and Home Ownership." *Journal of Urban Economics* 55:113-130.
- Carliner, Geoffrey. 1974. "Determinants of Home Ownership." *Land Economics* 50:109-119.
- Charles, Camille Zubrinsky. 2003. "The Dynamics of Racial Residential Segregation." *Annual Review of Sociology* 29:167-207.
- Charles, Kerwin K. and Erik Hurst. 2002. "The Transition to Home Ownership and the Black-White Wealth Gap." *The Review of Economics and Statistics* 84:281-297.
- Chevan, Albert. 1989. "The Growth of Home Ownership: 1940-1980." *Demography* 26:249-266.
- Cullen, Jim. 2003. *The American Dream: A Short History of an Idea That Shaped a Nation*. New York: Oxford University Press.
- Denton, Nancy A. 2001. "Housing as a Means of Asset Accumulation: A Good Strategy for the Poor?" Pp. 232-266 in Thomas M. Shapiro and Edward N. Wolff (eds.) *Assets for the Poor: The Benefits of Spreading Asset Ownership*. New York: Russell Sage Foundation.
- Dewilde, Caroline. 2003. "A Life-Course Perspective on Social Exclusion and Poverty." *British Journal of Sociology* 54:109-128.
- Di, Zhu Xiao and Xiaodong Liu. 2004. "The Importance of Wealth and Income in the Transition to Homeownership." Paper prepared for the U.S. Department of Housing and Urban Development., Office of Policy Development and Research.
- Elder, Glen H. 1995. The Life Course Paradigm: Social Change and Individual Development. Pp. 101-140 in Phyllis Moen, Glen H. Elder and Kurt Luescher (eds.) *Examining Lives in Context: Perspectives on the Ecology of Human Development*. New York: American Psychological Association.
- Espenshade, Thomas J. 1979. "The Economic Consequences of Divorce." *Journal of Marriage and the Family* 41:615-625.
- Farley, Reynolds. 1996 *The New American Reality: Who We Are, How We Got Here, Where We Are Going*. New York: Russell Sage Foundation.

- Hanushek, Eric A. and John E. Jackson. 1977. *Statistical Methods for Social Scientists*. New York: Academic Press.
- Hill, Martha S. 1992. *The Panel Study of Income Dynamics: A Users Guide*. Newbury Park, CA: Sage Publications.
- Hosmer, David W., Jr. and Stanley Lemshow. 1999. *Applied Survival Analysis: Regression Modeling of Time to Event Data*. New York: John Wiley & Sons.
- Jackman, Mary R. and Robert W. Jackman. "Racial Inequality in Home Ownership." *Social Forces* 58:1221-1234.
- Jacob, Herbert. 1989. "Another Look at No-Fault Divorce and the Post-Divorce Finances of Women." *Law and Society* 23:95-116.
- Kitagawa, Evelyn M. and Hauser, Philip M. 1973. *Differential Mortality in the United States: A Study in Socioeconomic Epidemiology*. Cambridge, MA: Harvard University Press.
- Krivo, Lauren J. and Robert L. Kaufman. "Racial-Ethnic Differences in Home Equity." *Demography* 41:585-605.
- Leisering, Lutz and Stephan Leibfried. 1999. *Time and Poverty in Western Welfare States*. New York: Cambridge University Press.
- Liebertson, Stanley. 1985. *Making it Count: The Improvement of Social Research and Theory*. Berkeley, CA: University of California Press.
- Massey, Douglas S. and Nancy A. Denton. 1993. *American Apartheid: Segregation and the Making of the Underclass*. Cambridge, MA: Harvard University Press.
- Mayer, Karl U. and Nancy B. Tuma. 1990. "Life Course Research and Event History Analysis: An Overview." Pp.3-20 in Karl U. Mayer and Nancy B. Tuma (eds.) *Event History Analysis in Life Course Research*. Madison, WI: University of Wisconsin Press.
- Moen, Phyllis, Glen H. Elder and Kurt Luscher. 1995. *Examining Lives in Context: Perspectives on the Ecology of Human Development*. Washington, DC: American Psychological Association.
- Mortimer, Jeylan T. and Michael J. Shanahan. 2003. *Handbook of the Life Course*. New York: Kluwer Academic/Plenum Publishers.
- Munnell, Alicia H., Lynn E. Browne, James McEneaney and Geoffrey M. B. Tootell. 1996. "Mortgage Lending in Boston: Interpreting HMDA Data." *American Economic Review* 86:25-53.



- Murphy, Kevin and Finis Welch. 1993. "Industrial Change and the Rising Importance of Skill." Pp.101-132 in *Uneven Tides: Rising Inequality in America*, Sheldon Danziger and Peter Gottschalk (eds.). New York: Russell Sage Foundation.
- Oliver, Melvin L. and Thomas M. Shapiro. 1995. *Black Wealth/White Wealth: A New Perspective on Racial Inequality*. New York: Routledge.
- Parcel, Toby. 1982. "Wealth Accumulation of Black and White Men: The Case of Housing Equity." *Social Problems* 30:199-211.
- Rank, Mark R. and Thomas A. Hirschl. 2001. "Rags or Riches: Estimating the Probabilities of Poverty and Affluence Across the Adult American Life Span." *Social Science Quarterly* 82:651-669.
- Reid, Carolina K. 2004. *Achieving the American Dream? A Longitudinal Analysis of the Homeownership Experiences of Low-Income Households*. Seattle: Center for Studies in Demography and Ecology, University of Washington, CSDE Working Paper No. 04-04.
- Riley, Matilda White. 1999. "Sociological Research on Age: Legacy and Challenge." *Aging and Society* 19:123-132.
- Rosen, H.S. and K.T. Rosen. 1980. "Federal Taxes and Homeownership: Evidence from Time Series." *Journal of Political Economy* 88:59-75.
- Rosenbaum, Emily. "Racial/Ethnic Differences in Home Ownership and Housing Quality." *Social Problems* 43:403-406.
- Ross, Stephen and John Yinger. 2002. *The Color of Credit: Mortgage Discrimination, Research Methodology, and Fair-Lending Enforcement*. Cambridge, MA: MIT Press.
- Sanders, Anthony B. 2005. "Barriers to Homeownership and Housing Quality: The Impact of the International Mortgage Market" *Journal of Housing Economics* 14: 147-152.
- SAS. 2005. SAS Version 9.1. Cary, NC: SAS Institute, Inc.
- Schwarz, John E. 1997. *Illusions of Opportunity: The American Dream in Question*. New York: W.W. Norton.
- Settersten, R.A. and K.U. Mayer. 1997. "The Measurement of Age, Age Structuring and the Life Course." *Annual Review of Sociology* 23:233-261.
- Shapiro, Thomas M. *The Hidden Cost of Being African American: How Wealth Perpetuates Inequality*. New York: Oxford University Press.
- Struyk, Raymond J. and Sue A. Marshall. 1975. "Income and Urban Homeownership." *The Review of Economics and Statistics* 57:19-26.

U.S. Census Bureau. 2001. *Statistical Abstract of the United States: 2001* (121<sup>st</sup> Edition). Washington, DC: U.S. Government Printing Office.

U.S. Census Bureau. 2006. Housing Vacancies and Homeownership. <http://www.census.gov/hhes/www/housing/hvs/historic/histt14.html>, downloaded January 11, 2006.

Voyer, Jean-Pierre. 2004. "A Life-Course Approach to Social Policy Analysis: A Proposed Framework." Discussion Paper, Policy Research Initiative, Canada.

Yeans, M.H. 1976. "Governmental Housing Programs: A Brief Review." Pp.81-86 in C.S. Wedom and L.G. Nygren (eds.) *Housing Perspectives: Individuals and Families*. Minneapolis: Burgess Publishing.

Table 1: Life Table Analysis of Home Ownership - Cumulative Probabilities

<u>Age</u>	<u>Total</u>	<u>Race</u>		<u>Gender</u>		<u>Education</u>		
		<u>White</u>	<u>Nonwhite</u>	<u>Male</u>	<u>Female</u>	<u>GT12</u>	<u>12</u>	<u>LT12</u>
25	.344	.384	.191	.311	.372	.303	.413	.308
30	.556	.610	.342	.533	.577	.567	.590	.456
35	.741	.797	.510	.726	.754	.771	.745	.631
40	.827	.872	.611	.836	.821	.863	.825	.714
45	.866	.908	.686	.876	.862	.907	.861	.767
50	.881	.923	.736	.890	.887	.924	.881	.784
55	.893	.923	.774	.900	.889	.928	.881	.799

Partial Likelihood Estimates of Race, Gender and Education on Home Ownership Status - Unstandardized Slopes, Standard Errors, and Odds Ratios

<u>Covariate</u>	<u>Variable</u>	<u>B</u>	<u>S.E.</u>	<u>Odds</u>
Race:	White	.690***	.031	1.99
	(Nonwhite)			
Gender:	Male	.018	.029	1.02
	(Female)			
Education				
:	GE12	.176***	.037	1.19
	(LT12)			
	12	.110**	.034	1.11
	(LT12)			
	Chi-Square		591.6***	
	d.f.		4	

\*\*significant at the .01 level  
 \*\*\*significant at the .001 level

Table 2: Life Table Analysis of Exit from Home Ownership - Cumulative Probabilities

<u>Year</u>	<u>Total</u>	<u>Race</u>		<u>Gender</u>		<u>Education</u>		
		<u>White</u>	<u>Nonwhite</u>	<u>Male</u>	<u>Female</u>	<u>GT12</u>	<u>12</u>	<u>LT12</u>
1	.116	.097	.200	.121	.113	.088	.119	.278
5	.276	.246	.377	.280	.271	.237	.313	.459
10	.398	.376	.460	.429	.387	.335	.450	.632
15	.464	.439	.670	.489	.439	.400	.523	.662
20	.502	.492	.673	.532	.471	.423	.555	.725
25	.522	.518	.677	.584	.506	.469	.595	.765

Partial Likelihood Estimates of Race, Gender and Education on Home Ownership Exit - Unstandardized Slopes, Standard Errors, and Odds Ratios

<u>Covariate</u>	<u>Variable</u>	<u>B</u>	<u>S.E.</u>	<u>Odds</u>
Race:	White	-.396***	.067	.67
	(Nonwhite)			
Gender:	Male	.229***	.066	1.26
	(Female)			
Education	: GE12	-.363***	.080	.70
	(LT12)			
	12 (LT12)	-.080	.081	.92
Chi-Square			70.8***	
d.f.			4	

\*\*\*significant at the .001 level

Table 3: Life Table Analysis of Return to Home Ownership, Following an Exit From Home Ownership - Cumulative Probabilities

<u>Year</u>	<u>Total</u>	<u>Race</u>		<u>Gender</u>		<u>Education</u>		
		<u>White</u>	<u>Nonwhite</u>	<u>Male</u>	<u>Female</u>	<u>GT12</u>	<u>12</u>	<u>LT12</u>
1	.310	.319	.255	.340	.276	.300	.315	.298
5	.602	.623	.508	.632	.570	.651	.565	.505
10	.791	.813	.712	.795	.787	.851	.758	.655
15	.879	.900	.835	.885	.871	.929	.864	.673

Partial Likelihood Estimates of Race, Gender and Education on Return to Home Ownership - Unstandardized Slopes, Standard Errors, and Odds Ratios

<u>Covariate</u>	<u>Variable</u>	<u>B</u>	<u>S.E.</u>	<u>Odds</u>
Race:	White	.308***	.090	1.36
	(Nonwhite)			
Gender:	Male	-.093	.084	.91
	(Female)			
Education:	GE12	.602***	.127	1.83
	(LT12)			
	12	.418***	.131	1.52
	(LT12)			
	Chi-Square		45.3***	
	d.f.		4	

\*\*\*significant at the .001 level

Table 4: Life Table Analysis of Market Value of Home  
in Constant 2003 Dollars - Cumulative Probabilities

<u>Age</u>	<u>Total</u>	<u>GE\$25k</u>						
		<u>Race</u>		<u>Gender</u>		<u>Education</u>		
		<u>White</u>	<u>Nonwhite</u>	<u>Male</u>	<u>Female</u>	<u>GT12</u>	<u>12</u>	<u>LT12</u>
25	.142	.164	.065	.121	.161	.153	.185	.074
30	.305	.342	.163	.280	.356	.325	.327	.181
35	.523	.574	.305	.512	.532	.617	.517	.362
40	.678	.723	.490	.674	.680	.774	.648	.557
45	.769	.813	.591	.776	.765	.838	.761	.661
50	.818	.851	.666	.827	.812	.885	.813	.710

<u>Age</u>	<u>Total</u>	<u>GE\$50k</u>						
		<u>Race</u>		<u>Gender</u>		<u>Education</u>		
		<u>White</u>	<u>Nonwhite</u>	<u>Male</u>	<u>Female</u>	<u>GT12</u>	<u>12</u>	<u>LT12</u>
25	.065	.075	.030	.052	.076	.073	.087	.026
30	.165	.186	.083	.140	.187	.199	.177	.093
35	.331	.366	.175	.306	.353	.416	.318	.204
40	.507	.554	.300	.511	.505	.609	.473	.394
45	.608	.654	.410	.617	.601	.719	.564	.493
50	.700	.749	.477	.729	.678	.808	.665	.580

<u>Age</u>	<u>Total</u>	<u>GE\$100k</u>						
		<u>Race</u>		<u>Gender</u>		<u>Education</u>		
		<u>White</u>	<u>Nonwhite</u>	<u>Male</u>	<u>Female</u>	<u>GT12</u>	<u>12</u>	<u>LT12</u>
25	.014	.016	.004	.008	.018	.015	.020	.005
30	.054	.061	.026	.036	.070	.057	.063	.031
35	.139	.156	.057	.110	.164	.198	.124	.071
40	.248	.274	.119	.228	.264	.364	.188	.148
45	.348	.383	.178	.331	.363	.492	.272	.236
50	.411	.450	.213	.414	.408	.565	.325	.304

<u>Age</u>	<u>Total</u>	<u>GE\$200k</u>						
		<u>Race</u>		<u>Gender</u>		<u>Education</u>		
		<u>White</u>	<u>Nonwhite</u>	<u>Male</u>	<u>Female</u>	<u>GT12</u>	<u>12</u>	<u>LT12</u>
25	.002	.002	.003	.001	.004	.002	.003	.002
30	.012	.012	.012	.008	.015	.011	.011	.013
35	.042	.048	.016	.031	.051	.143	.034	.024
40	.090	.103	.023	.074	.103	.220	.049	.058
45	.139	.191	.055	.120	.155	.275	.085	.078
50	.172	.205	.082	.167	.176	.303	.102	.100

Homeownership Across the American Life Course

Partial Likelihood Estimates of Race, Gender and Education on  
Market Value of Home - Unstandardized Slopes, Standard Errors, and Odds Ratios

<u>Covariate</u>	<u>Variable</u>	<u>GE\$25K</u>			<u>GE\$50k</u>		
		<u>B</u>	<u>S.E.</u>	<u>Odds</u>	<u>B</u>	<u>S.E.</u>	<u>Odds</u>
Race:	White	.857***	.049	2.36	.975***	.062	2.65
	(Nonwhite)						
Gender:	Male	-.055	.045	.95	-.064	.053	.93
	(Female)						
Education	GE12	.606***	.060	1.83	.655***	.073	1.93
:	(LT12)						
	12	.379**	.058	1.46	.347**	.073	1.41
	(LT12)						
	Chi-Square		493.4***			425.0***	
	d.f.		4			4	
<u>Covariate</u>	<u>Variable</u>	<u>GE\$100k</u>			<u>GE\$200k</u>		
		<u>B</u>	<u>S.E.</u>	<u>Odds</u>	<u>B</u>	<u>S.E.</u>	<u>Odds</u>
Race:	White	1.360***	.104	3.90	1.816***	.031	6.15
	(Nonwhite)						
Gender:	Male	-.161*	.077	.85	-.349**	.132	.71
	(Female)						
Education	GE12	.814***	.107	2.26	.892***	.133	2.44
:	(LT12)						
	12	.158	.113	1.17	-.132	.210	
	(LT12)						
	Chi-Square		352.6***			187.2***	
	d.f.		4			4	

\*significant at the .05 level  
 \*\*significant at the .01 level  
 \*\*\*significant at the .001 level

Table 5: Life Table Analysis of Home Ownership, Percent of Home Owned -  
Cumulative Probabilities  
GE 25%

<u>Age</u>	<u>Total</u>	<u>Race</u>		<u>Gender</u>		<u>Education</u>		
		<u>White</u>	<u>Nonwhite</u>	<u>Male</u>	<u>Female</u>	<u>GT12</u>	<u>12</u>	<u>LT12</u>
25	.192	.218	.098	.168	.216	.167	.243	.156
30	.370	.413	.206	.350	.387	.349	.430	.306
35	.587	.644	.361	.575	.597	.610	.608	.449
40	.743	.790	.557	.740	.746	.781	.747	.579
45	.819	.861	.641	.827	.815	.851	.826	.665
50	.870	.901	.700	.883	.862	.908	.871	.706

GE 50%

<u>Age</u>	<u>Total</u>	<u>Race</u>		<u>Gender</u>		<u>Education</u>		
		<u>White</u>	<u>Nonwhite</u>	<u>Male</u>	<u>Female</u>	<u>GT12</u>	<u>12</u>	<u>LT12</u>
25	.096	.108	.051	.090	.100	.069	.130	.156
30	.216	.239	.124	.196	.234	.170	.277	.306
35	.367	.396	.243	.335	.393	.322	.430	.449
40	.510	.545	.363	.476	.539	.487	.552	.579
45	.627	.663	.471	.598	.651	.625	.647	.665
50	.728	.796	.535	.702	.750	.748	.736	.706

GE 75%

<u>Age</u>	<u>Total</u>	<u>Race</u>		<u>Gender</u>		<u>Education</u>		
		<u>White</u>	<u>Nonwhite</u>	<u>Male</u>	<u>Female</u>	<u>GT12</u>	<u>12</u>	<u>LT12</u>
25	.051	.056	.033	.051	.051	.038	.065	.067
30	.126	.135	.087	.118	.133	.085	.162	.164
35	.221	.223	.165	.206	.234	.166	.278	.259
40	.322	.336	.258	.293	.346	.275	.368	.371
45	.431	.450	.341	.398	.457	.393	.479	.433
50	.521	.538	.438	.491	.544	.499	.552	.519

GE 100%

<u>Age</u>	<u>Total</u>	<u>Race</u>		<u>Gender</u>		<u>Education</u>		
		<u>White</u>	<u>Nonwhite</u>	<u>Male</u>	<u>Female</u>	<u>GT12</u>	<u>12</u>	<u>LT12</u>
25	.040	.046	.023	.040	.041	.028	.052	.058
30	.099	.104	.075	.101	.096	.067	.122	.152
35	.163	.170	.126	.161	.164	.119	.201	.221
40	.231	.238	.196	.226	.235	.178	.269	.329
45	.306	.318	.251	.302	.309	.259	.342	.385
50	.387	.401	.334	.378	.395	.348	.429	.416



## Homeownership Across the American Life Course

### Partial Likelihood Estimates of Race, Gender and Education on Percent of Home Owned - Unstandardized Slopes, Standard Errors, and Odds Ratios

<u>Covariate</u>	<u>Variable</u>	<u>GE 25%</u>			<u>GE 50%</u>		
		<u>B</u>	<u>S.E.</u>	<u>Odds</u>	<u>B</u>	<u>S.E.</u>	<u>Odds</u>
Race:	White	.810***	.044	2.25	.647***	.051	1.91
	(Nonwhite)						
Gender:	Male	-.065	.041	.94	-.149**	.047	.86
	(Female)						
Education	GE12	.355***	.061	1.43	.041	.071	1.04
:	(LT12)						
	12	.397***	.060	1.49	.282***	.068	1.33
	(LT12)						
	Chi-Square		434.7***			206.5***	
	d.f.		4			4	
<u>Covariate</u>	<u>Variable</u>	<u>GE 75%</u>			<u>100%</u>		
		<u>B</u>	<u>S.E.</u>	<u>Odds</u>	<u>B</u>	<u>S.E.</u>	<u>Odds</u>
Race:	White	.383***	.059	1.47	.261***	.026	1.30
	(Nonwhite)						
Gender:	Male	-.110	.056	.90	.013	.063	1.01
	(Female)						
Education	GE12	-.180*	.083	.84	-.300***	.093	.74
:	(LT12)						
	12	.150	.078	1.16	.079	.085	1.08
	(LT12)						
	Chi-Square		65.8***			39.0***	
	d.f.		4			4	