

Understanding Racial Inequality in Homeownership: A Dynamic Approach

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Homeownership is a keystone to wealth, important both as a determinant and an outcome of wealth inequality. The persistent gap in homeownership rates between whites and blacks attests to the enduring role of housing as a nexus of racial inequality. While a number of demographic and socioeconomic factors have been linked to homeownership, research demonstrates that racial differences in ownership rates persist even after accounting for life-cycle, resources, preferences and regional composition (Alba and Logan, 1992; Henretta, 1979; Horton, 1992; Jackman and Jackman, 1980; Krivo, 1982, 1986; Myers and Chung, 1996; Parcel, 1982). This analysis is interested in understanding *why* racial differences persist in the way they have in the past three decades and *how* they could be diminished. Specifically, how: 1) economic and societal change has effected homeownership overall and has effected some groups differentially, 2) the institution of homeownership has changed as a result of lower entry barriers, 3) the composition of groups has changed as a result of demographic and socioeconomic shifts.

Although many studies have tracked changes in homeownership rates using cross-sectional surveys, longitudinal data allows us the opportunity to study the dynamics of the process of transitioning in and out of homeownership and answer many questions about the occurrence and timing of these flows. Past research using longitudinal data has shown that compared to whites, black are less likely to ever become homeowners and if they do it's at older ages, with a higher risk of losing their homes and lower likelihood that they will buy any property beyond that first home (Charles and Hurst 2002, Bohem and Schlottman 2004, Dawkins 2005, Hughes 2005).

Building on the previous analyses, I model the likelihood of making various homeownership transitions. Using event history models I assess the effects of race and various other factors in the occurrence and timing of becoming an owner, buying subsequent homes and returning to renter status. An emphasis is placed on how these effects have changed over time and how they vary across cohorts. These estimates are then used in simulations to examine what accounts for the racial gap in aggregate homeownership levels and what changes might close this gap.

This project extends the previous research in important ways. Many studies on homeownership either focus on static characteristics of homeowners or the transition from renting to owning. This study is also interested in the likelihood of "slipping" back to renting after homeownership has been achieved as well as the process of buying other properties after the initial home purchase as these are also important components for understanding racial differences in homeownership and wealth. Also, this study looks at the transition into homeownership in a more nuanced way than previously considered. Rather than having the dependant variable be any move from renting to owning, I analyze the first move into ownership separately from all subsequent rent to own transitions. This approach acknowledges that the first transition is substantively different from subsequent

moves into ownership and I account for the tenure histories of household heads (in the years before they were heads) in order to more accurately track these transitions. Aside from conceptual innovation, I also make various improvements on estimation models used in previous research. I model homeownership transitions simultaneously using Heckman models to address the problems of unobserved heterogeneity found in previous studies.

This analysis makes use of data available from the Panel Study of Income Dynamics (PSID) which is a longitudinal study of a representative sample of U.S. individuals and their households. The first wave of the PSID in 1968 consisted of 3,000 interviews drawn from an equal probability sample of the continental US and 2,000 interviews of low-income households from the North and South. The PSID has since tracked members of its wave 1 (1968) families, including all those leaving to establish separate household units, with annual interviews (interviews after 1997 were biannual). To track transitions in and out of homeownership I utilize the residential mobility histories of household heads present in the PSID and changes in the tenure status of homes. Ownership transitions will be predicted using a number of socioeconomic characteristics of families including supplemental data on household wealth.

To account for the unobserved heterogeneity in traditional Cox hazard models, I estimate transitions with models developed by Heckman and Singer (1984). The hazard of making a transition is:

$$h(t) = \exp[\alpha + \beta X + \gamma_1 \frac{(t^\lambda - 1)}{\lambda_1} + \gamma_2 \frac{(t^\lambda - 1)}{\lambda_2} + f\theta]$$

where β is a vector of coefficients corresponding to the exogenous variables X . Duration dependence given estimated parameters γ_1 and γ_2 is captured by the terms $(t^\lambda - 1)/\lambda_1$ and $(t^\lambda - 1)/\lambda_2$. Unobserved variables are permitted to be functions of time where f is the estimated parameter on the unobserved heterogeneity component θ . This specification allows a general form for the hazard and a nonparametric estimator for heterogeneity (Heckman and Walker, 1990).

To expand on how this modeling strategy addresses my specific research questions, I discuss each transition model in turn and possible hypotheses:

Renting \rightarrow *1st time homeowner*

I hypothesize that black propensity to make the transition into the 1st home became more similar to whites as the economy improved and as mortgage lending products offering low or no downpayment requirements became available in the 1990s. Policies targeting low income households should benefit younger households and hence decrease the age gap in black and white owners.

Homeowner \rightarrow *Renting*

My analysis separates own to rent transitions which are temporary and short-term and focus on those which are the result of financial hardship. As another consequence of

mortgage lending reform, I hypothesize that blacks have become more likely to lose their homes than whites over time and this difference will be larger for younger cohorts than older ones. Findings from an earlier paper presented at PAA meetings in 2006 confirm this.

1st time Homeowner → 2nd time Homeowner

There are a number of possible reasons to expect a racial gap to be present in this transition: whites may experience greater economic mobility as their income grows more than blacks over time, whites may start with more equity than blacks due to the ability to provide larger downpayments, white equity may grow faster than black equity, white homes may appreciate more than black homes, and discrimination may be present in the process of finding or financing subsequent homes. I hypothesize that although housing policy has made homeownership more available to minority families, it has failed to help these families move up the ladder. Further, because the pool of minority homeowners is increasingly filled with those who were previously financially unable to purchase homes through conventional loans, the likelihood of this group moving up is worsened as the economic characteristics of owners declines. Thus, I expect that blacks will be less likely to move to higher order homes than whites both over time and across cohorts.

Once I have estimates of the effects of covariates on transition probabilities, I plan to simulate homeownership rates under various assumptions. These simulations will serve as an important extension of the current literature by illustrating how transitions in and out of ownership net out. One question is which contributes most to the black-white gap in homeownership rates: 1) differences in the age at which households first buy homes, 2) differences in the likelihood of buying homes, 3) differences in the likelihood of losing homes. The goal of the simulations would be to investigate how homeownership inequality would change if different points of the process were altered.

I plan to simulate homeownership rates assuming two different types of changes: 1) changes in the characteristics of the population of household heads and 2) changes in the institution of homeownership. Considering the effect of hypothetical changes in the characteristics of the population allows us to consider the extent to which racial differences in homeownership might diminish with the socioeconomic progress of blacks. Such a theory is put forth by Gabriel and Rosenthal (2004) who find that the increase in homeownership during the 1990s was driven largely by changes in the socio-economic status of the population rather than changes in mortgage finance. This implies that racial inequalities in homeownership may be affected more by changes in education and income inequality rather than attention to housing or mortgage discrimination. Considering the effect of changes in the institution of homeownership will allow me to explore possible outcomes for a number of hypothetical policy proposals. During the 1990s barriers to homeownership declined with the reform of mortgage lending practices which have largely targeted low-income first-time buyers. Simulations can allow me to explore the effects of further reforms which could for example, guard against home foreclosure or provide incentives for upgrading beyond the first home.

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