

# Tapped Out? Racial Disparities in Extra-Familial Resources and the Loss of Homeownership

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## Background

Racial inequalities in homeownership have been longstanding and persistent, yet the majority of Americans across all racial and ethnic groups aspire to own a home, even in the wake of the worst housing crisis in a century (McCabe 2018; Reid 2014). This positive outlook towards owning is unsurprising considering the many benefits conferred to homeowners, particularly with respect to wealth accumulation. There is, however, ample evidence that African Americans benefit less from ownership than similar whites, in terms of housing equity (Faber and Ellen 2016; Flippen 2004) and net worth (Herbert et al. 2014; Killewald and Bryan 2016). Further, blacks are more vulnerable to losing their homes and returning to renting than comparable white owners—a trend that coincided with the emergence of the subprime lending market that led to the housing bubble and collapse (Sharp and Hall 2014). These documented racially uneven patterns of homeownership exit, as well as the black disadvantage in financial returns of ownership, raise concerns regarding homeownership as a risky endeavor for minority households.

Extant research has documented that importance of personal wealth and extended families resources for facilitating homeownership, and for contributing to the low overall rates of homeownership among minority households (Charles and Hurst 2002; Hall and Crowder 2011). However, the role of these dynamics on sustaining homeownership is not well understood; nor is the extent that the lower wealth holdings of minorities' and their extended families may contribute to the high rates of ownership exit among minority homeowners. Describing these relationships, particularly in the face of economic shocks—e.g., job loss, income reductions, mortgage distress—is important for understanding the mechanisms of racial stratification in U.S. housing markets. Relevant research has found that blacks are more willing to completely deplete their household assets in times of economic hardship to stave off foreclosure or homeownership exit (Thomas 2013), while white households are typically more inclined to seek financial support from their extended-family network than their black counterparts (Sarkisian and Gerstel 2004). Other recent work suggests that African Americans do not experience the persistent wealth transfers across multiple generations in the same fashion as whites (Pfeffer and Killewald 2018).

In this study, we offer new evidence on the link between race, extended-family resources, and the risk of losing homeownership to renting over the last three decades. We use longitudinal data from the Panel Study of Income Dynamics (PSID), and the PSID's family identification mapping system (FIMS), to construct measures of extended-family resources and systematically assess their relative contributions to the racial gap in homeownership exit. Our results extend previous research on race and homeownership exit in at least three important ways. First, this is the first study of its kind to examine the role of extra-household family resources in shaping racial disparities in transitions from owning to renting. Second, we test the degree to which these economic resources help homeowners remain in their homes during times of economic crises differently for blacks and whites. And finally, we take advantage of multigenerational data to create more detailed extended-family profiles of PSID respondents than in past work.

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## Data and Methods

For this study, we rely on over three decades (1984-2015) of longitudinal household data from the Panel Study of Income Dynamics (PSID). The PSID originally sampled roughly 5,000 U.S. families in 1968 and members of panel households were interviewed annually until 1997, and biennially thereafter (PSID 2017). The PSID is an ideal source of data for this analysis because it provides detailed accounts of housing tenure histories, demographic, socioeconomic, and housing characteristics, as well as families' assets and net worth. The data are organized into person-interval cases with each observation representing the period between successive interviews—one-year intervals from 1985-1997 and two-year intervals from 1997-2015. We limit our sample to non-Hispanic black and non-Hispanic white respondents who were designated as the head of household at the beginning or at the end of the observation interval.<sup>4</sup> We further delimit the sample by focusing on householders younger than 65 (see Sharp and Hall 2014), as previous work has shown that the factors associated with transitions out of homeownership among elderly households are distinct from homeowners of pre-retirement age (Painter and Lee 2009). Our final analytic sample consists of 6,608 white and 2,937 black homeowners who contribute 45,932 and 15,174 person-intervals, respectively. We link members of PSID householders' extended families living outside the household via the family identification mapping system (FIMS), which includes respondents' parents, grandparents, children, grandchildren, siblings, aunts, uncles, nieces, nephews, cousins, and in-laws.

## Measures

In our analysis of *homeownership exit*, the dependent variable is a dummy variable indicating whether a householder transitioned from being a homeowner to a renter during the observation interval. *Household wealth* is a measure of the respondent's net worth (in 2015 dollars) and is the sum of: home equity (value minus debt); vehicle equity; checking, savings accounts; retirement and investment accounts; farms, businesses, and other real estate; wealth; other financial assets (bond funds, estate); and other debt (student loans, credit cards). For years in which the PSID did not collect wealth information, we use respondents' net worth dollars from the nearest preceding wave—1984 wealth is carried over to 1985-88; 1989 is used for 1990-93; and 1994 values are used for 1995-98. Starting in 1999, wealth components were collected for each successive survey wave. To create our measure of *extended-family wealth*, we append the year-specific net worth of each respondent's relatives and in-laws living outside the household, and we compute average household wealth across all extra-familial households.<sup>5</sup> We adjust for skewness in both wealth measures with an inverse hyperbolic sine (IHS) transformation, which can handle negative and zero values.<sup>6</sup> In addition to extended-family wealth, we include transfer measures that tap the amount of *financial help received* from relatives outside the household and the amount of *financial help provided* to relatives outside the household. These measures are also both in 2015 dollars and IHS-transformed.

A central objective of this study is to examine whether economic triggers impact the likelihood of exiting homeownership for renting differently for black and white owners, and whether extended-family resources modify or buffer the effects of these events in racially uneven ways. We include three economic trigger events: *job loss*, *income loss*, *becoming disabled*, and a fourth, *housing foreclosure*,

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<sup>4</sup> Reflecting the initial design of the 1968-sampled survey, members of other ethnoracial groups are not represented in sufficient numbers during this time period to support analysis.

<sup>5</sup> In addition to the average level of extended-family wealth, we ran supplemental models using the maximum amount of wealth across all extended-family members and found the results to be comparable to those using the average wealth.

<sup>6</sup> We tested alternative transformations of wealth, including the natural log of positive wealth with dummies for zero and negative values, categorical versions based on quartiles of positive wealth and a category for zero and negative values, as well as categorical versions with different percentile knots. Substantive results were similar across all wealth transformations and thus we employ IHS-transformed wealth for the sake of parsimony.

which is assigned during the years 2001-2015. Employed householders who became unemployed (i.e., no longer working or looking for work) by the end of the interval are coded 1, and 0 otherwise.<sup>7</sup> Income loss is a dichotomous indicator of whether a family's income fell by at least 10 percent during the interval. Lastly, a dummy variable is entered for respondents who developed a disability (coded as 1) during the observation period. Finally, the PSID started gathering information on household foreclosures in 2009 and ask respondents about their current and past experience with foreclosure as far back as 2001. Thus, we follow Hall and colleagues (2018) and code a foreclosure as 1 if the foreclosure process has commenced for the current home and assigned to the preceding person-intervals; for example, a foreclosure that started in 2004 is assigned to the 2003-2005 interval.

Several explanatory and control variables shown to influence homeownership exit are measured at the beginning of the observation interval. Non-Hispanic blacks are coded 1 and non-Hispanic whites are coded 0; age (measured in years); marital status (1=married or cohabiting); presence of children (1=yes); multi-family household (1=yes); employed (1=yes); family income (IHS-transformed; 2015 dollars); college graduate or higher (1=yes); disability status is a binary indicator of whether respondents have a physical or nervous condition that limits their capacity to work; number of persons per room; length of tenure (number of years in the current home); loan-to-value (LTV) ratio is underwater mortgage (1=LTVR>100; 0 otherwise); a dummy variable indicating whether the homeowner experienced a previous ownership exit (1=yes); dummies for the decade of homeownership entry (1970s and earlier, 1980s, 1990s, 2000s, 2010s); state fixed effects; and a dummy variable for survey years beginning in 1997 to account for the wider (two-year) observation intervals from 1997-2015.

### *Analytical Strategy*

To examine race, extended-family resources, and homeownership exit, we execute race-specific bivariate probit models, which are carried out in two stages—a selection model of homeownership and an outcome model of ownership exit (Heckman 1979). Not properly accounting for selection into homeownership may yield biased or inconsistent estimates. In the first-stage selection model, we estimate race-specific probit models of the likelihood of being a homeowner at the beginning of each person-interval based on a sample of all household heads (owners and renters) at the start of the interval. We input life-cycle demographic and socioeconomic characteristics as independent variables in the model, in addition to a control for prior homeownership. We then compute the inverse Mills' ratio (IMR), which is equivalent to the hazard rate of not owning a home, and enter it in our homeownership exit models to correct for biases introduced by performing analyses on a sample only comprised of black and white homeowners, respectively (see Sharp and Hall 2014).

Our second-stage probit model estimates the probability of transitioning from owning to renting within the one- or two-year observation interval. We run models separately for black and white homeowners to detect racial disparities in the effects of household economic trigger events and extended-family resources. To examine the influence of foreclosure on exit, we supplement our data for the 2001-2015 period and re-run our probit models with the addition of the housing foreclosure trigger. As our person-interval dataset violates the assumption of nonindependence, we report robust standard errors in our models. Note that additional analyses to be conducted, as well as the creation of additional extended-family measures, are detailed in the Ongoing Research section below.

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<sup>7</sup> To alleviate the risk of reverse causality, we use the PSID monthly employment information in conjunction with the timing of month of migration to only flag householders who lost their job before a presumed exit occurred during the interval.

## **Preliminary Results**

Table 1 presents descriptive statistics for the variables used in our analyses of black and white homeowners. As expected, we see that a larger proportion of black owners suffer an exit during the 30-year timeframe than their white counterparts. Focusing on our key independent variables, blacks and whites, on average, seem to experience economic trigger events at similar rates, but unsurprisingly, whites hold advantages in household net worth, extended-family wealth, and in receiving help from extra-household kin, but also provide more financial assistance to their extended families.

In Table 2, we show preliminary results from probit models predicting the likelihood of transitioning from owning to renting during the observation-interval separately for blacks and whites (significant differences [at  $p < .05$ ] in black and white coefficients are bolded). For both African-American and white owners, losing a job, a significant amount of income, or becoming disabled is associated with a higher probability of homeownership exit, net of covariates. There are, however, racial disparities in the effects of household wealth on exit, such that whites use their own wealth to sustain ownership, while own wealth holdings play no detectable role in mitigating the risk of exit for black owners. Extended-family resources exert little impacts on the probability of exit across race, with white homeowners' provision of help to relatives registering the lone significant effect.

Given the devastating impacts of the foreclosure on Americans' housing circumstances, we supplement our analysis with a test of housing foreclosure on the likelihood of losing one's home for renting during a period encompassing the housing crisis and Great Recession, 2001-2015. Table 3 shows that, consistent with other economic hardships, owning a home that is being foreclosed upon is a significantly strong predictor of homeownership exit. Similar to our full-sample analysis in Table 2, we do not detect significant racial differences in the effects of the full range of trigger events. In addition, the effects of own household wealth, extended-family wealth, and receiving or giving extra-familial help mirror those from Table 2.

## **Ongoing Research**

In the coming months, we will be conducting several analyses including the following:

1. Creating and testing additional extended-family measures hypothesized to influence homeownership exit, including 1) the proportion of respondent's extended-family network living in poverty (see Hall and Crowder 2011); 2) the average level of extended-family income; 3) weighting the strength of extended-family ties, such as providing greater influence to measures of immediate-family members (e.g., parents, children, siblings); and 4) a proximity-to-kin measure, which is the average distance to all extended-family members (see Spring et al. 2017).
2. This research is primarily concerned with the extent that extended-family resources buffer or modify the deleterious impacts of economic triggers, like foreclosure and job loss. Accordingly, we will run a series of models testing interactions between trigger events and extended-family resources. This part of our analysis will answer such questions as, "Do certain types of resources from outside the household help black owners stay in their homes in times of economic crisis, such as losing a job or becoming disabled?"
3. We also plan to present our results in a way that facilitate interpretation by converting probits to predicted probabilities and graphing differences between blacks and whites.

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**Table 1. Descriptive Statistics for Variables Used in Analyses of Homeownership Exit by Race: PSID, 1984-2015**

|   | Black Owners |         | White Owners |         |
|---|--------------|---------|--------------|---------|
|   | Mean         | S.D.    | Mean         | S.D.    |
| Homeownership exit (1=yes)                  | .09          |         | .05          |         |
| <i>Economic Trigger Events</i>              |              |         |              |         |
| Experienced job loss                        | .03          |         | .02          |         |
| Household income loss                       | .33          |         | .29          |         |
| Developed disability                        | .05          |         | .05          |         |
| Household wealth (1000s)                    | 91.63        | 170.66  | 270.76       | 394.78  |
| <i>Extended-family Resources</i>            |              |         |              |         |
| Extended-family wealth (1000s)              | 773.57       | 2393.46 | 2534.24      | 6966.80 |
| Help received from relatives                | 106.05       | 982.02  | 358.81       | 3157.23 |
| Support provided to relatives               | 523.64       | 2039.74 | 1025.12      | 5608.91 |
| <i>Individual/Household Characteristics</i> |              |         |              |         |
| Age   | 42.53        | 9.92    | 41.90        | 10.14   |
| Married or cohabiting (1=yes)               | .59          |         | .81          |         |
| Presence of children (1=yes)                | .64          |         | .56          |         |
| Multi-family household (1=yes)              | .16          |         | .06          |         |
| Employed (1=yes)                            | .84          |         | .93          |         |
| Family income (1000s)                       | 67.21        | 44.80   | 102.31       | 64.18   |
| College graduate (1=yes)                    | .13          |         | .34          |         |
| Disability status (1=yes)                   | .13          |         | .12          |         |
| Number of persons per room                  | .58          | .30     | .48          | .22     |
| Length of tenure (years)                    | 6.87         | 7.31    | 7.05         | 7.57    |
| LTV ratio > 1 (1=yes)                       | .05          |         | .03          |         |
| Prior homeownership exit (1=yes)            | .22          |         | .23          |         |
| N of person-intervals                       | 15,174       |         | 45,932       |         |

Note: Non-transition variables are measured at the beginning of the observation interval. Family income adjusted to 2015 dollars. Standard deviations reported for interval-ratio variables.

**Table 2. Probit Models of Homeownership Exit by Race: PSID, 1984-2015**

|   | <b>Black Owners</b> |                   | <b>White Owners</b> |                   |
|---|---------------------|-------------------|---------------------|-------------------|
|   | Coef.               | (S.E.)            | Coef.               | (S.E.)            |
| <i>Economic Trigger Events</i>                  |                     |                   |                     |                   |
| Experienced job loss                            | <b>.307</b>         | <b>(.075) ***</b> | <b>.521</b>         | <b>(.059) ***</b> |
| Household income loss                           | .341                | (.036) ***        | .338                | (.023) ***        |
| Developed disability                            | .216                | (.068) **         | .175                | (.046) ***        |
| Household wealth (IHS transformed)              | <b>.000</b>         | <b>(.003)</b>     | <b>-.014</b>        | <b>(.002) ***</b> |
| <i>Extended-family Resources</i>                |                     |                   |                     |                   |
| Extended-family wealth (IHS transformed)        | .003                | (.003)            | -.003               | (.003)            |
| Help received from relatives (IHS transformed)  | .008                | (.008)            | .007                | (.005)            |
| Support provided to relatives (IHS transformed) | .004                | (.005)            | .012                | (.004) ***        |
| Inverse Mills Ratio                             | <b>.292</b>         | <b>(.042) ***</b> | <b>-.002</b>        | <b>(.038)</b>     |
| N of person-intervals                           | 15,174              |                   | 45,932              |                   |

\*p < .05; \*\*p < .01; \*\*\*p < .001

Note: Models include all controls. Inverse Mills Ratio generated from separate selection models for whites and blacks.

**Table 3. Probit Models of Homeownership Exit Including Foreclosure by Race: PSID, 2001-2015**

|   | <b>Black Owners</b> |               | <b>White Owners</b> |                   |
|---|---------------------|---------------|---------------------|-------------------|
|   | Coef.               | (S.E.)        | Coef.               | (S.E.)            |
| <i>Economic Trigger Events</i>                  |                     |               |                     |                   |
| Experienced foreclosure                         | 1.030               | (.114) ***    | 1.138               | (.091) ***        |
| Experienced job loss                            | .278                | (.109) *      | .486                | (.093) ***        |
| Household income loss                           | .291                | (.056) ***    | .338                | (.040) ***        |
| Developed disability                            | .225                | (.108) *      | .131                | (.079)            |
| Household wealth (IHS transformed)              | <b>.007</b>         | <b>(.004)</b> | <b>-.012</b>        | <b>(.003) ***</b> |
| <i>Extended-family Resources</i>                |                     |               |                     |                   |
| Extended-family wealth (IHS transformed)        | .005                | (.004)        | .000                | (.004)            |
| Help received from relatives (IHS transformed)  | .015                | (.012)        | .012                | (.007)            |
| Support provided to relatives (IHS transformed) | .014                | (.008)        | .010                | (.006)            |
| Inverse Mills Ratio                             | .206                | (.070) **     | .050                | (.062)            |
| N of person-intervals                           | 4,920               |               | 14,566              |                   |

\*p < .05; \*\*p < .01; \*\*\*p < .001

Note: Models include all controls. Inverse Mills Ratio generated from separate selection models for whites and blacks.