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Influence of Proximity to Kin on Residential Mobility and Destination Choice: Examining Local Movers in Metropolitan Areas

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Abstract

A growing body of research has examined how family dynamics shape residential mobility, highlighting the social—as opposed to economic—drivers of mobility. However, few studies have examined kin ties as both push and pull factors in mobility processes or revealed how the influence of kin ties on mobility varies across sociodemographic groups. Using data on local residential moves from the Panel Study of Income Dynamics (PSID) from 1980 to 2013, we find that location of noncoresident kin influences the likelihood of moving out of the current neighborhood and the selection of a new destination neighborhood. Analyses of out-mobility reveal that parents and young adult children living near each other as well as low-income adult children living near parents are especially deterred from moving. Discrete-choice models of neighborhood selection indicate that movers are particularly drawn to neighborhoods close to aging parents, white and higher-income households tend to move close to parents and children, and lower-income households tend to move close to extended family. Our results highlight the social and economic trade-offs that households face when making residential mobility decisions, which have important implications for broader patterns of inequality in residential attainment.

Keywords

Residential mobility; Neighborhood; Family dynamics; Discrete choice

Introduction

The decision to move is often motivated by family-related considerations (Cooke 2008). Studies have documented the important role of the family life cycle in the timing and probability of moving (Clark 2013; Courgeau 1990; Rossi 1980). These studies showed that mobility is closely linked to family life events, such as marriage (Clark 2013; Mulder and

Wagner 1993), divorce (Cooke et al. 2016; Dewilde 2008; Mulder and Wagner 2010), and childbirth (Clark 2013; Clark et al. 2006). Additional research has focused on how geographical proximity of noncoresident kin—usually parents, adult children, and siblings—relates to social interaction and the exchange of care (Chan and Ermisch 2015; Greenwell and Bengtson 1997; Mulder and van der Meer 2009; Pettersson and Malmberg 2009). Collectively, this prior work demonstrates the centrality of family dynamics in residential decisions. More broadly, we know that individuals often move for generic family reasons (Long 1988) and that having many local kinship ties deters moving (Boyd 2008; Dawkins 2006; Kan 2007).

Yet, key aspects of the ways in which kin proximity factors into mobility decisions remain unclear. Much prior research is limited in terms of geographic scale, generalizability, and the ability to distinguish the mobility influences of different types of kin. Furthermore, no large-scale study has simultaneously considered family ties as both push and pull factors by identifying kin ties at residential origins and destinations. Perhaps most importantly, other than research on residential decision-making following major medical procedures (Choi et al. 2014), little research exists on how family ties interact with other individual- and family-level characteristics to influence mobility and destination choices.

In this study, we use data from the Panel Study of Income Dynamics (PSID) to examine how the geographic location of kin influences the likelihood of moving out of the current neighborhood and, among those who move, the choice of a new neighborhood. We investigate for whom kin matters most by exploring variations in the link between mobility and kin ties by age, race, and family income. More formally, our research tests the following arguments: (1) those living close to kin are the least likely to move out of their neighborhood; (2) individuals engaging in mobility are more likely to choose neighborhoods closer to kin than neighborhoods farther from kin; (3) proximity to kin can help explain relationships between mobility and other established mobility predictors; and (4) demographic and socioeconomic characteristics moderate the relationship between proximity to kin, out-mobility, and destination choice. Our findings are relevant for policies attempting to ameliorate the repercussions of residential mobility as well as those intended to reduce inequality and deconcentrate poverty through person-based interventions.

The Role of Kin in Mobility

According to Lee's (1966) classic argument, migration decisions are shaped by the balance of push factors at the place of origin, pull factors in potential destinations, and a set of intervening obstacles affecting the cost or feasibility of moving. Lee's straightforward yet comprehensive theory has been used to frame studies seeking to understand specific combinations of push and pull factors as well as intervening obstacles. Building on this framework, Long (1988) pointed to the great diversity of factors responsible for individual decisions to migrate, including factors economic in nature (such as employment and education) and noneconomic factors (such as proximity to family and friends).

Although Lee (1966) and Long (1988) both argued that a diversity of factors motivate moving, economic explanations have tended to dominate the study of migration and of

shorter-distance moves between neighborhoods, often referred to as "residential mobility."[1] For example, the *spatial assimilation model*—one framework for the study of residential mobility and so-called locational attainment—specifically argues that households seek to convert human capital (namely income, education, and occupational status) into residence in more affluent neighborhoods (Alba and Logan 1992, 1993; Charles 2003; Freeman 2000; Logan and Alba 1993, 1995). In contrast, the *place stratification model* of locational attainment posits that the ability of certain groups to translate human capital into neighborhood advantage may be impeded by racism and discrimination (Massey and Denton 1993; South and Crowder 1997, 1998). Thus, although they are typically conceived of as competing arguments, the spatial assimilation and place stratification perspectives share the common assumption that mobility decisions are rooted in an effort to translate household socioeconomic resources into neighborhood socioeconomic attributes.

The focus on socioeconomic predictors and outcomes adopted by these locational attainment perspectives likely provides an incomplete picture of residential mobility because noneconomic forces also motivate households to move and choose specific types of destinations (Clark and Ledwith 2006; Clark and Maas 2015; Cooke 2008; Permentier et al. 2009). Of the noneconomic drivers of mobility, kin ties may be among the most important. According to the American Housing Survey (2011), approximately one-quarter of respondents report reasons for moving that could be characterized as family-related. Lee's theory suggests that kin ties (or lack thereof) in origin neighborhoods influence decisions to stay or move; indeed, studies have shown that having many local kinship ties deters moving (Boyd 2008; Dawkins 2006; Kan 2007). At the same time, having kin located at a distance may serve as a pull factor that encourages a move. Prior research has shown that preferences for proximity to family can sometimes outweigh financial considerations when making residential mobility decisions (Dahl and Sorenson 2010).

Reasons why proximity to kin may weigh heavily on the decision to move and the choice of a destination include the desire for face-to-face contact with kin, the exchange of instrumental support (such as childcare or housework), and the sharing of resources. Kin ties may also affect mobility by shaping intervening obstacles. For example, kin may share information about neighborhoods and local residential opportunities either intentionally (e.g., by telling a family member about a home for sale on their block) or passively (e.g., by having family visitors to their home). In both instances, kin may serve as sources of information about potential locations that reduce the obstacles to moving.

Kinship ties could also influence mobility decisions by affecting residential satisfaction, an established determinant of moving (Speare 1974). Residential mobility could occur if a household is less satisfied with the current neighborhood of residence because it is far away from neighborhoods occupied by kin members, whereas neighborhoods closer to kin members may provide higher levels of satisfaction and could thus root individuals in place. Although the literature is not entirely consistent (Landale and Guest 1985), several studies have found that local social bonds affect residential mobility indirectly through residential

[1]Short-distance moves between neighborhoods within a metropolitan area constitute the majority (i.e., two-thirds) of all moves among residents of the United States (based on authors' calculations of data from the U.S. Census Bureau 2015).

satisfaction (Bach and Smith 1977; Oh 2003). Discrepant findings may be partly due to inconsistency in the way social bonds have been characterized and measured. Additionally, much of the previous work linking kin ties to residential satisfaction and/or residential mobility has focused on residents of a single city or state (Bach and Smith 1977; Boyd 2008; Landale and Guest 1985; Oh 2003; Speare 1974). Other studies have used more geographically dispersed samples but observed family ties and mobility for a very limited window of time (Dawkins 2006; Kan 2007).

The analysis presented in this article more fully incorporates kin ties into models of residential mobility by using more comprehensive data. We hypothesize that respondents who live in close geographic proximity to one or more kin members will be less likely to move, even after we adjust for demographic and socioeconomic predictors of moving. Among movers, we expect respondents to select destinations that are closer to kin, even after we account for other neighborhood characteristics that might influence the selection of a particular destination neighborhood. Furthermore, we posit that kin proximity may help explain prior findings by, for example, helping to explain why some households stay in, or move to, neighborhoods that do not necessarily maximize their socioeconomic attributes.

Variations by Age, Race, and Income

The influence of geographic proximity to kin on residential mobility is likely to be especially strong among certain types of individuals. In general, the role of kin in family life has been characterized as particularly important for unmarried persons (Sarkisian and Gerstel 2008), those with young children (Compton and Pollock 2014; Cooney and Uhlenberg 1992; Gallagher and Gerstel 2001), older adults (Choi et al. 2014; Clark and Wolf 1992; Silverstein 1995; Wilmoth 2010; Zhang et al. 2013), the less-educated (Rogerson et al. 1993), and those with fewer economic resources (McPherson et al. 2006). This research suggests that influences of kin location on residential mobility might vary minimally by age, race, and income.

Variations by age are suggested by the life cycle perspective, which views mobility as a response to needs generated by major life transitions, especially family transitions (Rossi 1980). These transitions fall in a somewhat predictable sequence that is largely driven by age, with rates of migration peaking in the young adult ages when family formation is most common, dropping off for individuals in their 30s and 40s, and remaining low for the remainder of the life course (Glick and Parke 1965; Rossi 1980; Schachter 2004). Distinct relations with kin also characterize each life stage. Adults in their 20s and early 30s are often reliant on kin, especially parents, for financial and practical support, particularly prior to first marriage (Sarkisian and Gerstel 2008). In later life, adult children and other kin are important sources of care for aging individuals, and geographic proximity facilitates the exchange of care (Joseph and Hallman 1998; Lin and Rogerson 1995; Litwak and Kulis 1987; Zhang et al. 2013). Based on these general patterns, we hypothesize that neighborhood out-mobility and destination choice will be more strongly linked to proximity to parents and extended kin during younger and older ages and will be more strongly linked to proximity to children during middle and very old ages.

The relationship between proximity to kin and residential mobility might also vary by race. A common narrative points to the abundance of family ties and reliance on extended kin in black families (e.g., Allen 1979; Hill 1999; Stack 1974; Staples 1981). Moreover, kin in black families may be more involved in instrumental support (such as help with transportation, household work, and childcare), whereas kin in white families may be more involved in financial and emotional support (Sarkisian and Gerstel 2004). Instrumental support is more contingent on geographic proximity than financial and emotional support (Sarkisian and Gerstel 2004). Following these arguments, we hypothesize that out-mobility and destination choice will be more strongly linked to kin proximity among black households compared with white households.

The desire to exchange support and share resources might also lead to variation in the kin-mobility link by householders' income. Lower-income households are more likely to make localized moves than their higher-income counterparts, likely reflecting differences in housing tenure and general stability (Ihrke and Faber 2012). In addition, low-income families often rely on instrumental support from local relatives to help them cope with day-to-day struggles (Briggs 1998). The need for frequent exchange of instrumental support may lead lower-income households to be especially tied to neighborhoods containing kin (Dawkins 2006). We therefore hypothesize that out-mobility and destination choice will be more weakly related to kin proximity as income increases.

Our study builds on previous research demonstrating a link between kin location and residential mobility (Boyd 2008; Dahl and Sorenson 2010; Dawkins 2006; Geist and McManus 2008; Kan 2007; Long 1988) but goes beyond previous studies in several important ways. First, we use a larger, more representative, and more geographically dispersed sample observed over a longer period than most of these prior studies. Our sample includes families of all types and ages dispersed across the metropolitan United States, and it includes those with and without kin living nearby. Second, our examination of variations in the influences of kin across sociodemographic characteristics provides important clues about the underlying motivations for these influences. Third, as described later, we use modeling techniques that allow us to account for the facts that the decision to move is conditional on the characteristics of potential destinations and that kin locations represent bundles of neighborhood features that households consider simultaneously in making mobility decisions (Bruch and Mare 2012). We are therefore better able than previous studies to evaluate the role of kin location in mobility decisions above and beyond other factors that might shape locational decisions.

Methods

Data and Sample

We use data from the PSID, a nationally representative longitudinal survey of U.S. residents and their families, for the years 1980–2013. Members of the initial 1968 panel of approximately 5,000 families (approximately 18,000 individuals) were interviewed annually until 1997 and biennially thereafter. New families have been added to the panel as children, and other members of original panel families form their own households.

We identify kin networks using the 1968 Family ID variable, whose values allow us to link members of an extended family. We also use the PSID supplemental Parent Identification file to identify the nature of each kin relationship. Starting with the initial parent/child relationship defined in the Parent Identification file, we infer additional relationships, including siblings, grandparents, grandchildren, aunts/uncles, nieces/nephews, and cousins.[2] Because of the sampling structure of the PSID, we typically have complete kin networks for only one partner in married-couple families—most often the spouse connected by birth or adoption to a PSID core family. In these cases, we use the kin network of the PSID core family member to represent the network for the household. Whether the network is that of the male or female spouse in married couple families is essentially random, but we nevertheless include a control for whether the kin network belongs to a male or female. Because the PSID kin networks are limited to kin who met the rules for follow-up by the PSID, our analysis does not depict individuals' or households' entire kin networks. Despite these limitations, our detailed data on kin relationships and kin's geographic location go beyond any measures contained in other large-scale studies of residential mobility. Furthermore, the omission of some kin is unlikely to be systematic in ways that would bias our results. Respondents with no PSID kin are retained in the sample; they represent 19.4 % of all person-periods. A control variable indicating whether the respondent has no PSID kin is included in all models.

We restrict the analysis to PSID household heads whose race and ethnicity is non-Latino black or white. The PSID contains too few Latino and Asian households during the period to produce precise estimates for these groups. We structure the data as a series of person-periods, each referring to the period, or migration interval, between successive interviews. *Mobility* is defined as a move to a different census tract from the beginning to the end of the migration interval.[3] Given our focus on short-distance moves, we select only those respondents who remained in the same metropolitan area over the interval. These restrictions result in a total sample size of 103,276 person-periods, of which 16,545 include a move to a new tract. The sample represents 13,897 unique respondents.

Measuring Proximity to Kin

We use the PSID supplemental Geospatial Match Files to link addresses of PSID respondents at each annual (or biennial) interview to corresponding codes for census tracts. Tract data come from the 1970–2010 U.S. decennial censuses and the 2006–2010 American Community Survey, with tract boundaries normalized to 2010 (GeoLytics 2014). We measure geographic proximity between a respondent and each identified kin by calculating the distance in miles from the centroid of the respondent's tract to the centroid of the tract occupied by their noncoresident kin at the beginning of the migration interval. We restrict our proximity measures to kin who maintain a separate household from the respondent, according to year-specific family identification variables, although the kin need not be a

[2]Kin networks include members related by blood, marriage, or adoption and include full siblings, half-siblings, and current stepsiblings. Analyses excluding adoptive and current stepparents and stepsiblings produce similar results. Grandparents and grandchildren also include great-grandparents and great-grandchildren. Our measures exclude ex-spouses and ex-step relationships, in-laws, and kin who are far removed.

[3]Moves to a new housing unit within the same census tract are not analyzed.

household head. This restriction helps ensure that our kin measures do not include members of the same household (i.e., parents and children, spouses, etc.) who are likely to make joint mobility decisions. We further restrict kin to those who lived in the same metropolitan area as the respondent and who did not move to a new tract during the period when the respondent may have moved. These restrictions help to ensure that we do not confound respondents' decisions to move closer to kin with kin's decisions to move closer to respondents. We identify 637,524 year-specific respondent-kin pairs, which averages to 6.2 identified kin per respondent in each person-period.

We measure kin proximity using two sets of binary indicators. The first set indicates whether one or more parents, children, or siblings/extended family members live within 1 mile of the respondent's origin tract (a similar set of variables is used to indicate proximity of potential destinations to nearby kin). A second set indicates whether one or more parents, children, or siblings/extended family members live more than 1 mile from the origin tract but still within the same metropolitan area. This contrast of indicators for nearby and more distant kin is consistent with the assumption that residing close to kin might deter mobility, while kin living in another part of the metropolitan area might induce mobility.

The assumption that this distinction between nearby and more distant kin is important is supported by analyses comparing the predictive value of alternative measures of kin proximity. Table 1 compares several alternative measures, including the *average* distance to kin and the distance to the geographically *closest* kin, using logistic models predicting out-mobility. Comparisons indicate that whereas the measures of average and closest distance to kin simply suggest a positive association between (average or closest) distance from kin and the odds of out-mobility, only the binary indicators distinguish between the mobility-inhibiting effects of nearby kin from the mobility-inducing effects of more distant kin. Moreover, unlike the closest- or average-distance measures, the dummy measures are nonmissing even for individuals with no identifiable kin in a particular category.

A second consideration in the measurement of kin proximity concerns potential variation in the effects on mobility of different types of kin. Table 1 shows that having parents living within 1 mile deters mobility more strongly than having other types of kin living this close (with an odds ratio of 0.43). The effects of other types of kin are weaker but still deterrent of mobility, and they are fairly similar to one another. Similarly, according to the measure “any at >1 mile,” having parents and children located farther away induces mobility most strongly (with odds ratios of 1.47 and 1.45, respectively), but the effects of proximity to siblings, grandparents/grandchildren, and other extended kin are generally similar. Accordingly, our measures distinguish the unique effects of proximity to parents and children, but siblings and extended kin (grandparents/grandchildren, aunts/uncles, nieces/nephews, and cousins) are grouped together.[4]

Finally, we consider several distance thresholds in constructing our measures of kin proximity. Table 2 compares various mileage thresholds derived from logistic models predicting out-mobility. Here the goal is to identify the mileage threshold under which

[4]Analyses in which siblings and extended kin are distinguished in separate measures produce substantively similar results.

individuals might avoid mobility to maintain proximity to kin, and above which people might move to be closer to kin. The basic associations in Table 2 indicate a tipping point at approximately 1 mile. The estimates of the bivariate association between "any kin within *x* miles" and out-mobility in Model 1 show that between 1 and 2 miles, parents and siblings/extended kin transition from deterring out-mobility to having no effect or inducing mobility. After adjusting for kin at farther distances (above the *x* threshold) in Model 2, we find that the biggest change in the odds ratios for "any kin within *x* miles" for each kin type occurs between 1 and 2 miles. These results provide some initial evidence of the potential salience of 1 mile as a meaningful distance threshold for measuring kin proximity.[5]

Analytical Strategy

We are interested in how proximity to kin influences the decision to move and the choice of a destination. Thus, we first estimate a logistic regression equation predicting the likelihood that a respondent will move out of the census tract of origin between successive PSID interviews. We are particularly interested in the association between proximity to kin and out-mobility over and above the effects of established predictors of moving. Therefore, we begin by specifying a baseline model that includes individual and tract characteristics, and we then add in our kin proximity measures. Individual-level variables include well-accepted predictors of mobility: age (squared), race, household type (married, single male, or single female), family income (logged),[6] number of children under 18 in the household,[7] homeownership, and whether the household head is employed. We incorporate a squared term for age to account for the well-documented nonlinearity in the propensity to move over the life course (Schachter 2004). We use multiple imputation to obtain values for variables with missing values.[8] We also include tract-level variables that might predict mobility: the number of households (logged), percentage black, mean housing values (logged), and percentage owner-occupied housing. Linear interpolation is used to estimate values for noncensus years. Logged transformations are utilized for variables that exhibit a right skew. To adjust for differential lengths of the migration intervals, we control for number of years since the previous interview. We also use a cubic term to control for the survey year in order to account for shifting trends in the propensity to move over the last several decades (Stoll 2013). All models incorporate clustered standard errors to adjust for multiple observations of the same individual over time.

We next use discrete-choice methods to analyze destination choice among movers. Discrete-choice models are useful tools for analyzing decisions, such as the choice of a destination neighborhood, where behavior is constrained by the available options across multiple dimensions (Bruch and Mare 2012; McFadden 1978). Discrete-choice models account for the fact that residential choices depend on the attractiveness of a neighborhood across

[5]Results of models using 2- and 3-mile thresholds show weaker but substantively similar results compared with those presented in our main analysis.

[6]All monetary variables are adjusted for inflation and standardized to year 2000 dollars. Family income includes total income for all family members from taxable income, transfer income, and Social Security income.

[7]We tested alternative measures differentiating numbers of children within specific age categories but found no substantive differences compared with the results using a simple count of all children under 18.

[8]Variables with missing values include family income (83 respondents with missing information), employment status (36), and homeownership (1). Following White et al. (2011), all covariates and outcomes from our analysis are included in the imputation model.

several dimensions—such as proximity to kin, housing prices, and sociodemographic composition—compared with the attractiveness of available alternatives (Bruch and Mare 2012).

Data for this step are structured as a series of person-period-tract alternatives. The set of tract alternatives (i.e., the choice set) represents a sample of tract choices to which the individual *might* have moved, including the tract that was ultimately chosen. Theoretically, the choice set would include every tract in the metropolitan area. However, because such a large choice set would be computationally prohibitive, we take a sample from the full set of choices. Drawing on notions of labeling and importance sampling (Frejinger and Bierlaire 2007; Guo and Loo 2013), we include in the sample the most theoretically important tracts—that is, those in close proximity to kin and the tract actually chosen—plus a 5 % random sample of remaining tracts in the metropolitan area.[9] We construct sampling weights to represent the differential probabilities of inclusion of each tract in the choice set.[10] Our analytical sample includes 769,712 person-period-tract alternatives, representing 16,545 person-periods and 7,570 unique persons.

We estimate discrete-choice models using a conditional logistic regression equation predicting the tract chosen at the end of the migration interval, given the set of available alternatives. We begin with a model that includes tract-level characteristics that may determine the likelihood of a tract to be the selected destination: number of housing units (logged), percentage black, mean housing value (logged), percentage owner-occupied housing units, and distance in miles from the respondent's origin tract. In the subsequent model, we add our measures of proximity to kin, measured as the presence of any parents, children, and siblings/extended kin within 1 mile of the destination tract. We then add interactions between kin proximity and the respondent's age, race, and income. Individual characteristics enter the interaction models only because individual characteristics are constant within the set of person-period-tract alternatives (unlike tract characteristics, which vary). All models incorporate the correction factor for sampling the choice set of tract alternatives as well as clustered standard errors to adjust for multiple observations of the same individual over time. A detailed description of discrete-choice methodology can be found in Bruch and Mare (2012) and Quillian (2015).

Results

Descriptive Statistics

Table 3 shows a description of our sample and key individual-level predictors. In 14.9 % of all person-period observations, the individuals in our sample live within 1 mile of a parent. Slightly fewer—10.8 %—live within 1 mile of a child, and 24 % live within 1 mile of a sibling or an extended family member. In our sample, 16 % of respondents are mobile (i.e., they move to a different census tract) during a typical migration interval. These numbers

[9]Tracts are restricted to those that have at least one housing unit given that tracts with zero units are not feasible as potential destinations.

[10]The probability of inclusion is equal to 1.0 for tracts that were ultimately chosen and tracts that have kin within one mile and 0.05 for the 5 % sample of other tracts. The probabilities enter the regression model as a constant, $-\ln(q_{ijt})$, where q_{ijt} is the probability that that the j^{th} tract is included in respondent i's choice set at time t.

vary in important ways by individual characteristics. For example, younger respondents (those under 30) are most likely to be mobile and are also most likely to live near parents and siblings/extended family. Interneighborhood mobility rates decline with age, as does the likelihood of living near parents and siblings/extended kin. Few young adults live near noncoresident children (in part because few of these individuals have noncoresident children), but by age 50, nearly one-quarter of respondents live close to at least one child.

Black respondents are nearly twice as mobile as white respondents, but they are also more likely to live close to all types of kin. Mobility declines with income: 21.7 % of respondents in the lowest-income quartile are mobile, compared with only 9.6 % of respondents in the highest-income quartile. Lower-income households are also more likely than high-income households to live in close geographic proximity to kin, especially parents and siblings/extended kin, and this likelihood steadily diminishes as income increases. Collectively, these statistics provide important insight into how current life stage, race, and socioeconomic position condition both mobility and geographic proximity to kin.

Kin Proximity and Neighborhood Out-Mobility

Table 4 presents odds ratios from logistic regression models predicting out-mobility from the origin tract. The results of Model 1 are generally consistent with previous research documenting important effects of socioeconomic, life cycle, and locational factors on residential mobility. The odds of out-mobility decline with age (tapering off at older ages) and are lower for those who are married, are employed, and own their home. Respondents are less likely to leave tracts that have higher percentages of black residents and more owner-occupied housing and are more likely to leave tracts with higher housing values. The polynomials for year indicates that, on average, the adjusted odds of mobility declined slightly in the early 1980s, increased rapidly until 2004, and then declined sharply from 2004–2010.

Results in Model 2 indicate that when these established mobility predictors are controlled for, kin location is an important noneconomic driver of mobility. The likelihood of leaving the origin tract is significantly lower for individuals who have kin in close proximity, suggesting that kin bind individuals to their current neighborhoods. Having a parent within 1 mile of the origin tract reduces the odds of out-mobility by 47 %, having at least one child in close proximity reduces the odds of out-mobility by 36 %, and having at least one sibling or extended family member nearby reduces the odds by 26 %. At the same time that having kin in close proximity deters mobility, having kin at farther distances encourages leaving the neighborhood. Having one or more children at distances greater than 1 mile (but still in the same metropolitan area) increases the odds of moving by 27 %. Having siblings or extended kin more than1 mile away increases the odds of moving by 13 %. However, although individuals already located near parents have lower odds of moving, having parents located at greater distances is not significantly associated with the likelihood of leaving the origin neighborhood.

Comparison of the odds ratios in Models 1 and 2 reveals slight suppression of the effects of several well-accepted predictors of mobility when proximity to kin is not accounted for. The magnitudes of the coefficients for single males and females increase after kin proximity is

included, revealing even greater odds of out-mobility for these two groups compared with married couples. According to Table 3, single males and females are more likely than married couples to live close to their parents and siblings/extended family; controlling for this difference reveals an even greater tendency for unmarried individuals to move. The effects of homeownership and employment status are also suppressed in Model 1 and are revealed as stronger deterrents of mobility after adjusting for kin proximity. This suppression is driven by the lower likelihood of living near parents and siblings/extended kin for owners and the employed compared with renters and the unemployed.

Proximity to kin also helps to explain why respondents are more likely to stay in neighborhoods with higher percentages of black residents and lower home values. More than 17 % of individuals in neighborhoods in the highest quartile of percentage black live near parents, and almost one-third live near siblings or extended family, more than in neighborhoods with lower percentages of black residents. Of respondents in tracts in the lowest quartile of home values (with average values under $66,416), 18 % live near parents, and 32% live near siblings or extended family, twice as many as respondents in the highest quartile tracts (with average home values more than $153,932). These results suggest that proximity to kin is one important factor that binds individuals to predominantly black neighborhoods (South and Crowder 1998) and neighborhoods with lower socioeconomic status (Crowder and South 2005). Overall, our results suggest that research failing to incorporate kin location may have slightly over- or underestimated relationships between mobility and several demographic and life cycle factors.

As we suggest earlier, the influence of proximity to kin on neighborhood out-mobility might vary by age, race, and income. Model 3 of Table 4 introduces interactions between age and proximity to kin to test whether individuals are more tied to kin locations during certain life stages. Figure 1 shows the predicted odds of moving by age (and income).[11] In the graphs, the more the two lines diverge from parallel, the stronger the interaction between the two variables. Our theoretical arguments focus on relationships between parents and children, suggesting that parents are most tied to the location of children during middle age, when their children are young adults, and during old age. We find some support for this hypothesis. Figure 1 shows that the odds that parents leave neighborhoods near their children is significantly lower during middle and older ages (but not younger ages) than the odds for those who do not have children nearby. However, we do not detect a corollary effect tying young adult children to locations of their middle-aged or elderly parents; rather, the bonds linking children to the location of their parents, although strong, do not seem to vary significantly over the life course. A significant effect of having older parents nearby may be difficult to observe because so few middle-aged children live close to aging parents (see Table 3).

Figure 1 also shows that the relationship between neighborhood out-mobility and proximity to siblings and extended family declines sharply with age. Individuals are least likely to move away from siblings and extended family networks when they are young adults. We

[11]For a description of the methods for including interactions in nonlinear models, see Long (2006), Xu and Long (2005), and Buis (2010).

find essentially no difference in out-mobility for individuals with and without siblings or extended family nearby after age 45. This finding is consistent with arguments that young adults are especially reliant on support from extended family that is afforded by geographic proximity (Bengtson 2001; King and Elder 1997; Silverstein et al. 1998).

Model 4 of Table 4 tests the hypothesis that blacks' residential mobility is more responsive than whites' mobility to the location of kin. The results of Model 4 do not support this claim. Instead, they show that blacks and whites are equally bound to origin neighborhoods that have parents, siblings, or extended kin in close proximity, and that blacks are somewhat *more* likely than whites to leave tracts inhabited by children. It is difficult to reconcile a lack of moderating effects by race with arguments of the greater role of kin in black versus white households. One possibility is that these arguments are more relevant to differences across income groups than to differences across racial groups. The results of our final set of interactions support this claim with respect to proximity to parents and are presented in Model 5 and graphed in Fig. 1. At lower levels of income, those living near parents are especially unlikely to move, presumably because they rely more heavily on kin for instrumental support. Our finding of significant results only for parents is consistent with the notion that parents are the most important source of support (especially financial support) for adult children. Furthermore, this evidence supports the idea that adult children rely more on the support afforded by proximity to their parents than do parents rely on proximity to their adult children (Michielin et al. 2008).

Kin Proximity and Destination Choice

If a lack of local kin ties can push households from their origin neighborhoods, does the proximity of kin to potential destination neighborhoods pull households into these areas? To answer this question, we turn to our analysis of mobility destinations. Table 5 presents descriptive statistics for movers' origin tracts, chosen tracts, and nonchosen tracts. We find that in general, a similar percentage of movers live close to kin in their origin tracts and destination tracts. However, chosen destinations are much more likely to be close to kin than the set of nonchosen tracts. As evidence of upward mobility, chosen destinations also tend to have higher average housing values and more owner-occupied units than origin tracts, but nonchosen tracts tend to be even more affluent. This evidence seems to suggest that mobile householders balance choosing an economically advantaged new neighborhood with choosing a neighborhood that is geographically close to kin.

Table 6 presents results of the conditional logit model predicting destination tract choice among movers. Model 1 indicates that movers are more likely to choose tracts that have more housing units, larger percentages of black residents, lower housing values, and more owner-occupied housing. These findings are generally consistent with a supply-and-demand perspective: movers are more likely to choose neighborhoods that have a large supply of affordable homes in affordable areas. They are also more likely to choose tracts close to their origin tract than more distant locations.

Model 2 adds the measures of kin location and finds support for the hypothesis that independent of the other neighborhood characteristics, a tract's proximity to kin increases the likelihood that it will be selected as the destination. The strongest draw is proximity to

parents; above and beyond other tract characteristics, the odds that a particular tract is chosen are 5.8 times greater if a parent is located within 1 mile of the tract. Having children, siblings, and extended kin in close proximity more than doubles the odds of selection. Perhaps most importantly, our results suggest that proximity to kin may potentially draw movers to neighborhoods that are slightly lower value and more racially segregated. Comparing Models 1 and 2, we find that the odds ratio for tract housing values and percentage black are both somewhat attenuated (moving closer to 1.0) when kin proximity is controlled. After kin proximity is accounted for, respondents are slightly more likely to choose higher-value neighborhoods and slightly less likely to choose predominantly black neighborhoods. This finding suggests that proximity to kin explains, in small part, the tendency for some households to choose neighborhoods that do not maximize traditional indicators of residential attainment.

Proximity to kin influences the destination choices of movers, but does such proximity weigh more heavily on individuals of various ages, races, or incomes? Model 3 and Fig. 2 show age variation in the relationship between proximity to kin and the odds of selecting a destination tract. We find that although individuals are always more likely to select tracts that have parents in close proximity, they are especially likely to do so at younger and older ages. The probability of selecting a parent-proximate tract declines sharply from age 20 to 40, and then begins to increase, especially after age 50. We interpret this as evidence of adult children moving to be closer to aging parents, possibly to provide support and facilitate the exchange of care. We do not find a statistically significant corollary effect indicating that as they age, older adults are increasingly likely to select tracts close to children.

Model 4 of Table 6 allows the effect of proximity to kin to differ between blacks and whites so as to test the long-standing assumption that kin location is especially important for black families. Our findings contradict this assumption; in comparison with white movers, black movers are less responsive than white movers to whether a neighborhood has parents or children in close proximity. Although the reason for this unexpected result is unclear, additional analysis reveals that black kin networks are dispersed across fewer neighborhoods than whites, reflecting the more extreme geographic clustering of black populations. This clustering results in less variation in tracts' proximity to kin for black movers than for whites, which could make it more difficult to observe a large effect size for blacks.

Model 5 tests for interactions between income and proximity to kin, with the predicted odds graphed in Fig. 2. We had hypothesized that lower-income households would be more likely than higher-income households to move close to kin because lower-income households are more reliant on kin for economic and social support. Our results for proximity to parents and children, however, fail to support this hypothesis. Higher-income households are equally likely (or possibly even *more* likely) as lower-income households to choose tracts that have parents or children in close proximity. These findings suggest that households do not move toward parents or children because they need financial help. These variations are especially telling in combination with the observed income variations in the effects of kin proximity on out-mobility. Lower-income households are less likely than higher-income households to move away from their parents, but they may not have the resources to move toward them. In contrast, households with lower incomes are more likely to select tracts that have siblings or

extended kin in close proximity. This finding is more consistent with our original hypothesis and arguments that reliance on extended kin increases as income declines.

Discussion

Although it is often argued that decisions to move are constrained or facilitated by family considerations (e.g., Cooke 2008), how the geographic location of family members affects residential mobility is not well understood. This study draws on more than 30 years of longitudinal data from the PSID to track the residential mobility of households and the corresponding locations of their noncoresident kin. We highlight the extent to which kin location influences residential mobility, including moving from an origin neighborhood and the choice of a destination. Our findings show that local kin ties serve as rooting forces that bind individuals to their current neighborhood. Even after a number of mobility-related factors are controlled for, the presence of kin nearby tends to depress neighborhood out-mobility. Correspondingly, having kin networks farther away increases the likelihood of leaving the origin neighborhood. Moreover, discrete-choice models show that movers are more likely to choose destination neighborhoods close to kin than other plausible neighborhood alternatives.

Parent-child location dynamics tend to be particularly salient determinants of residential mobility decisions. Having parents nearby reduces the odds of leaving a neighborhood by almost one-half, and having children nearby reduces the odds by one-third. Adult children who move are also more likely to choose tracts that have parents nearby over other tracts. The influence of proximity to kin on interneighborhood mobility varies by age. Middle-aged parents are very unlikely to move away from adult children, and adult children over the age of 50 are more likely to choose neighborhoods that are close to aging parents. Although the influence of the extended family is growing (Bengtson 2001), this finding suggests that a unique and intensive support relationship remains between parents and adult children (Silverstein and Bengtson 1997).

There are also key differences between disadvantaged and advantaged groups in exposure to geographically proximate kin, as well as differences in the influence of kin proximity on residential mobility and neighborhood selection. We find that residents of disadvantaged neighborhoods live closer to kin than those in more advantaged neighborhoods. And because living close to kin reduces the likelihood of moving, residents of poor and minority-concentrated neighborhoods may be unlikely to leave these locations in order to maintain geographic proximity to kin networks. Relative to higher-income households, lower-income households are also less likely to move from an origin tract that is close to parents. When it comes to neighborhood choices among movers, however, whites tend to move to neighborhoods that are closer to kin than do blacks. In other words, distance to kin roots socioeconomically disadvantaged households in place, but the ability to move toward kin members is facilitated by advantaged racial position.

This study confirms that kin location is an important driver of residential mobility and neighborhood choice that must be situated among such other factors as SES, housing considerations, employment, and homeownership in research on residential mobility and

attainment. We are not the first to call for a fuller incorporation of kin into research on residential mobility (Mulder 2007). Rather, our study complements previous work by confirming the importance of kin location in mobility decisions using data that are more representative and have a larger geographic scale than the data used in prior studies. Our study is also the first to go beyond studying neighborhood out-mobility to consider the role of kin in the destination choice of movers. Discrete-choice models show that the location of kin weighs heavily in the choice of a destination, even after accounting for other forces that shape movers' neighborhood selection.

Consideration of kin dynamics will be especially important for refining and adjudicating between some of the most dominant theories of residential mobility and migration. The spatial assimilation perspective, for instance, focuses on the economic components of mobility and neighborhood choice, arguing that households convert human capital resources into residence in more affluent neighborhoods. Although socioeconomic resources are salient predictors of mobility and residential attainment, our findings also point to the importance of noneconomic forces, such as kin proximity. Our findings do fit with a broad interpretation of spatial assimilation theory in that some households use human capital (namely, higher income) to “attain” residence in neighborhoods that are closer to kin. We could view the movement toward kin as an opportunity that more-advantaged households are better able than less-advantaged household to realize.

Kin location is likely important because it changes the calculus of what is considered a desirable neighborhood. Living close to kin may improve neighborhood satisfaction by providing resources and support and by strengthening social and psychological bonds to the neighborhood (Bach and Smith 1977; Landale and Guest 1985; Speare 1974). Our findings —and especially the variations by age, race, and income—are most consistent with the resources and support argument, although we cannot rule out other explanations. We find unique relationships between kin proximity and mobility during particularly support-demanding stages in the life course. Exchange of support may also help to explain why lower-income households are less likely to move away from parents than are higher-income households.

Our findings also suggest that there may be trade-offs between living close to kin and accessing neighborhoods with desirable amenities, especially for disadvantaged groups. Living close to family members keeps individuals rooted in their neighborhoods, and this is especially true for those from lower-income households. It may be difficult for lower-income households to leave their neighborhoods—even poor neighborhoods—if moving involves severing instrumental support from kin. Among those who move from their origin neighborhood, neighborhoods that are closer to kin are especially attractive options, even net of other neighborhood characteristics. Some households may choose neighborhoods that are more racially isolated or more socioeconomically disadvantaged than they would otherwise move to in order to be close to kin.

Given these findings, our study may have implications for policies attempting to address broad patterns of spatial inequality through person-based interventions. Under the current system, housing subsidies provided for individual households often necessitate a separation

from their noncoresident kin if they are to maximize the socioeconomic characteristics of their destination neighborhoods. For many low-income households, geographic separation from kin may entail substantial social and economic costs. In fact, the costs associated with moving far from kin is one explanation for the negligible improvements in access to jobs and educational opportunities among Moving to Opportunity voucher recipients (Briggs et al. 2010). Moreover, because moving to a higher-SES neighborhood frequently means losing a key source of kin support, these housing policies may unintentionally contribute to increased social isolation of poor households. Rather than requiring a spatial dislocation between individuals and kin in order to realize greater improvements in neighborhood outcomes, current programs might profit from better understanding, and potentially harnessing, the influence of kin on interneighborhood residential mobility.

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References

Alba RD, Logan JR. Analyzing locational attainments: constructing individual-level regression models using aggregate data. Social Methods Research. 1992; 20:367–397.

Alba RD, Logan JR. Minority proximity to whites in suburbs: An individual-level analysis of segregation. American Journal of Sociology. 1993; 98:1388–1427.

Allen WR. Class, culture, and family organization: The effects of class and race on family structure in urban America. Journal of Comparative Family Studies. 1979; 10:301–313.

American Housing Survey. Public use file (version 1.1). Washington, DC: U.S. Department of Housing and Urban Development; 2011.

Bach RL, Smith J. Community satisfaction, expectations of moving, and migration. Demography. 1977; 14:147–167. [PubMed: 870348]

Bengston VL. Beyond the nuclear family: The increasing importance of multigenerational bonds. Journal of Marriage and Family. 2001; 63:1–16.

Boyd ML. The role of social networks in making housing choices: The experience of the Gautreaux Two Residential Mobility Program. Cityscape: A Journal of Policy Development and Research. 2008; 10:41–63.

Briggs, XdS. Brown kids in white suburbs: Housing mobility and the many faces of social capital. Housing Policy Debate. 1998; 9:177–221.

Briggs, XdS, Popkin, SJ., Goering, J. Moving to opportunity: The story of an American experiment to fight ghetto poverty. New York, NY: Oxford University Press; 2010.

Bruch EE, Mare RD. Methodological issues in the analysis of residential preferences, residential mobility, and neighborhood change. Sociological Methodology. 2012; 42:103–154. [PubMed: 23476098]

Buis ML. Stata tip 87: Interpretation of interactions in nonlinear models. Stata Journal. 2010; 10:305–308.

Chan TW, Ermisch J. Proximity of couples to parents: Influences of gender, labor market, and family. Demography. 2015; 52:379–399. [PubMed: 25794526]

Charles CZ. The dynamics of racial residential segregation. Annual Review of Sociology. 2003; 29:167–207.

Choi H, Schoeni RF, Langa KM, Heisler MM. Older adults' residential proximity to their children: Changes after cardiovascular events. Journals of Gerontology, Series B: Psychological Sciences and Social Sciences. 2014; 70:995–1004.

Clark, R., Wolf, D. Proximity of children and elderly migration. In: Rogers, A., editor. Elderly migration and population redistribution: A comparative perspective. London, UK: Belhaven Press; 1992. p. 77-96.

Clark WAV. Life course events and residential change: Unpacking age effects on the probability of moving. Journal of Population Research. 2013; 30:319–334.

Clark WAV, Deurloo M, Dieleman F. Residential mobility and neighbourhood outcomes. Housing Studies. 2006; 21:323–342.

Clark WAV, Ledwith V. Mobility, housing stress, and neighborhood contexts: evidence from Los Angeles. Environment and Planning A. 2006; 38:1077–1093.

Clark WA, Maas R. Interpreting migration through the prism of reasons for moves. Population, Space and Place. 2015; 21:54–67.

Cooke TJ. Migration in a family way. Population, Space and Place. 2008; 14:255–265.

Cooke TJ, Mulder C, Thomas M. Union dissolution and migration. Demographic Research. 2016; 34(article 26):741–760. DOI: 10.4054/DemRes.2016.34.26

Compton J, Pollak RA. Family proximity, childcare, and women's labor force attachment. Journal of Urban Economics. 2014; 79:72–90.

Cooney TM, Uhlenberg P. Support from parents over the life course: The adult child's perspective. Social Forces. 1992; 71:63–84.

Courgeau, D. Migration, family, and career: A life course approach. In: Baltes, P.Featherman, D., Lerner, R., editors. Life-span development and behaviour. Vol. 10. Hillsdale, NJ: Lawrence Erlbaum Associates; 1990. p. 219-256.

Crowder K, South SJ. Race, class, and changing migration patterns between poor and nonpoor neighborhoods. American Journal of Sociology. 2005; 110:1715–1763.

Dahl MS, Sorenson O. The social attachment to place. Social Forces. 2010; 89:633–658.

Dawkins CJ. Are social networks the ties that bind families to neighborhoods? Housing Studies. 2006; 21:867–881.

Dewilde C. Divorce and the housing movements of owner-occupiers: A European comparison. Housing Studies. 2008; 23:809–832.

Freeman L. Minority housing segregation: A test of three perspectives. Journal of Urban Affairs. 2000; 22:15–35.

Frejinger, E., Bierlaire, M. Sampling of alternatives for route choice modeling. Lusanne, Switzerland: Ecole Polytechnique Fédérale de Lausanne; 2007. (Report TRANSP-OR 071121)

Gallagher S, Gerstel N. Connections and constraints: The effects of children on caregiving. Journal of Marriage and Family. 2001; 63:265–275.

Geist C, McManus PA. Geographical mobility over the life course: Motivations and implications. Population, Space and Place. 2008; 14:283–202.

GeoLytics. CensusCD Neighborhood Change Database 1970–2010 Tract Data. 2014. Retrieved from http://www.geolytics.com/USCensus Neighborhood-Change-Database-1970-2000,Data,Features,Products.asp

Glick PC, Parke R. New approaches in studying the life-cycle of the family. Demography. 1965; 2:187–202.

Greenwell L, Bengtson B. Geographic distance and contact between middle-aged children and their parents: The effects of social class over 20 years. Journal of Gerontology, Series B: Social Sciences. 1997; 52B:S13–S26.

Guo Z, Loo BPY. Pedestrian environment and route choice: Evidence from New York City and Hong Kong. Journal of Transport Geography. 2013; 28:124–136.

Hill, RB. The strengths of black families: Twenty-five years later. Lanham, MD: University Press of America; 1999.

Ihrke, DK., Faber, CS. Geographical mobility: 2005 to 2010. Washington, DC: U.S. Census Bureau; 2012. (Current Population Reports P20-567)

Joseph AE, Hallman BC. Over the hill and far away: Distance as a barrier to the provision of assistance to elderly relatives. Social Science & Medicine. 1998; 46:631–640. [PubMed: 9522424]

Kan K. Residential mobility and social capital. Journal of Urban Economics. 2007; 61:436–457.

King V, Elder GH Jr. The legacy of grandparenting: Childhood experiences with grandparents and current involvement with grandchildren. Journal of Marriage and the Family. 1997; 59:848–859.

Landale NS, Guest AM. Constraints, satisfaction and residential mobility: Speare's model reconsidered. Demography. 1985; 22:199–222. [PubMed: 3996689]

Lee ES. A theory of migration. Demography. 1966; 3:47–57.

Lin G, Rogerson PA. Elderly parents and the geographic availability of their adult children. Research on Aging. 1995; 17:303–331.

Litwak E, Kulis S. Technology, proximity, and measures of kin support. Journal of Marriage and the Family. 1987; 49:649–661.

Logan JR, Alba RD. Locational returns to human capital: minority access to suburban community resources. Demography. 1993; 30:243–268. [PubMed: 8500639]

Logan JR, Alba RD. Who lives in affluent suburbs? Racial differences in eleven metropolitan regions. Sociological Focus. 1995; 28:353–364.

Long, JS. Group comparisons and other issues in interpreting models for categorical outcomes using Stata. Paper presented at the 5th North American Users Group Meeting; Boston, MA. 2006 Jul.

Long, L. Migration and residential mobility in the United States. New York, NY: Russell Safe Foundation; 1988.

Massey, DS., Denton, NA. American apartheid: Segregation and the making of the underclass. Cambridge, MA: Harvard University Press; 1993.

McFadden D. Modeling the choice of residential location. Spatial Interaction Theory and Planning Models. 1978; 25:75–96.

McPherson M, Smith-Lovin L, Brashears ME. Social isolation in America: Changes in core discussion networks over two decades. American Sociological Review. 2006; 71:353–375.

Michielin F, Mulder C, Zorlu A. Distance to parents and geographical mobility. Population, Space, and Place. 2008; 14:327–345.

Mulder C, van der Meer M. Geographical distances and support from family members. Population, Place and Space. 2009; 15:381–399.

Mulder CH. The family context and residential choice: A challenge for new research. Population, Space, and Place. 2007; 13:265–278.

Mulder CH, Wagner M. Migration and marriage in the life course: A method for studying synchronized events. European Journal of Population. 1993; 9:55–76. [PubMed: 12344903]

Mulder CH, Wagner M. Union dissolution and mobility: Who moves from the family home after separation? Journal of Marriage and Family. 2010; 72:1263–1273.

Oh JH. Social bonds and the migration intentions of elderly urban residents: The mediating effect of residential satisfaction. Population Research and Policy Review. 2003; 22:127–146.

Panel Study of Income Dynamics (PSID). Restricted use dataset. Ann Arbor: Institute for Social Research Survey Research Center, University of Michigan; 2013.

Permentier M, Van Ham M, Bolt G. Neighbourhood reputation and the intention to leave the neighbourhood. Environment and Planning A. 2009; 41:2162–2180.

Pettersson A, Malmberg G. Adult children and elderly parents as mobility attractions in Sweden. Population, Space, and Place. 2009; 15:343–357.

Quillian L. A comparison of traditional and discrete-choice approaches to the analysis of residential mobility and locational attainment. Annals of the American Academy of Political and Social Science. 2015; 660:240–260.

Rogerson PA, Weng RH, Lin G. The spatial separation of parents and their adult children. Annals of the Association of American Geographers. 1993; 83:656–671.

Rossi, PH. Why families move. Beverly Hills, CA: Sage Publications; 1980.

Sarkisian N, Gerstel N. Kin support among blacks and whites: Race and family organization. American Sociological Review. 2004; 69:812–837.

Sarkisian N, Gerstel N. Till marriage do us part: Adult children's relationships with their parents. Journal of Marriage and Family. 2008; 70:360–376.

Schachter, JP. Geographical mobility: 2002–2003. 2004. Retrieved from https://www.census.gov/prod/2004pubs/p20-549.pdf

Silverstein M. Stability and change in temporal distance between the elderly and their children. Demography. 1995; 32:29–45. [PubMed: 7774729]

Silverstein M, Bengtson VL. Intergenerational solidarity and the structure of adult child-parent relationships in American families. American Journal of Sociology. 1997; 103:429–460.

Silverstein, M., Giarrusso, R., Bengtson, VL. Intergenerational solidarity and the grandparent role. In: Szinovacz, M., editor. Handbook on grandparenthood. Westport, CT: Greenwood Press; 1998. p. 144-158.

South SJ, Crowder KD. Residential mobility between cities and suburbs: Race, suburbanization, and back-to-the-city moves. Demography. 1997; 34:525–538. [PubMed: 9545629]

South SJ, Crowder KD. Leaving the 'hood: Residential mobility between black, white, and integrated neighborhoods. American Sociological Review. 1998; 63:17–26.

Speare AJ. Residential satisfaction as an intervening variable in residential mobility. Demography. 1974; 11:173–188. [PubMed: 21274806]

Stack, CB. All our kin: Strategies for survival in a black community. New York, NY: Harper & Row; 1974.

Staples, R. The myth of the black matriarchy. In: Steady, FC., editor. The black woman cross-culturally. Cambridge, MA: Schenkmann; 1981. p. 335-348.

Stoll, MA. Residential mobility in the U.S. and the Great Recession: A shift to local moves. 2013. (US 2010 Report). Retrieved from http://www.s4.brown.edu/us2010/Data/Report/report09232013.pdf

U.S. Census Bureau. Geographic mobility: 2013 to 2014: Table 16 Metropolitan mobility, by sex, age, race and Hispanic origin, relationship to householder, educational attainment, marital status, nativity, tenure, and poverty status: 2013 to 2014. 2015. Retrieved from http://www.census.gov/data/tables/2014/demo/geographic-mobility/cps-2014.html

White IR, Royston P, Wood AM. Multiple imputation using chained equations: Issues and guidance for practice. Statistics in Medicine. 2011; 30:377–399. [PubMed: 21225900]

Wilmoth JJ. Health trajectories among older movers. Journal of Aging and Health. 2010; 22:862–881. [PubMed: 20710006]

Xu J, Long JS. Confidence intervals for predicted outcomes in regression models for categorical outcomes. Stata Journal. 2005; 5:537–559.

Zhang Y, Engelman M, Agree EM. Moving considerations: A longitudinal analysis of parent-child residential proximity for older Americans. Research on Aging. 2013; 35:663–687.

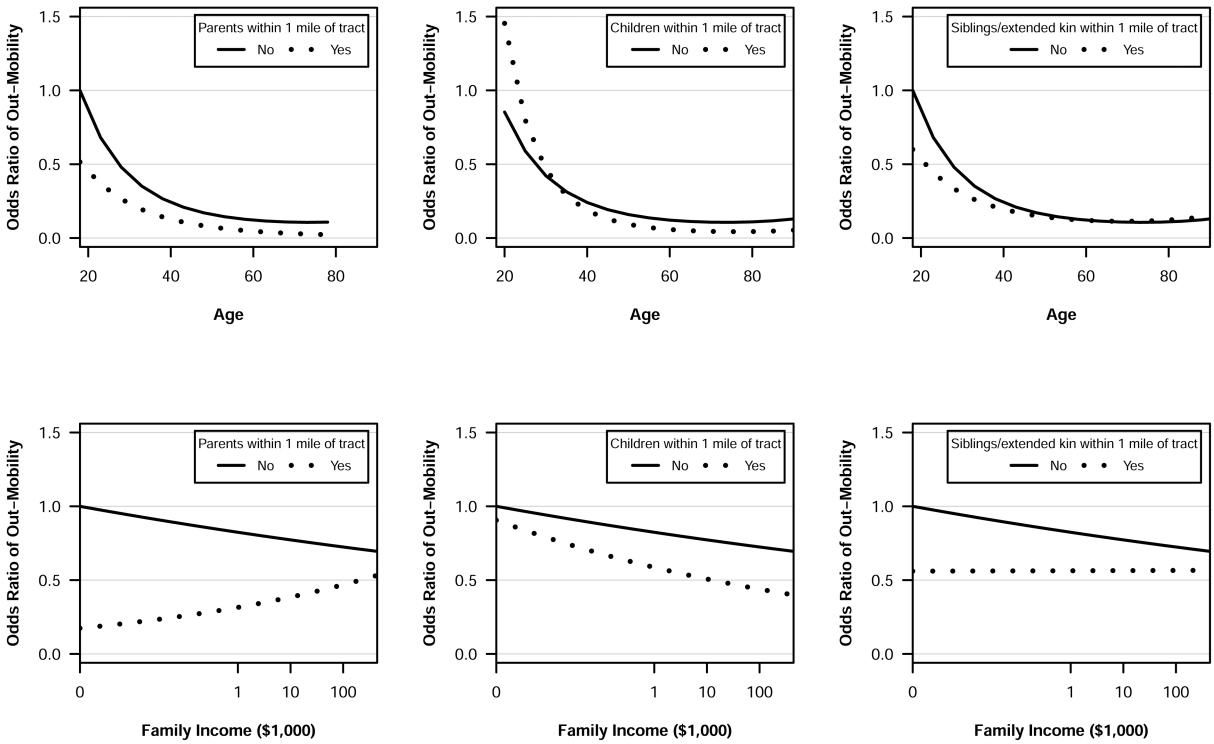

Fig. 1.

Odds of out-mobility by age, income, and proximity to kin. Graphs for age are based on coefficients from Table 4, Model 3. Depicted odds are in reference to a baseline of 18 years and no kin of that type within 1 mile. Graphs for family income are based on coefficients from Table 4, Model 5. Depicted odds are in reference to a baseline of zero income and no kin of that type within 1 mile. Family income is standardized to year 2000 dollars

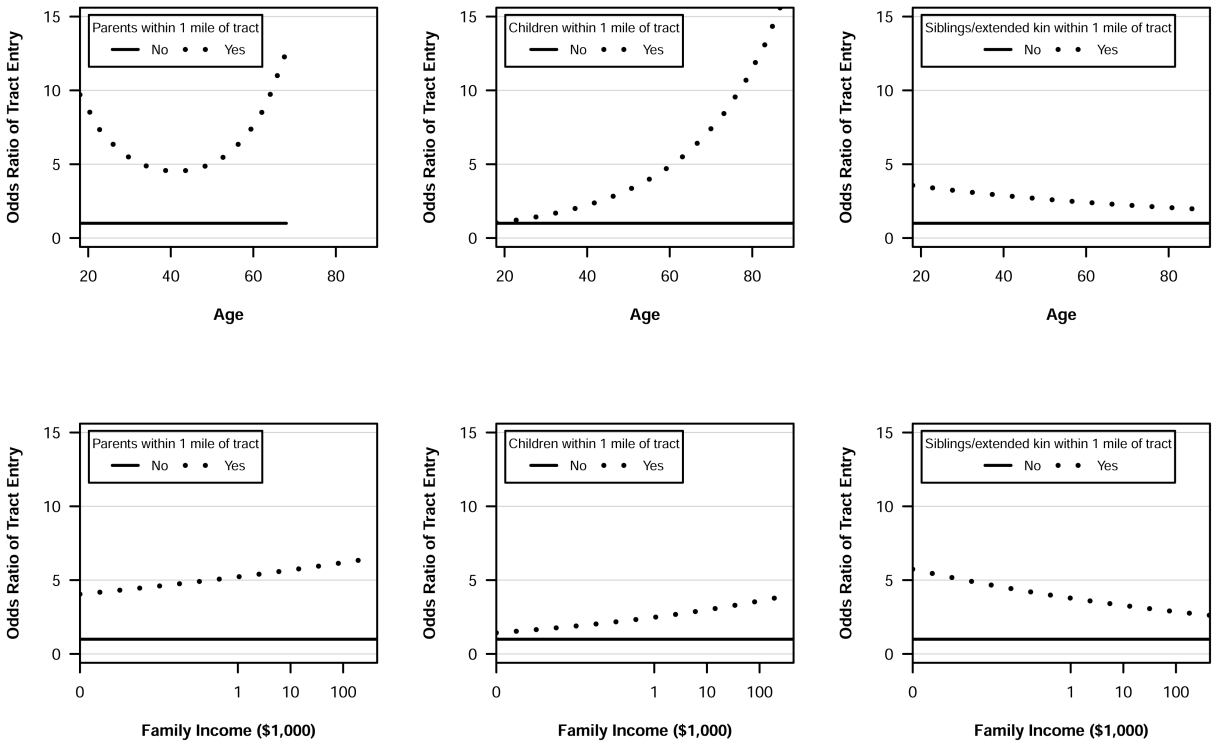

Fig. 2.

Odds of destination tract choice among movers by age, income, and proximity to kin. Graphs for age are based on coefficients from Table 6, Model 3. Depicted odds are in reference to a baseline of 18 years and no kin of that type within 1 mile. Graphs for family income are based on coefficients from Table 6, Model 6. Depicted odds are in reference to a baseline of zero income and no kin of that type within 1 mile. Family income is standardized to year 2000 dollars

Table 1

Comparison of kin proximity measures predicting residential mobility

Measure	Kin Type	Mean	SD	Median	Odds Ratios Predicting Out-Mobility From Origin Tract in Logit Model[a]	*N* of Nonmissing Person-Periods
Any Within 1 Mile						
	Nuclear	0.31	0.46	0	0.649***	103,276
	Parents	0.15	0.36	0	0.917**	103,276
	Children	0.11	0.31	0	0.279***	103,276
	Siblings	0.16	0.36	0	0.986***	103,276
	Extended	0.19	0.39	0	0.722***	103,276
	Grandparents	0.01	0.12	0	1.324***	103,276
	Grandchildren	0.07	0.25	0	0.272***	103,276
	Aunts/uncles/nieces/nephews/cousins	0.12	0.32	0	1.029	103,276
	Siblings + extended	0.24	0.43	0	0.809***	103,276
	Nuclear + extended	0.32	0.47	0	0.712***	103,276
Any at >1 Mile						
	Nuclear	0.58	0.49	1	1.671***	103,276
	Parents	0.27	0.45	0	2.013***	103,276
	Children	0.18	0.38	0	0.599***	103,276
	Siblings	0.36	0.48	0	1.934***	103,276
	Extended	0.44	0.50	0	1.570***	103,276
	Grandparents	0.04	0.20	0	3.076***	103,276
	Grandchildren	0.12	0.33	0	0.486***	103,276
	Aunts/uncles/nieces/nephews/cousins	0.32	0.47	0	2.039***	103,276
	Siblings + extended	0.52	0.50	1	1.880***	103,276
	Nuclear + extended	0.62	0.49	1	2.000***	103,276
Closest Distance in Miles						
	Nuclear	4.92	8.27	1.92	1.011***	75,982
	Parents	5.90	9.16	2.77	1.008***	43,224

Measure	Kin Type	Mean	SD	Median	Odds Ratios Predicting Out-Mobility From Origin Tract in Logit Model[a]	*N* of Nonmissing Person-Periods
	Children	4.76	8.34	1.70	1.017***	25,367
	Siblings	5.80	8.57	2.70	1.001	45,851
	Extended	5.75	8.53	2.62	1.006***	55,736
	Grandparents	6.89	9.58	4.00	1.011*	5,669
	Grandchildren	4.94	7.75	1.99	1.018***	17,160
	Aunts/uncles/nieces/nephews/cousins	6.30	8.99	2.31	1.001	39,112
	Siblings + extended	5.29	8.09	2.31	1.003*	65,532
	Nuclear + extended	4.73	8.06	1.76	1.008***	78,592
Average Distance in Miles						
	Nuclear	6.65	8.78	4.01	1.007***	75,982
	Parents	6.01	9.17	2.89	1.008***	43,224
	Children	6.10	8.67	3.52	1.011**	25,367
	Siblings	7.34	8.87	4.60	0.998	45,851
	Extended	7.52	9.01	4.71	1.007***	55,736
	Grandparents	6.97	9.63	4.02	1.011**	5,669
	Grandchildren	6.25	8.11	3.63	1.014***	17,160
	Aunts/uncles/nieces/nephews/cousins	8.12	9.40	5.16	1.002	39,112
	Siblings + extended	7.35	8.72	4.67	1.005**	65,532
	Nuclear + extended	7.00	8.81	4.40	1.008***	78,592

[a]Standard errors (not reported) are clustered by persons. Coefficients reflect bivariate associations; control variables are not included.

*$p < .05$;

**$p < 01$;

***$p < .001$

Table 2

Comparison of kin proximity measures by varying distance thresholds (N = 103,276 person-periods)

		Mean		Model 1: Odds Ratios Predicting Out-Mobility From Origin Tract in Logit Model, Single Proximity Indicator[a]	Model 2: Odds Ratios Predicting Out-Mobility From Origin Tract In Logit Model, Both Proximity Indicators[a]	
Kin Type	***x***	**Any Kin Within *x* Miles**	**Any Kin at More Than *x* Miles**	**Any Kin Within *x* Miles**	**Any Kin Within *x* Miles**	**Any Kin at More Than *x* Miles**
Parents						
	0	0.13	0.29	0.830***	1.073*	2.087***
	1	0.15	0.27	0.917**	1.171***	2.075***
	2	0.18	0.24	1.094**	1.361***	2.040***
	3	0.22	0.21	1.214***	1.470***	2.008***
	4	0.24	0.18	1.295***	1.536***	1.982***
	5	0.27	0.16	1.365***	1.588***	1.957***
	10	0.34	0.09	1.541***	1.680***	1.884***
	20	0.39	0.03	1.688***	1.734***	1.744***
	Metro	0.42	--	1.749***	1.749***	—
Children						
	0	0.10	0.19	0.248***	0.268***	0.672***
	1	0.11	0.18	0.279***	0.301***	0.675***
	2	0.13	0.16	0.336***	0.361***	0.677***
	3	0.15	0.14	0.383***	0.409***	0.668***
	4	0.16	0.13	0.395***	0.419***	0.677***
	5	0.17	0.12	0.416***	0.440***	0.665***
	10	0.21	0.07	0.463***	0.479***	0.636***
	20	0.23	0.02	0.481***	0.488***	0.560***
	Metro	0.25	—	0.221***	0.482***	—
Siblings +Extended						

Kin Type	x	Mean: Any Kin Within x Miles	Mean: Any Kin at More Than x Miles	Model 1: Odds Ratios Predicting Out-Mobility From Origin Tract in Logit Model, Single Proximity Indicator[a]: Any Kin Within x Miles	Model 2: Odds Ratios Predicting Out-Mobility From Origin Tract In Logit Model, Both Proximity Indicators[a]: Any Kin Within x Miles	Model 2: Odds Ratios Predicting Out-Mobility From Origin Tract In Logit Model, Both Proximity Indicators[a]: Any Kin at More Than x Miles
	0	0.21	0.54	0.708***	0.703***	1.916***
	1	0.24	0.52	0.809***	0.800***	1.885***
	2	0.30	0.48	0.999	0.987	1.754***
	2	0.35	0.44	1.093***	1.084**	1.645***
	3	0.39	0.41	1.163***	1.158***	1.565***
	5	0.43	0.37	1.233***	1.233***	1.519***
	10	0.53	0.23	1.418***	1.420***	1.350***
	20	0.60	0.09	1.582***	1.583***	1.194***
	Metro	0.63	—	1.618***	1.618***	—

[a]Standard errors (not reported) are clustered by persons. Other control variables are not included.

*$p < .05$;

**$p < 01$;

***$p < .001$

Table 3

Descriptive statistics for individual characteristics, by proximity to kin and mobility: Panel Study of Income Dynamics, 1980–2013

	% in Close Proximity to Kin[a] by Kin Type				
	Parents	**Children**	**Siblings and Extended Kin**	**% Mobile**	***N* (person-periods)**
Total	14.93	10.76	24.03	16.02	103,276
Age					
Under 30	30.71	0.53	34.56	31.85	20,754
30–39	21.61	1.63	25.21	18.31	27,014
40–49	12.24	9.49	18.95	12.24	19,635
50–59	4.84	24.44	21.57	8.32	14,095
60–69	1.05	30.82	23.78	6.12	10,710
70 or older	0.07	17.68	13.81	6.84	11,068
Race					
Non-Latino black	17.54	11.69	31.22	20.49	44,583
Non-Latino white	12.94	10.06	18.56	12.62	58,693
Family Income					
1st quartile (≤ $17,100)	18.79	12.81	31.78	21.69	25,833
2nd quartile ($17,100–$35,400)	17.63	12.13	28.84	18.91	25,839
3rd quartile ($35,400–$60,750)	14.40	9.80	21.79	13.87	25,725
4th quartile (≥ $60,750)	8.91	8.33	13.75	9.59	25,796
Household Type					
Married couple	12.56	10.64	21.23	11.38	55,376
Single male	26.25	5.82	30.80	25.48	14,371
Single female	13.99	13.08	25.75	19.62	33,520
Number of Children in Household					
0	12.53	15.32	23.19	14.92	54,689
1–2	17.76	6.13	24.83	16.83	36,884
3 or more	17.19	4.08	25.43	18.62	11,703
Employment Status of Head					
Employed	16.86	7.62	23.32	16.38	70,794
Not employed	10.69	17.61	25.57	15.23	32,446

	% in Close Proximity to Kin[a] by Kin Type				
	Parents	**Children**	**Siblings and Extended Kin**	**% Mobile**	***N* (person-periods)**
Homeownership					
Owner	9.83	13.16	20.15	6.26	57,743
Renter	21.38	7.73	28.95	28.40	45,532

Notes: Family income is standardized to year 2000 dollars. Values represent nonmissing observations.

[a]One or more kin within 1 mile of origin tract.

Table 4

Logit models of out-mobility from origin tract

	Model 1		Model 2		Model 3		Model 4		Model 5	
	OR	**SE**	**OR**	**SE**	**OR**	**SE**	**OR**	**SE**	**OR**	**SE**
Individual Characteristics										
Age	0.932***	0.003	0.926***	0.003	.922***	0.003	0.926***	0.003	0.927***	0.003
Age^2	1.001***	0.00004	1.001***	0.00004	1.001***	0.00005	1.001***	0.00004	1.001***	0.00004
Black (ref. = white)	1.052	0.039	1.032	0.038	1.032	0.038	1.000	0.039	1.031	0.038
Family income (log)	1.019	0.010	1.000	0.009	1.000	0.009	1.000	0.009	0.972*	0.011
Household type (ref. = married)										
Single male	1.230***	0.044	1.312***	0.049	1.305***	0.049	1.311***	0.049	1.311***	0.049
Single female	1.104**	0.034	1.176***	0.044	1.179***	0.044	1.178***	0.044	1.173***	0.044
Number of children in household	1.010	0.010	0.999	0.010	0.999	0.010	1.000	0.010	0.998	0.010
Head is employed (1 = yes)	0.920**	0.027	0.900***	0.026	0.898***	0.026	0.900***	0.026	0.897***	0.026
Own home (1 = yes)	0.244***	0.007	0.234***	0.007	0.234***	0.007	0.233***	0.007	0.236***	0.007
Number of years since previous interview	1.384***	0.077	1.410***	0.079	1.412***	0.079	1.411***	0.079	1.414***	0.080
Origin Tract Characteristics										
Number of housing units (log)	1.006	0.022	0.994	0.022	0.993	0.022	0.993	0.022	0.994	0.022
% black	0.999**	0.0005	1.000	0.0005	1.000	0.0005	1.000	0.0005	1.000	0.0005
Mean housing value (log)	1.022**	0.008	1.013	0.008	1.013	0.008	1.012	0.008	1.013	0.008
% owner-occupied	0.996***	0.001	0.998***	0.001	0.998***	0.001	0.998***	0.001	0.998***	0.001
Year	0.822***	0.033	0.848***	0.034	0.848***	0.034	0.847***	0.034	0.849***	0.034
Year^2	1.010***	0.002	1.009***	0.002	1.009***	0.002	1.009***	0.002	1.009***	0.002
Year^3	1.000***	0.00002	1.000***	0.00002	1.000***	0.00002	1.000***	0.00002	1.000***	0.00002
Proximity to Kin From Origin Tract										
Parents within 1 mile (1 = yes)			0.530***	0.021	0.515***	0.049	0.500***	0.028	0.174***	0.040
Children within 1 mile (1 = yes)			0.644***	0.034	1.876*	0.479	0.560***	0.045	0.906*	0.265
Siblings/extended family within 1 mile (1 =yes)			0.741***	0.023	0.600***	0.044	0.718***	0.035	0.561**	0.104

	Model 1		Model 2		Model 3		Model 4		Model 5	
	OR	**SE**	**OR**	**SE**	**OR**	**SE**	**OR**	**SE**	**OR**	**SE**
Parents at 1+ miles (1 = yes)			1.036	0.030	1.032	0.030	1.032	0.030	1.044	0.030
Children at 1+ miles (1 = yes)			1.271***	0.051	1.287***	0.052	1.268***	0.050	1.273***	0.051
Siblings/extended kin at 1+ miles (1 = yes)			1.132***	0.031	1.125***	0.031	1.130***	0.031	1.132***	0.031
Respondent has no kin (1 = yes)			0.936	0.045	0.928	0.045	0.932	0.045	0.937	0.045
Kin network of male (1 = yes)			1.058	0.038	1.065	0.038	1.059	0.038	1.064	0.038
Interactions Between Individual										
Characteristics and Proximity to Kin										
Age × Parents within 1 mile					1.011	0.012				
Age^2 × Parents within 1 mile					1.000	0.0003				
Age × Children within 1 mile					0.952**	0.014				
Age^2 × Children within 1 mile					1.000	0.0002				
Age × Siblings/extended kin within 1 mile					1.016*	0.007				
Age^2 × Siblings/extended kin within 1 mile					1.000	0.0001				
Black × Parents within 1 mile							1.105	0.077		
Black × Children within 1 mile							1.265*	0.128		
Black × Siblings/extended family within 1 mile							1.045	0.065		
Family income (log) × Parents within 1 mile									1.121***	0.026
Family income (log) × Children within 1 mile									0.966	0.028
Family income (log) × Siblings/extended kin within 1 mile					1.495				1.029	0.019
Constant	1.139	0.446	1.416	0.555	1.495	0.587	1.478	0.579	1.828	0.724
Number of Person-Years		103,276		103,276		103,276		103,276		103,276
Number of Persons		13,897		13,897		13,897		13,897		13,897

Notes: Standard errors are clustered by persons. Age is centered at 18 years.

* $p < .05$;

** $p < 01$;

*** $p < .001$

Table 5

Descriptive statistics of origin, chosen, and nonchosen tracts among movers in the Panel Study of Income Dynamics, 1980–2013

	Tract Type		
	Origin Tracts	**Chosen Tracts**	**Nonchosen Tracts**
Proximity to Kin (%)			
Parents within 1 mile	14.02	13.53	4.00
Children within 1 mile	3.70	3.35	1.31
Siblings/extended kin within 1 mile	20.91	19.69	10.57
Tract Characteristics (means)			
Housing units	1,709	1,708	1,473
% black	37.00	35.49	21.69
Housing value ($)	124,205	130,912	195,404
% owner-occupied	56.73	58.91	60.70
Distance in miles from origin	0	6.51	19.69
N (person-period-tract alternatives)	16,545	16,545	753,167

Note: Housing values are standardized to year 2000 dollars.

Table 6

Conditional logit models of destination choice among movers

	Model 1		Model 2		Model 3		Model 4		Model 5	
	OR	**SE**	**OR**	**SE**	**OR**	**SE**	**OR**	**SE**	**OR**	**SE**
Destination Tract Attributes										
Number of housing units (log)	2.471***	(0.075)	2.319***	(0.066)	2.316***	(0.066)	2.317***	(0.066)	2.320***	(0.066)
% black	1.017***	(0.0004)	1.013***	(0.0004)	1.013***	(0.0004)	1.013***	(0.0004)	1.013***	(0.0004)
Mean housing value (log)	0.939***	(0.010)	0.950***	(0.010)	0.950***	(0.010)	0.950***	(0.010)	0.950***	(0.010)
% owner-occupied	1.006***	(0.001)	1.006***	(0.001)	1.006***	(0.001)	1.006***	(0.001)	1.006***	(0.001)
Distance in miles from origin	0.774***	(0.003)	0.802***	(0.003)	0.802***	(0.003)	0.803***	(0.003)	.803***	(0.003)
Proximity to Kin From Destination Tract										
Parents within 1 mile (1 = yes)			5.776***	(0.278)	9.705***	(1.245)	7.511***	(0.571)	4.050***	(1.088)
Children within 1 mile (1 = yes)			3.096***	(0.259)	1.033	(0.388)	4.404***	(0.580)	1.433	(0.682)
Siblings/extended kin within 1 mile (1 = yes)			3.204***	(0.134)	3.565***	(0.357)	2.896***	(0.211)	5.740***	(1.021)
Interactions of Individual Attributes and Proximity to Kin										
Age × Parents within 1 mile					0.936***	(0.015)				
Age^2 × Parents within 1 mile					1.001**	(0.0005)				
Age × Children within 1 mile					1.033	(0.024)				
Age^2 × Children within 1 mile					1.000	(0.0003)				
Age × Siblings/extended kin within 1 mile					0.990	(0.010)				
Age^2 × Siblings/extended kin within 1 mile					1.000	(0.0002)				
Black × Parents within 1 mile							0.647***	(0.062)		
Black × Children within 1 mile							0.570**	(0.095)		
Black × Siblings/extended family within 1 mile							1.181	(0.103)		
Family income (log) × Parents within 1 mile									1.037	(0.028)
Family income (log) × Children within 1 mile									1.083	(0.052)
Family income (log) × Siblings/extended family within 1 mile									0.941**	(0.017)
N of Person-Year-Tract Alternatives	769,712		769,712		769,712		769,712		769,712	

	Model 1		Model 2		Model 3		Model 4		Model 5	
	OR	**SE**	**OR**	**SE**	**OR**	**SE**	**OR**	**SE**	**OR**	**SE**
N of Person-Years	16,545		16,545		16,545		16,545		16,545	
N of Persons	7,570		7,570		7,570		7,570		7,570	

Notes: Standard errors are clustered by persons. Models include the offset term, −ln(q_{ijt}), for sampling the choice set. Age is centered at 18 years.

* $p < .05$;

** $p < 01$;

*** $p < .001$