FLEEING FROM THE FOREIGNER?
NEIGHBORHOOD IMMIGRATION AND NATIVE OUT-MIGRATION

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Abstract

This study combines data from the Panel Study of Income Dynamics with data from four censuses to examine the effects of foreign-born populations in the immediate neighborhood of residence and surrounding neighborhoods on the residential mobility decisions of native-born black and white householders. We find that the likelihood of out-mobility for native householders is significantly and positively associated with the relative size of, and increase in, the immigrant population in the neighborhood. Large concentrations of immigrants in surrounding areas reduce native out-mobility, presumably by reducing the attractiveness of the most likely mobility destinations. A sizable share of these effects can be explained by the mobility-related characteristics of native-born individuals living in immigrant populated areas, but the racial composition of the neighborhood and local housing market conditions also appear to be important mediating factors. Native-born householders moving from areas with low concentrations of immigrants tend to move to areas with similar immigrant concentrations but those leaving areas with larger concentrations of immigrants tend to move to neighborhoods that substantially reduce their exposure to foreign-born neighbors. The implications of these patterns for processes of neighborhood change and broader patterns of residential segregation are discussed.

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The increasing diversity of metropolitan populations and declining levels of segregation between many racial and ethnic groups has spurred considerable hope for increased residential equity in the U.S. (c.f., Glaeser and Vigdor 2003; Iceland 2009). Continued high rates of immigration have helped to dramatically increase levels of diversity in most metropolitan areas and many of their neighborhoods (Fong and Shibuya 2005; Logan 2003; Singer 2009), and this has been accompanied by increases in intergroup exposure and declines in multigroup segregation (Timberlake and Iceland 2007). Even average levels of segregation between blacks and whites – historically the most stubborn form of residential segregation (Massey and Denton 1993) – have declined substantially in recent decades (Iceland, Weinberg, and Steinmetz 2002; Logan, Stults, and Farley 2004). Indeed, levels of black-white segregation in many of the fastest-growing metropolitan areas of the country have now dropped into the "low" or "moderate" range in Massey and Denton's (1993) oft-used categorization (Iceland 2009; Logan, Stults, and Farley 2004).

Yet amid these signs of progress toward racial integration are indications of persistent segregation of some groups and the emergence of new forms of residential inequality. Especially troubling is the fact that residential separation of both Latinos and Asians from the non-Latino white majority has remained virtually unchanged or, according to some measures, increased since 1980 (Logan 2001; Iceland 2009). In fact, Timberlake and Iceland (2007) predict that Hispanics will soon overtake blacks as the most segregated group relative to whites and note that the level of neighborhood socioeconomic inequality experienced by Hispanics is converging towards that experienced by blacks.

To a certain extent, the increasing racial isolation of Asians and Latinos likely represents a piling up of immigrants, the majority of whom can be classified as Latino or Asian, in established co-ethnic neighborhoods. Segregation levels for foreign-born Asians and Hispanics – the two largest and most amorphous groups of immigrants – remains higher than the segregation experienced by their US-born counterparts (Iceland and Nelson 2008; Iceland and Scopilliti 2008) so that the continual inflow of new immigrants tends to bolster overall segregation levels for Latinos and Asians (Iceland 2009). However, the reaction of native-born residents and their decisions to remain in diversifying neighborhoods or flee in the face of growing immigrant concentrations are just as crucial in determining the trajectory of residential integration. With 1.25 million migrants entering the country annually (U.S. Census Bureau 2006) and the growing diversity of metropolitan populations, consideration of possible residential responses has likely become a reality for native-born residents within an increasing number of neighborhoods.

While the effects of immigrant concentrations on inter-regional migration of native-born populations have been the subject of extensive research and intensive debate (c.f., Borjas 2006; Card 2005; Ellis and Wright 1998; Frey 1995, 1996; Kritz and Gurak 2001; White and Liang 1998; Wright, Ellis, and Reibel 1997), the effects on more local mobility decisions have received almost no attention. This is an important omission given that the vast majority of moves do not involve a change in regional, state, or even county location, and because more common local moves are crucial to understanding persistent levels of segregation between native- and foreign-born populations *within* metropolitan areas.

In this paper we address a fairly simple question: How do the concentrations of foreign-born populations in the immediate neighborhood of residence and surrounding neighborhoods affect

the residential decisions of native-born householders? We utilize data from the Panel Study of Income Dynamics (PSID) linked with data from the four most recent U.S. censuses to describe basic patterns of out-mobility as a function of both the size of, and change in, the local immigrant population. We employ spatial-data techniques to assess the effects of foreign-born concentrations in areas surrounding the neighborhood of residence on native mobility decisions. The longitudinal nature of the PSID also allows us to examine *changes* in the effects of foreign-born population concentrations on the mobility decisions of native-born householders. The wide range of microlevel and neighborhood characteristics available in the PSID also provides the opportunity to assess the theoretically-implicated mechanisms linking foreign-born populations to native out-mobility. Finally, we explore the characteristics of the destinations of inter-neighborhood movers to more fully assess implications for community change and segregation.

BACKGROUND

Immigration has had profound transformative effects on nearly every aspect of American life (Hirschman 2005), perhaps none more impressive than the impact on the social and spatial structure of U.S. cities (Singer 2009). In assessing the effects of immigration on these urban spatial structures, popular theoretical arguments have focused on the residential settlement patterns of the foreign-born and their descendants, highlighting residential segregation from the native-born majority as a temporary phenomenon, allowing for the gradual social and spatial integration of immigrant groups (Lieberson 1963; Massey 1985; Park and Burgess 1969). A considerable body of research has emerged to test the implications of these theoretical arguments for processes of neighborhood attainment and segregation (for reviews see Charles 2006; Iceland 2009; Rosenbaum and Friedman 2007). Far less attention has been dedicated to the study of how immigration settlement patterns affect the residential processes of the native-born population –

processes that are likely to have equally important effects on overall patterns of neighborhood change and segregation. Information on these processes must currently be gleaned from aggregate-level studies documenting the effects of Asian or Latino populations in general – not immigrants specifically – on neighborhood turnover (e.g., Denton and Massey 1991), studies of inter-group dynamics within specific neighborhoods of a single cities (e.g., Wilson and Taub 2006), or studies of native reactions to immigrants from countries outside the U.S. (e.g., Brama 2006; Ray, Halseth, and Johnson 1997).

In contrast, considerable attention has been paid to the effects of immigrant concentrations and change on longer-distance migration decisions of native-born populations. Just over a decade ago, William Frey (1995, 1996; Frey and Liaw 1998) argued that the U.S. is being transformed by a process of regional population redistribution in which native-born populations are increasingly flowing away from metropolitan areas with large and growing concentrations of immigrants, creating a kind of regional "balkanization," replete with divergent regional political interests, social conditions, and economic trajectories. While his conclusions and choice of terminology were controversial (c.f., Ellis and Wright 1998), Frey's work, in combination with economists' efforts to identify the effects of immigration on native wages, invigorated research on internal migration responses to evolving immigrant settlement patterns (e.g. Card 2001, 2005; Ellis and Wright 1998; Frey and Liaw 1998; Kritz and Gurak 2001; White and Liang 1998). The results of this research are, at best, mixed. Several studies have presented evidence that at least some segments of the native population are responsive to the concentration of immigrants in their county, metropolitan area, or state (e.g., Filer 1992; Frey 1995; Frey and Liaw 1998; White and Liang 1998). Other research, however, finds little effect of immigrant concentrations (e.g., Card 2001, 2005; Card and DiNardo 2001; Kritz and Gurak 2001) or suggests that any link

between the settlement patterns of immigrants and native migrants is a function of broader structural and economic conditions shaping migration more generally (e.g., Wright, Ellis, and Reibel 1997).

Despite this mixed evidence, existing research on regional migration patterns, in combination with more general research on residential segregation and mobility, provides ample theoretical reason to believe that the type of demographic "balkanization" posited by Frey might be underway at a lower level of aggregation. There are, in fact, several factors that might lead to the exodus of native-born individuals from neighborhoods with large immigrant concentrations. One possibility is that out-mobility away from large or growing concentrations of immigrants might occur simply because of the composition of native-born populations of neighborhoods in which immigrants tend to settle. For example, if immigrant populations concentrate in areas in which native-born residents have lifecycle characteristics (e.g., young, unmarried, childless) or housing conditions (e.g., short-term residents, non-owners) conducive to mobility, then areas with large or growing concentrations of foreign-born residents would exhibit relatively high levels of native out-migration. While such a finding would not diminish the importance of native out-migration flows in processes of neighborhood change and segregation, it would indicate that the connection of this out-migration to local concentrations of immigrants is simply coincidental with more mundane microlevel factors that affect mobility in general.

Other theoretical arguments suggest an actual impact of immigrant concentrations on native out-mobility but point to a variety of mediating factors. First, following Frey's arguments about the importance of the "flight" of whites away from immigrant populations, large or growing concentrations of foreign-born residents in the neighborhood could spur out-mobility through their effect on the racial and ethnic composition of the neighborhood. Consistent with this

argument, Clark and Blue (2004) argue that high levels of segregation within immigrant gateway cities reflect the preferences of members of most groups to cluster residentially with co-ethnics, an argument that is consistent with at least some research on racial-residential preferences. While racial attitudes expressed by white survey respondents have apparently become more liberal over time (Farley et al. 1994), the latest survey results indicate that whites remain reluctant to remain in even moderately integrated neighborhoods (Charles 2006; Krysan 2002a) and tend to rate integrated neighborhoods as substantially less desirable than predominantly white neighborhoods (Krysan 2002b; Krysan and Bader 2007; Krysan, Farley, and Couper 2008). Much of this research on neighborhood residential preferences has focused on whites' aversion to black neighbors but there is also evidence that whites also have limited tolerance for living near Asians and Hispanics – groups that now make up the bulk of the US foreign-born population – and continue to express the strongest preferences for neighborhoods with large shares of white neighbors (Charles 2006; Clark 2009). Limited research on actual mobility behavior tends to confirm that large concentrations of minorities significantly increase the likelihood of moving to a different neighborhood for white households (Crowder 2000; Crowder and South 2008). In comparison to whites, black survey respondents express considerably stronger tolerance for integration (Charles 2006; Krysan and Bader 2007; Krysan and Farley 2002). However, negative attitudes toward Latinos and Hispanics are also fairly common among black survey respondents (Charles 2006) and ethnographic research often points to animosity on the part of African Americans toward immigrant groups who enter their neighborhoods (e.g., Johnson, Farrell, and Guinn 1999; Oliver and Johnson 1984; Wilson and Taub 2006). Moreover, there is substantial evidence that blacks tend to rate as most desirable those neighborhoods with large concentrations of their own race (Clark 1992, 2009; Krysan and Bader 2007). Thus, a

racial preferences argument suggests that high concentrations of immigrants in the neighborhood may reduce residential satisfaction and increase the likelihood of out-mobility for both white and black native-born residents by increasing the share of relatively unattractive racial and ethnic groups and reducing the relative share of own-race neighbors.

Another possibility is that large concentrations of immigrants in the neighborhood will spur native out-mobility by undermining the overall socioeconomic quality of the area. Because immigrants tend to have lower levels of education and are more likely than the native-born to live in poverty (Clark 1998; DeJong and Madamba 2001), high concentrations of immigrants are likely to be associated with lower average income levels in the neighborhood. To the extent that these income levels are linked to the physical condition of the neighborhood, local levels of crime, and the quality of services and other valuable amenities (Logan and Alba 1993), residential satisfaction may be undermined, and the likelihood of residential out-mobility enhanced, for native-born householders with large numbers of foreign-born neighbors. This *socioeconomic composition thesis* is consistent with arguments suggesting that reactions to non-racial socioeconomic conditions, not the aversion to particular racial or ethnic groups, are the primary drivers of population loss and neighborhood change (Harris 1999; Keating 1994; Taub et al. 1984).

Finally, large and growing concentrations of immigrants might also produce fundamental changes in local housing market conditions that affect the mobility behavior of the native born (Ley 2007; Ley and Tutchener 2001). Specifically, increases in the concentration of immigrants might reduce the stock of vacant housing available in an area and increase local housing costs which, in turn may "push" some native residences out of their neighborhoods and lead them to look for housing elsewhere. In a related way, the concentration of immigrants in the

neighborhood may be associated with other local housing market conditions that shape mobility decisions for native residents. For example, immigrants may cluster in neighborhoods with low levels of homeownership, a contextual characteristic typically associated with low out-mobility. Similarly, the availability of relatively new housing in the neighborhood may be associated with both the concentration of immigrants and the likelihood of native out-mobility. All of these arguments suggest that local housing market conditions represent a potentially important mediating factor in native-born residents' mobility reactions to the size and growth of immigrant populations in the area. Indeed, Wilson and Taub (2006) highlight variations in the competition for housing as a central factor to explain differential intergroup dynamics and trajectories of neighborhood change in the face of increasing immigrant concentrations. This housing competition model parallels arguments that focus on job competition as a primary driver of the link between immigrant concentrations and native inter-regional mobility (e.g., Frey 1995; Walker, Ellis, and Barff 1992; White and Liang 1998).

Although they point to different explanatory mechanisms, all of these theoretical arguments suggest that large and growing concentrations of immigrants in the immediate neighborhood of residence will increase the likelihood of out-mobility for individual native-born residents. However, it is also likely that immigrant concentration in areas surrounding the neighborhood of residence will affect native mobility. Both aggregate-level and ethnographic studies on patterns of neighborhood turnover provide evidence of the salience of these extralocal conditions for the processes of neighborhood change (Denton and Massey 1991; Wilson and Taub 2006), a conclusion supported by recent mobility research indicating that individual householders are responsive to conditions in surrounding neighborhoods (Crowder and South 2008). Following these arguments, large populations of immigrants in these extralocal areas may signal to native-

born residents the impending influx of immigrants into their own neighborhood, prompting them to leave the neighborhood.

However, there are also reasons to believe that immigrant concentrations in extralocal areas may have the opposite effect – reducing the likelihood of out-mobility among native-born residents. According to existing mobility theory (South and Crowder 1997; Lee 1966), families' decisions to leave their neighborhood of origin are shaped in part by the supply of destinations that are perceived to be more attractive than the origin neighborhood. To the extent that location near foreign-born populations represents an important residential consideration for the native born, the concentration of immigrants in surrounding neighborhoods is likely to shape perceptions of the quality of the most likely destination options. Most residential moves occur over fairly short distances (Lee 1966; Long 1988), and individual householders are likely to consider nearby options first when weighing possible destinations. If these nearby options are relatively unattractive to native-born householders because of their large concentrations of immigrants, whites may decide not to move. Conversely, native-born residents may be particularly likely to move to a different neighborhood if they are surrounded by residential alternatives with the relatively attractive condition of low immigrant concentrations. Thus, while the direction of the effect is yet to be determined, consideration of extralocal immigrant concentrations is likely important for a full assessment of the effects of immigrant populations on the mobility decisions of native-born householders.

DATA AND METHODS

We explore these theoretical arguments using data from the Panel Study of Income Dynamics (PSID) linked to contextual data drawn from the U.S. Census. The PSID is a well-known longitudinal survey of U.S. residents and their families begun in 1968 with approximately

5,000 families. Members of panel families were interviewed annually between 1968 and 1995 and every two years thereafter. New families have been added to the panel as children and other members of original panel families form their own households. The longitudinal nature of the PSID data makes it possible to assess prospectively the migration behavior of individual householders and the data contain rich information on a variety of individual- and household-level characteristics that are known to influence residential mobility decisions, thereby improving the ability to isolate the effects of foreign-born concentrations on these behaviors.

The availability of restricted-access Geocode Match Files, which link the individual records of individual respondents to census codes describing their place of residence at each interview, also make the PSID well suited for our purposes. These supplemental data allow us to trace the migration of PSID respondents across neighborhoods between successive interviews and to attach detailed census data about the neighborhoods occupied by these respondents at each annual interview. The PSID Geocode data also allow us to identify the conditions of the extralocal neighborhoods – those neighborhoods that are in close proximity to the tract in which each PSID resided at each annual interview. We use standard GIS tools to determine the physical proximity of the census tract of residence to all other census tracts in the country. By attaching information on the characteristics of surrounding tracts, we are able to construct reliable measures of both local and extralocal neighborhood conditions for PSID respondents at each interview.

In this study, we follow much of the prior work in this area (e.g., Massey, Gross, and Shibuya 1994; Quillian 2002) by using census tracts to represent neighborhoods in defining local and extralocal neighborhood conditions. Although census tracts are imperfect operationalizations of neighborhoods (Tienda 1991), they undoubtedly come the closest of any

commonly available spatial entity in approximating the usual conception of a neighborhood (Jargowsky 1997; White 1987). Furthermore, as of the 2000 census, census tracts were designated for the entire United States, providing the basis for characterizing neighborhoods consistently for all PSID respondents. Potential problems associated with changes in tract boundaries across decennial censuses are mitigated by our use of the Neighborhood Change Database (NCDB) constructed through a collaboration of GeoLytics Corporation and the Urban Institute (GeoLytics 2006). We utilize the NCDB's data on tracts from the 1970, 1980, 1990, and 2000 censuses and use linear interpolation/extrapolation, with adjacent census years as endpoints, to estimate values for all tract characteristics in non-census years.

Our effective sample for this analysis consists of 16,516 native-born non-Latino white and non-Latino black heads of PSID households who were interviewed between 1968 (the first year of the PSID data collection) and 2005 (the latest year for which complete PSID data are available). Given the original structure of the PSID panel, based on a sample of families drawn in 1968, the numbers of native-born members of non-white, non-black groups are too small to sustain a separate analysis. Because most residential moves are undertaken by families, a decision to move made by the household head (or made jointly by the family) perforce means a move by other family members. The focus only on household heads allows us to avoid counting as unique and distinct those moves made by members of the same family (e.g., children and spouses). At the same time, moves by family members who were not the household head at one interview but become the head of a household by the subsequent interview (e.g., a child leaving the parental home or an ex-spouse establishing a new residence) are included in our effective sample.

We take advantage of the longitudinal nature of the PSID data and the fact that tract-coded residential addresses are available for PSID respondents at each interview by segmenting each respondent's data record into a series of person-period observations, with each observation referring to two-year period between PSID interviews. Although it is possible to define annual mobility intervals for most years of the PSID, the use of a two-year interval is necessitated by the adoption of a biennial interview schedule in the PSID after 1995.[1] On average, the individual household heads in the sample contribute just fewer than 9.4 person-period observations for a total sample size of 154,848 person-period observations. We use logistic regression to examine the additive and interactive effects of local and extralocal neighborhood conditions and individual-level characteristics on the odds of moving to a different census tract between interviews. Because the same PSID respondent can contribute more than one person-period to the analysis, and because inter-neighborhood migration is a repeatable event, the usual regression assumption of the stochastic independence of error terms underlying tests of statistical significance is violated (Bye and Riley 1989). In all regression analyses we correct for this non-independence of observations using the cluster procedure available in Stata to compute robust standard errors (StataCorp 2008).[2]

Outcome variables: We use a variety of descriptive statistics and regression analyses to examine two primary outcomes related to broader segregation patterns. First, we examine a dichotomous variable indicating whether the native-born respondent moved out of the census tract of origin during the two-year migration interval, taking a value of 1 for those who moved and a value of 0 for those who remained in the same tract. Second, for those who do move, we examine the difference between the percentage of the population in the tract of destination (time t+2) and the percentage foreign-born in the tract of origin (time t). We focus here on changes in

exposure to foreign-born populations as a result of mobility because such changes have the clearest implications for the effects of native-born mobility on broader patterns of residential segregation.

Explanatory variables: The primary explanatory variables refer to the level of, and change in, the immigrant concentration in and around the tract of residence at the beginning of the migration interval. The *local immigrant concentration* is measured by the percentage of the population in the tract of residence made up of individuals born outside of the U.S. *Change in the immigrant concentration* is measured as the absolute difference between the percent foreign-born in the year of observation and the percent foreign-born in the tract as of five years prior to the observation year, both estimated through linear interpolation for non-census years.

We characterize the *immigrant concentration in extralocal neighborhoods* as the distance-weighted average percent foreign-born in surrounding tracts. To create these measures we utilize a spatial weights matrix that specifies, for each tract, the presumed existence and magnitude of effects of conditions in other tracts on outcomes among those individuals originating in a particular tract of origin. Following Downey's (2006: 570) argument that spatial dependence tends to decline with distance, we employ a spatial-weighting strategy in which the influence of conditions in an extralocal area on individual mobility decisions is assumed to be inversely related to the distance of the extralocal tract from the individual's tract of residence. Specifically, under this distance-decay strategy the elements of the spatial weights matrix are defined as $w_{ij} = 1/d_{ij}$ where d_{ij} is the geographic distance between the centroid of the tract of residence, i, and the centroid of the extralocal tract, j. Given the implausibility that the demographic characteristics of every tract in the nation directly affect the decisions of residents of all other tracts, we constrain to zero the influence of tracts that are more than 100 miles away

from the focal tract, but even without this constraint, spatial weights determined by inverse distance are quite small beyond distances of about 10 miles.[3] The weights matrix is row standardized so that the elements of each row sum to one and the resulting extralocal measure of immigrant concentration can be easily interpreted as a distance-weighted average percent foreign-born for all potentially influential extralocal tracts (Anselin 1988; 2001).

We consider a variety of other characteristics of the native-born sample members, their families, and their neighborhoods in order to test theoretical arguments related to the link between local immigrant concentrations and native out-mobility. Key demographic predictors of residential mobility include age and, to capture the non-monotonic dependence of migration on age (Long 1988), age-squared. The sex of the householder is captured as a dummy variable scored 1 for females and marital status takes a value of 1 for respondents who were married or permanently cohabiting. The effect of children is tapped with a dummy variable taking a value of 1 for those individuals living in a family with any members under age 18. We also control for the education of the householder, measured by years of school completed, and the total family taxable income, measured in thousands of constant 2000 dollars. Home ownership is coded as 1 for those in an owner-occupied housing unit, household crowding is measured by the number of persons per room, and length of residence takes a value of 1 for those respondents who had lived in their home for at least three years. All of these variables except gender are considered time-varying and refer to conditions at the beginning of the mobility interval. The year of observation is included to account for trends in inter-neighborhood migration.

We present models with controls for a variety of characteristics of the tract of origin to test theoretically implicated mechanisms through which local immigrant concentrations may influence out-mobility for native-born sample members. To test the argument that mobility away

from immigrant populations reflects a reaction to local racial conditions we consider the percentage of the tract's population made up of residents with a different race than the respondent (i.e., percent other than non-Hispanic white for white respondents and percent other than non-Hispanic black for black respondents). To account for the possibility that native-born residents are more responsive to socioeconomic characteristics and related conditions of the tract than to the concentration of immigrants, we control for the average income (adjusted to 1000s of year 2000 dollars) of all families in the tract of origin. We also control for several measures of the local housing market that may affect mobility decisions and may be associated with the size and change in the local concentration of immigrants. Housing competition is measured primarily with the average rent for renter-occupied housing in the tract[4] and the percent of housing units that were vacant at the beginning of the observation period. We also control for the level of homeownership (the percentage of households in the tract of residence that are owner occupied) and the age of the housing stock (the percentage of housing in the tract built in the preceding ten years) to better isolate the effects of local immigrant concentrations.

FINDINGS

Levels of exposure to immigrant populations

We begin with a basic description of the residential exposure of native-born households to immigrants during the study period. At the beginning of the average observation period, the PSID householders in our sample resided in tracts in which just under 5.5% of the residents were foreign born (see Appendix Table A1 for pooled and race-specific statistics). However, this residential exposure has changed considerably over the years of the PSID survey. As shown in Figure 1, there has been a fairly steady increase in the concentration of immigrants in the tracts occupied by PSID householders; the percentage foreign-born as of the beginning of the biennial

interview periods increased from about 3.9 for observations in 1968 to 7.6 for those in 2005. This, of course, is consistent with the general increase in the foreign-born population in the country as a whole and points to increasing levels of residential exposure between native- and foreign-born households.

Figure 1 about here

It is important to note, however, that the increasing concentration of immigrants in natives' neighborhoods has been much less pronounced than increases in foreign-born representation elsewhere. For example, Figure 1 also shows that a steady increase in the concentration of immigrants in the metropolitan areas represented by PSID respondents and this increase has been substantially stronger than the increase in immigrant concentrations in the tracts occupied by native-born PSID respondents.[5] These numbers indicate that native-born households have been somewhat shielded from the more general potential residential repercussions of increasing immigrant concentrations, finding themselves in neighborhoods in which foreign-born populations are underrepresented relative to metropolitan concentrations. They also suggest that despite a potential for increased residential exposure between native-born households and immigrants over the past few decades, the extent to which these groups concentrate in different neighborhoods has not necessarily declined.

These statistics do not reveal, however, the extent to which the voluntary mobility behaviors of the native-born have helped to maintain this relative residential distance from foreign-born populations. The remaining analyses address this general question. Guiding our efforts are two relatively straightforward questions: 1) Do native-born householders tend to move out of neighborhoods with higher concentrations of foreign-born populations; and 2) When they do

move, do native-born householders move to areas with relatively lower concentrations of immigrants?

Immigrant populations and native out-mobility

Table 1 presents a basic answer to the first of these questions, presenting coefficients from a logistic regression analysis predicting the log-odds of moving to a different tract during the two-year mobility interval for native-born white and black PSID householders. The first model includes the relative size of the foreign-born population in the tract occupied by the householder at the beginning of the mobility interval. The logit coefficient (b=.014) for this variable is positive and statistically significant ($p<.001$) indicating that the likelihood of leaving the neighborhood increases for native-born residents as the share of immigrants in the neighborhood increases. Specifically, a one standard-deviation increase in the tract percent foreign-born increases the odds of out-mobility by 11.2% [$e^{(.014*7.657)}=1.112$].

Table 1 about here

The second model of Table 1 tests whether this mobility response to immigrants has changed over the long span of the PSID, a period in which both the composition and size of the immigrant population has changed dramatically (Kritz and Gurak 2005; Larsen 2004). Specifically, the model includes coefficients for the year of observation (measured as the number of years since 1968, the first year of PSID data) and a product term representing the interaction between this year variable and the percent foreign-born in the tract of origin. The negative, statistically significant coefficient for year of observation captures the general decline in residential mobility (Fischer 2002). However, and more important for our purposes, there is no evidence that the effect of immigrant populations on the likelihood of out-mobility among the native-born members of our sample has changed over time; the coefficient for the interaction between the

year of observation and the neighborhood concentration of immigrants is very small (b=.00005) and far from statistically significant (p=.708). Thus, while native-born residents have experienced an increased residential exposure to immigrant populations, the out-mobility response to these populations has remained relatively unchanged since the late 1960s.

The coefficients in Model 3 also indicate that the tendency to move away from larger immigrant populations holds for both black and white native-born householders. Consistent with published research (e.g., Crowder and South 2005; South and Deane 1993), the likelihood of mobility is higher for black than for white householders as indicated by the positive and statistically significant coefficient for black race (b=.253). However, the coefficient for the interaction between black race and the percent foreign-born in the tract (b=-.00009) is very small and far from statistically significant. Thus, native-born residents of both races appear to be about equally responsive to the size of the immigrant population in the neighborhood.

Overall, the analysis in Table 1 suggests that the out-mobility of native-born residents tends to be higher in neighborhoods containing large shares of immigrants. By itself, this association has important implications for processes of neighborhood change and the influence of native mobility decisions on the maintenance of immigrant-native segregation. However, this tendency of the native-born to exit areas with larger foreign-born concentrations does not necessarily reflect an aversion to residence near immigrants but may reflect the influence of other contextual conditions or the composition of native populations in areas with large numbers of immigrants. We turn now to the evidence on the competing theoretical arguments offered to explain these patterns.

While the results above indicate that white and black native householders do not differentially respond to local immigrant populations, it is plausible that the underlying processes

motivating whites' and blacks' mobility responses operate differently. Accordingly, in Tables 2 and 3, we present more in-depth analyses of the effects of immigrant populations on natives' mobility behaviors separately for black (Table 2) and white (Table 3) householders. The first model of Table 2 includes terms for the foreign-born percentage in the tract of residence for native-born black householders at the beginning of each interval, changes in this percentage occurring during the five-year period leading up to each interval, and the spatially-weighted average concentration of immigrants in surrounding neighborhoods. Consistent with the findings from Table 1, the results in Model 1 of Table 2 show that among African American householders the likelihood of out-mobility increases with the representation of immigrants in the immediate neighborhood of residence. The coefficient for recent changes in the size of the immigrant representation is also positive but not statistically significant in Model 1. In contrast, however, the (distance-weighted) average level of immigrant concentration in surrounding tracts is negatively and significantly associated with neighborhood out-mobility among black householders. This negative effect is consistent with arguments based on the distance-dependence of migration: Because most geographic moves take place over a relatively short distance, relatively unfavorable conditions in nearby areas will tend to reduce the likelihood of out-migration by convincing householders that the most likely available neighborhood alternatives are relatively unattractive. In other words, consideration of the relative concentration of immigrants appears to extend beyond the immediate neighborhood to surrounding areas as well.

Table 2 about here

Controlling for the size of the immigrant population in extralocal areas[6] also has the effect of increasing the coefficient for the local neighborhood immigrant concentration (b=.020) relative

to the coefficient seen in the racially-pooled analysis of Table 1.[7] This suppression stems from the fairly strong positive association between local and extralocal immigrant concentrations, with neighborhoods of similar foreign-born percentages clustering together, but countervailing influences of these forces on native householders' out-migration. Consequently, controlling for the negative impact of immigrant concentration in surrounding neighborhoods on native out-migration reveals a stronger positive effect of local immigrant concentrations on native householders' propensity to move out of their neighborhood. Thus, controlling for the countervailing effect of extralocal immigrant concentrations, an increase of one standard deviation in the percent foreign-born in the neighborhood of residence is associated with a 17.5% increase in the odds of moving to a different tract for black householders [$e^{(.020*8.067)}$=1.175].

Model 2 of Table 2 includes controls for a wide range of individual- and household-level determinants of mobility and is designed to test the possibility that the heightened likelihood of out-mobility from immigrant-populated neighborhoods is simply due to the fact that black householders residing in these areas have characteristics that increase their propensity for mobility more generally. The effects of these controls are consistent with results of past research: the likelihood of out-mobility decreases (but at a declining pace) with age, and is lower for married householders and those with children. Net of other factors, higher-levels of income are associated with a greater likelihood of residential mobility. Homeownership and longer-term residence decrease the likelihood of residential mobility but living in more crowded housing increases this likelihood.

More importantly, controlling for these significant microlevel mobility predictors accounts for a sizeable share of the association between local immigrant concentrations and inter-tract mobility among black householders with the coefficient for this variable reduced by about 45%

(from .020 to .011) between Models 1 and 2. Thus, consistent with the compositional explanation for the effects of immigrant concentrations, part of the elevated mobility of black households away from high immigrant concentrations is due, not to a direct reaction to living near immigrants, but to the fact that black residents of areas with large immigrant populations have other characteristics conducive to mobility. Housing characteristics are especially important here with separate models (not shown) in which microlevel variables are added sequentially indicating that controls for homeownership and length of residence are primarily responsible for the attenuation of the local immigrant effect between Models 1 and 2. Among black householders those who do not own their home and those who had moved within the preceding three years tend to live in areas with the highest immigrant concentrations, and these short-term residents and renters are more likely than longer-term residents and homeowners to move, accounting for part of the positive association between local immigrant concentrations and residential mobility. In contrast, these microlevel influences suppress the association between growing foreign-born populations and out-mobility for native blacks; controlling for these variables in Model 2 reveals a positive and statistically significant coefficient indicative of a higher likelihood of out-mobility from areas experiencing greater increases in immigrant concentration.

The coefficients in Model 3 of Table 2 appear to indicate that another portion of the immigrant-concentration effect reflects a reaction to local neighborhood racial conditions. For black householders, the likelihood of out-mobility increases significantly with the relative size of the non-black population (b=.002), a variable positively associated with the share of immigrants in the area (Pearson r=.330). Thus, controlling for the effect of the local racial composition reduces the coefficient for local immigrant concentrations by another 36% (from .011 to .007)

between Models 2 and 3. Model 4 shows that net of the effects of other variables in the model, the likelihood of out-mobility for black householders also increases with the average income of families in the neighborhood (b=.005), but controlling for this effect has little effect on the association between local immigrant concentrations and black out-mobility.

Finally, Model 5 includes measures of housing market conditions that may be associated with both the concentration of immigrants in the neighborhood and the likelihood of out-mobility among native blacks. As expected, native black out-mobility increases with the average rent in the neighborhood but, controlling for the cost of housing in the area, also increases with the housing vacancy rate in the tract. In contrast, the likelihood of out-mobility is lower from those tracts with a relatively large stock of new housing and high concentrations of homeowners.

The most important findings from this model, however, is that controlling for local housing market conditions further attenuates the coefficient for local immigrant concentrations (from .008 to .005), reducing it to statistical non-significance (p=.105). Thus, the residual effect of immigrant concentrations on black out-mobility appears to be due to the association with housing market conditions that increase the likelihood of black out-mobility. Two characteristics of the local housing market are especially important in this regard: 1) the concentration of homeowners is negatively associated with both the concentration of immigrants and the likelihood of out-mobility for native black householders; and 2) average rent costs tend to be higher in areas with large immigrant populations and are also positively associated with out-mobility for black householders. Separate models (not shown) indicate that controlling for these two variables alone accounts for the attenuation of the local foreign-born effect across the final model of Table 2. The mediating effect of local rents in particular provides some support for the competition argument that large concentrations of immigrants transform the local housing

market in ways that price some black householders out of the market. In contrast, the positive effect of changes in immigrant concentration on residential mobility for blacks remains statistically significant despite the introduction of neighborhood-level control variables and actually increases in strength in Model 5.

Results of regression analyses of out-mobility for native-born white householders show dynamics that are similar to those observed for blacks, but that also differ in potentially important ways. These results are presented in Table 3. As is true for black householders, the likelihood of neighborhood out-mobility is positively associated with the concentration of foreign-born residents in the neighborhood. Model 1 also shows the negative effect of extralocal conditions that partially suppress the effects of local immigrant concentrations.[8] However, in comparison to their black counterparts, native-born whites appear to be more strongly influenced by changing concentrations of immigrants in their neighborhood. Controlling for the effects of the percent foreign-born in both local and extralocal areas, an increase of 2 percentage points (about one standard deviation) in the concentration of immigrants over the preceding five years is associated with an increase in the odds of out-mobility for whites of about 9.4% [$e^{(.045*2)}$=1.094]. This finding can be interpreted in the context of theoretical arguments that emphasize the importance of residential satisfaction and utility (e.g., Speare 1974; Wolpert 1966); recent changes in neighborhood conditions may influence the decision to leave the neighborhood by creating a disparity between residential preferences (which likely influenced the decision to settle in the neighborhood) and actual neighborhood contextual conditions. The recent influx of immigrants may also signal to white residents an undesirable trajectory of the neighborhood and prompt at least some to leave in advance of further changes. Either way, the results in Model 1 indicate that the likelihood of white out-mobility is especially high from

neighborhoods containing relatively large immigrant populations and those experiencing growing immigrant populations.

Table 3 about here

The remaining models in Table 3 investigate possible explanations for this elevated white out-mobility. In Model 2 we introduce the full slate of individual- and household-level mobility controls. Consistent with the results for black householders, these variables have important influences on the mobility decisions of native-born whites and, importantly, greatly attenuate the effects of the local immigrant concentration. Specifically, the coefficient for the local immigrant concentration in the neighborhood is reduced to less than one-third of its original size (from .019 to .006) with the introduction of these controls. This lends considerable support to the compositional explanation of white mobility behavior; the high-mobility characteristics of white households living in areas with high concentrations of foreign-born residents accounts for about half of the effect of local immigrant concentrations on white out-mobility. However, the effect of percent immigrant remains positive and significant even after controlling for these factors. Moreover, controlling for these additional variables does nothing to account for the significant association between residential out-mobility and recent changes in immigrant concentrations; the coefficient for this variable actually increases (from .045 to .050) between Models 1 and 2. Thus, even after controlling for the influence of key microlevel mobility determinants, the likelihood of white out-mobility increases significantly with both the size of the local immigrant population and recent increases in this foreign-born representation.

The results presented in Model 3 indicate that at least part of these effects of local immigrant concentrations and change can be attributed to the effects of the neighborhood racial composition. As with black householders and consistent with past research (Crowder and South

2008), larger concentrations of neighbors of a different race increase the likelihood of out-mobility for white householders, and this effect holds after controlling for the socioeconomic condition of the tract (see Model 4). However, this effect is considerably larger for white than for black householders (compare coefficients in Model 3 of Table 3 to Model 3 in Table 2)[9] and plays a more substantial role in attenuating the effect of local immigrant concentrations. Specifically, the coefficient for recent changes in the immigrant population is reduced by 12% (from .050 to .044) after controlling for the racial composition of the tract and the coefficient for the relative size of the immigrant population is reduced to about one-third of its original size (from .006 to .002) and becomes statistically non-significant. Thus, a large part of the link between white out-mobility and the size of the foreign-born population appears to be a function of the associated concentration of non-whites in the neighborhood. In contrast, the effect of changes in immigrant concentration on the residential mobility of whites is reduced only slightly by the presence of non-whites in the neighborhood

Finally, the coefficients in Model 5 of Table 3 indicate that among native-born whites, the likelihood of out-mobility increases with rents in the neighborhood and declines with the level of homeownership in the area. Both of these tract characteristics are also correlated with recent changes in the immigrant population; rents are higher (Pearson r=.155), and homeownership lower (Pearson r=-.195), in those areas experiencing more rapid growth in immigrant representation. As a result, controlling for these local housing market conditions also helps to explain part of the association between immigrant growth and white out-mobility, with the coefficient for this change variable declining by about 13% (from .045 to .039) between Models 4 and 5. Again, this provides some support for the argument that growing immigrant populations help to alter local housing conditions in a way that spur out-mobility among whites. However,

the mobility-inducing effect of recent increases in immigrant concentrations and the likelihood of out-mobility remains substantial and statistically significant even with the controls for these housing-market conditions.[10]

Destinations of mobile native-born householders

The results thus far point to significantly higher levels of native-born out-migration from neighborhoods with large and growing foreign-born populations and provide some indication of the compositional and contextual basis for this association. These patterns of native mobility have the potential to help drive processes of neighborhood change and contribute to the maintenance of residential segregation between native- and foreign-born populations. However, these effects of native out-mobility would be considerably mitigated if native-born residents simply left their tract of residence to enter neighborhoods with similar concentrations of immigrants. Given this, we offer a descriptive analysis of the neighborhood destinations of mobile native-born householders. Our goal here is not to provide a definitive test of mobility destinations but to highlight the basic consequences of natives' mobility responses to concentrations of immigrants that might increase or decrease residential exposure between native-born and foreign-born populations.

Figure 2 presents the average level of immigrant concentration in the tracts of both origin and destination for black and white native-born householders who moved to a different tract during the mobility interval. On average, mobile black householders tend to move to tracts with immigrant concentrations that are slightly higher than those in the tracts they exited (5.89% versus 5.39% foreign-born), mitigating some of the effect of elevated mobility out of areas with relatively large immigrant populations. In contrast, mobile white householders tend to move into neighborhoods that have slightly smaller shares of immigrants than the ones they moved from.

Thus, the level of segregation between native-born whites and immigrants is likely enhanced by both the tendency of whites to leave areas with larger shares of immigrants and to enter areas with relatively lower shares.

Figure 2 about here

The evidence in Figure 2 points to potentially important differences in the *average* levels of foreign-born representation in mobility origins and destinations but obscures some of the potential impact of native mobility on segregation patterns. In Table 4 we explore these issues further with regression analyses of the association between the percent foreign-born in the tract of destination and the percent foreign-born in the tract of origin for mobile native-born households. In these models we use a Heckman procedure (Heckman 1979) to correct for the non-random selectivity of those who choose to move but results are virtually identical with a simpler OLS analysis. For mobile black householders (see Model 1), a difference of one percentage point in the level of immigrant representation in the tract of origin is associated with an increase of about six-tenths of a percentage point (b=.592) in the immigrant concentration in the tract of destination. This is just slightly larger than the association between origin and destination immigrant percentages for mobile white householders (b=.532 in Model 3).

Table 4 about here

The implications of these associations are illustrated in Figure 3 in which the values on percent foreign-born in the destinations of mobile PSID householders are predicted for various values of percent foreign-born in the tract of origin using the coefficients from Models 1 and 3 of Table 4. In this figure the diagonal line represents equality between origins and destinations in terms of the percent foreign-born – a situation in which mobility events would have no net effect on exposure to immigrant neighbors.

Figure 3 about here

The figure shows that at relatively low values of immigrant representation – up to around 6% and near the means for both black and white householders – mobile individuals tend to enter neighborhoods that are fairly similar in composition to those they left or even enter areas with slightly higher concentrations of immigrants. However, as the percentage foreign-born in origins increase, the immigrant concentration in destinations does not keep pace. In other words, native-born householders leaving areas with larger shares of immigrants are likely to experience substantial reductions in their exposure to immigrants as a result of residential mobility, a fact illustrated by the divergence of the predicted value lines in Figure 3 from the diagonal line representing equality between origins and destinations. This divergence is magnified further with controls for the concentration of immigrants in extralocal areas (see Figure 3, based on Models 2 and 4 of Table 4) which tend to be higher in tracts with large immigrant populations and reduce relative opportunities to move to a nearby tract with lower concentrations of immigrants.[11]

CONCLUSIONS

In recent decades, large and increasingly diverse flows of immigrants have produced dramatic changes in the composition of the American population and raised a wide range of questions about evolving systems of economic, social, and spatial stratification. Among these are questions about the effect of immigration on patterns of residential segregation and residential attainment. Even in the face of declining segregation between many groups, the residential integration of Latinos and Asians – groups that make up the majority of recent immigrant populations – appears to have stagnated. Levels of segregation are especially high for

foreign-born members of these groups, raising important questions about the prospects for future integration.

In this paper we attempt to illuminate some of the individual-level dynamics shaping these aggregate population distributions, complementing the large and growing research on patterns of neighborhood attainment among immigrants with our analysis of the effect of immigrant populations on the mobility decisions of native-born householders. Using data from the Panel Study of Income Dynamics linked to data derived from four censuses to describe the characteristics of neighborhoods of residence and surrounding areas, we find evidence that immigrant concentrations have a considerable effect on the mobility decisions of native-born blacks and whites. For both black and white native householders, the relative size of the immigrant population is positively associated with the likelihood of leaving the tract, and this association has persisted since the late 1960s even as the size and diversity of the immigrant population has changed dramatically. Net of the effect of the size of the immigrant population in the neighborhood, recent increases in this foreign-born representation in the local area also appear to spur native out-mobility, and native householders appear to be less likely to leave their neighborhood if surrounding neighborhoods – those representing the most likely mobility destinations – have large shares of immigrants.

Our investigation indicates that the composition of native-born populations living in immigrant-populated areas represents an important source of these mobility patterns; controlling for individual-level, family, and microlevel housing variables substantially reduces the association between the size of the immigrant population and the likelihood of native out-mobility. However, contextual mediators also play an important role. Among whites, mobility away from non-white neighbors appears to be an especially important component of the

association between immigrant populations and the likelihood of out-mobility. The concentration of other-race neighbors is also important in explaining the reaction of native-born blacks to large shares of immigrants, but characteristics of the housing market also appear to be important; large shares of immigrants are associated with neighborhood housing characteristics, including low levels of homeownership and high rent costs, that elevate the likelihood of out-mobility for black householders. In contrast to the influence of the *concentration* of foreign-born populations in the neighborhood, for both blacks and whites, residential mobility continues to be enhanced by *growth* in the immigrant population and reduced by the presence of larger foreign-born populations in surrounding neighborhoods – even while controlling for individual-level, household-level, and neighborhood characteristics.

Our analysis of the residential destinations shows that native-born householders leaving areas with low to moderate levels of immigrant concentration tend to move to neighborhoods with comparable levels of foreign-born representation. However, the disparity between origins and destinations increases quickly with the percent foreign-born in the origin neighborhood such that native-born residents leaving neighborhoods with moderate to high levels of immigrant concentration tend to move to areas with substantially lower levels of immigrant representation. Together with the elevated likelihood of mobility out of immigrant-populated areas, this tendency to move to areas with lower concentrations of immigrants has helped to limit the residential exposure of native-born householders to immigrants. Indeed, while the representation of immigrants in the neighborhoods occupied by native-born householders has increased in recent decades, this increase has been far more modest than the increasing immigrant concentration in the country's population as a whole.

As a first analysis of the link between immigrant populations and native mobility patterns at the neighborhood level, this paper leaves open a number of important questions for future research. First, additional attention should be paid to individual-level variations in the association between neighborhood immigrant concentrations and residential mobility. Parallel research on patterns of inter-regional migration indicates that variations by socioeconomic status may be particularly important. Such variations would hold additional implications for the processes of neighborhood change along both racial and economic lines and may also shed additional light on the mechanisms through which immigrant concentrations affect native out-mobility. For example, to the extent that competition for housing and other valuable resources drives the mobility of native-born householders from neighborhoods with large and growing immigrant populations, this effect should be most pronounced among lower-income natives. Conversely, if reactions to immigrant populations are truly rooted in dissatisfaction with local racial or socioeconomic conditions the effect may be strongest among higher-income native householders for whom residential options are more plentiful.

Along these same lines, further research on the factors affecting native residents' reactions to foreign-born neighbors is crucial. Our strategy of examining the attenuation of neighborhood compositional effects with controls for individual- and tract-level characteristics provides some hints at possible mechanisms, but additional research on native attitudes toward immigrant neighbors, patterns of social interaction and political exchange within changing neighborhoods, and the connections to related residential decision-making processes will surely shed additional light on these mechanisms. Similarly, examining how native mobility responses to immigrant populations vary with the racial or ethnic composition and socioeconomic characteristics of those

immigrants will provide additional clues to underlying motivations and a more nuanced picture of the likely assimilation trajectories of specific immigrant groups.

Finally, drawing more direct links between the individual mobility patterns revealed here and both the processes of neighborhood change and patterns of segregation across metropolitan areas is an important line of future research. Especially important will be efforts to understand how these mobility processes are shaped by, and interact with, broader structural and economic conditions of the metropolitan area to affect aggregate population distributions. For now we stop short of claiming the U.S. is undergoing a process of balkanization at the neighborhood level, paralleling the regional pattern identified by Frey (1995). However, our analysis does point to some longstanding mobility trends that would appear to diminish the prospects residential integration between immigrants and native-born populations. Thus, while scholarly attention continues to focus on the residential attainment processes of immigrants, we call for additional attention to the mobility reaction of native-born populations to these immigrant settlement patterns as these reactions are likely to be crucial in determining the pace and processes of neighborhood change, immigrant incorporation, and broader patterns of stratification.

ENDNOTES

[1] Analyses using single-year mobility intervals for data years prior to 1995 produce results that are similar to those reported below.

[2] The multi-level structure of our data would ordinarily call for the use of multilevel modeling strategies (Teachman and Crowder 2002). However, the low level of clustering of individual PSID respondents within census tracts undermines the utility of such models.

[3] We compared the inverse-distance weighting strategy to results using several other alternatives: 1) an adjacent-tracts approach in which w_{ij}=1 when tracts i and j share a common border or vertex and w_{ij}=0 otherwise; 2) a strategy in which spatial weights were defined as the squared distance between census tracts so that more distant extralocal tracts are presumed to be less influential relative to nearby tracts; 3) a strategy in which spatial weights are a function of logged distance so that distant tracts exert more influence on extralocal measures; and 4) a structure in which conditions in all tracts in the metropolitan are presumed to have the same influence on individual mobility decisions. These alternative strategies produce results that are similar to, but generally weaker than, results using the inverse-distance strategy.

[4] The average rent for all tracts within 100 miles is used for the small number of tracts with no renter-occupied units. We also tested models with the average value of owner-occupied housing but because of the high correlation with local rents this control introduced considerable instability into the models.

[5] The trend in the percent foreign-born in PSID metros parallels that in the country as a whole; in 1970, about 4.7% of U.S. population was categorized as foreign-born and this increased to 11.7% by 2003 (Larsen 2004).

[6] Here we utilize a cross-regressive modeling strategy because our measure of extralocal immigrant concentrations reflects a spatially-lagged version of a key predictor (Anselin 2003). This stands in contrast to more typical autoregressive forms of spatial data analysis where a spatially-lagged version of the dependent variable is used as a predictor. The cross-regressive strategy employed here requires few modifications to standard estimation procedures (Anselin 2002) and is sufficiently flexible to accommodate a variety of methodological techniques.

[7] The bivariate logit representing the effect of neighborhood immigrant composition on out-mobility among black householders is .014 ($p<.001$), consistent with the combination of coefficients in Model 3 of Table 1.

[8] For whites the bivariate logit for the local immigrant concentration is .015 ($p<.001$).

[9] Racially pooled models with interaction terms indicate that the black-white difference in the coefficients for the percent other-group in the tract is statistically significant ($p<.01$).

[10] A comparison of coefficients from Tables 2 and 3 shows a stronger association between changes in the immigrant concentration and out-mobility for white than for black native householders. Racially pooled models with interactions reveal that this difference is statistically significant ($p<.05$).

[11] The statistically significant, negative lambda coefficients in most models in Table 4 also indicate that those respondents who move during the mobility interval (i.e., are selected into this second stage of the analysis) tend to experience significantly lower levels of immigrant exposure at the end of the mobility interval than do those who remained in their original tract.

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Table 1. Logistic Coefficients for Regression Analyses of Residential Mobility Out of Census Tract of Origin: White and Black PSID Householders, 1968-2005.

Independent Variables	Model 1 b	Model 1 se	Model 2 b	Model 2 se	Model 3 b	Model 3 se
Immigrant concentration in neighborhood	.014 ***	.001	.013 ***	.003	.015 ***	.002
Year			-.005 ***	.001		
Interaction: Immigrant concentration in neighborhood X Year			.000	.000		
Black (1=yes)					.253 ***	.028
Interaction: Immigrant concentration in neighborhood X Black					-.000	.003
Constant	-.982 ***	.014	-.892 ***	.027	-1.093 ***	.019
Wald chi-square	109.34		136.84		232.32	
df	1		3		3	

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

N of observations = 154,848; N of persons = 16,516

Table 2. Logistic Coefficients for Regression Analyses of Residential Mobility Out of Census Tract of Origin: **Black PSID Householders**, 1968-2005.

Independent Variables	Model 1 b		se	Model 2 b		se	Model 3 b		se	Model 4 b		se	Model 5 b		se
Contextual characteristics															
Immigrant concentration in neighborhood	.020	***	.003	.011	***	.003	.007	**	.003	.008	**	.003	.005		.003
Change in neighborhood immigrant concentration	.005		.008	.014	*	.007	.014	*	.007	.015	*	.007	.018	**	.007
Immigrant concentration in extralocal areas	-.009	*	.004	-.010	**	.002	-.007	*	.003	-.008	*	.003	-.011	***	.003
Percent other racial groups in neighborhood							.002	***	.000	.001	*	.001	.002	***	.001
Average family income in neighborhood										.005	***	.001	.007	***	.002
Average rent in neighborhood													.035	**	.013
Vacancy rate in neighborhood													.011	***	.002
Home ownership rate in neighborhood													-.002	***	.001
New housing concentration in neighborhood													-.005	***	.001
Micro-level Characteristics															
Age				-.123	***	.005	-.123	***	.005	-.123	***	.005	-.124	***	.005
Age-squared				.001	***	.000	.001	***	.000	.001	***	.000	.001	***	.000
Female				.070		.039	.070		.038	.069		.039	.066		.039
Married				-.226	***	.038	-.235	***	.033	-.232	***	.038	-.216	***	.038
Children				-.098	**	.033	-.093	**	.033	-.091	**	.033	-.092	**	.033
Education				.002		.006	.001		.006	-.001		.006	-.001		.006
Family Income (in $1000's)				.005	***	.001	.005	***	.001	.005	***	.001	.004	***	.001
Homeowner				-1.061	***	.034	-1.067	***	.034	-1.075	***	.034	-1.006	***	.036

Table 2 (continued). Logistic Coefficients for Regression Analyses of Residential Mobility Out of Census Tract of Origin: **Black PSID Householders**, 1968-2005.

Independent Variables	Model 1 b	Model 1 se	Model 2 b	Model 2 se	Model 2 b	Model 2 se	Model 4 b	Model 4 se	Model 4 b	Model 4 se
Household crowding			.168 ***	.029	.170 ***	.029	.171 ***	.029	.170 ***	.029
Long-term resident			-.427 ***	.028	-.419 ***	.028	-.414 ***	.028	-.420 ***	.028
Year			.017 ***	.002	.014 ***	.002	.009	.002	-.001	.003
Constant	-.808 ***	.025	2.387 ***	.128	2.387 ***	.128	2.413 ***	.128	2.520 ***	.137
Wald chi-square	69.53		4460.51		4487.66		4498.51		4493.53	
df	3		14		15		16		20	

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

N of observations = 62,342; N of persons = 6,978

Table 3. Logistic Coefficients for Regression Analyses of Residential Mobility Out of Census Tract of Origin: **White PSID Householders**, 1968-2005.

	Model 1		Model 2		Model 3		Model 4		Model 5	
Independent Variables	b	se	b	se	b	se	b	se	b	se
Contextual characteristics										
Immigrant concentration in neighborhood	.019 ***	.003	.006 *	.003	.002	.003	.002	.003	-.002	.003
Change in neighborhood immigrant concentration	.045 ***	.008	.050 ***	.007	.044 ***	.007	.045 ***	.007	.039 ***	.008
Immigrant concentration in extralocal areas	-.017 ***	.003	-.009 ***	.003	-.009 ***	.003	-.011 ***	.003	-.010 ***	.003
Percent other racial groups in neighborhood					.005 ***	.001	.006 ***	.001	.004 ***	.001
Average family income in neighborhood							.001	.001	.001	.001
Average rent in neighborhood									.024 *	.010
Vacancy rate in neighborhood									-.002	.002
Home ownership rate in neighborhood									-.006 ***	.001
New housing concentration in neighborhood									.005	.001
Micro-level Characteristics										
Age			-.136 ***	.004	-.136 ***	.004	-.136 ***	.004	-.137 ***	.004
Age-squared			.001 ***	.000	.001 ***	.000	.001 ***	.000	.001 ***	.000
Female			.084 *	.039	.080 *	.039	.080 *	.039	.073	.039
Married			-.313 ***	.032	-.313 ***	.032	-.311 ***	.032	-.310 ***	.032
Children			-.192 ***	.027	-.191 ***	.027	-.191 ***	.027	-.183 ***	.027
Education			.010 *	.005	.011 *	.005	.010 *	.005	.006	.005
Family Income (in $1000's)			.002 ***	.000	.002 ***	.000	.002 ***	.000	.002 ***	.000
Homeowner			-.912 ***	.027	-.906 ***	.027	-.907 ***	.027	-.871 ***	.028

Table 3 (continued). Logistic Coefficients for Regression Analyses of Residential Mobility Out of Census Tract of Origin: **White PSID Householders**, 1968-2005.

Independent Variables	Model 1 b	Model 1 se	Model 2 b	Model 2 se	Model 3 b	Model 3 se	Model 4 b	Model 4 se	Model 5 b	Model 5 se
Household crowding			.150 ***	.026	.146 ***	.026	.148 ***	.026	.155 ***	.026
Long-term resident			-.415 ***	.026	-.412 ***	.026	-.411 ***	.026	-.389 ***	.026
Year			.003 *	.001	.001	.001	-.001	.002	-.001	.002
Constant	-1.033 ***	.022	3.220 ***	.103	3.198 ***	.103	3.219 ***	.104	3.506 ***	.116
Wald chi-square	140.26		7939.79		7941.75		7942.77		8076.14	
df	3		14		15		16		20	

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

N of observations = 92,506; N of persons = 9,538

Table 4. Coefficients for Linear Regression Models of the Percentage Foreign-born in Destination Tract: Black and White PSID Householders, 1968-2005.[a]

	Black Householders				White Householders			
	Model 1		Model 2		Model 3		Model 4	
Independent Variables	b	se	b	se	b	se	b	se
Immigrant concentration in neighborhood	.592 ***	.014	.189 ***	.020	.533 ***	.013	.225 ***	.017
Immigrant concentration in extralocal areas			.647 ***	.023			.463 ***	.017
Constant	2.540 ***	.476	.663 ***	.186	3.483 ***	.165	2.234 ***	.132
Lambda (λ)	.167	.470	-.379 *	.162	-.633 ***	.123	-.849 ***	.094
Wald chi-square	1677.37		2820.81		1719.44		2769.77	
df	1		2		1		2	
N of Uncensored Observations (movers)	19,769				24,897			
N of Censored Observations (non-movers)	42,573				67,609			
N of Person-years	62,342				92,506			
N of Persons	6,978				9,538			

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

a. Models were estimate with maximum-likelihood Heckman selection with the selection model containing all variables from Model 5 of Tables 2 and 3.

Figure 1. Trends in Tract and MSA Percent Foreign-born for PSID Households, 1968 to 2005

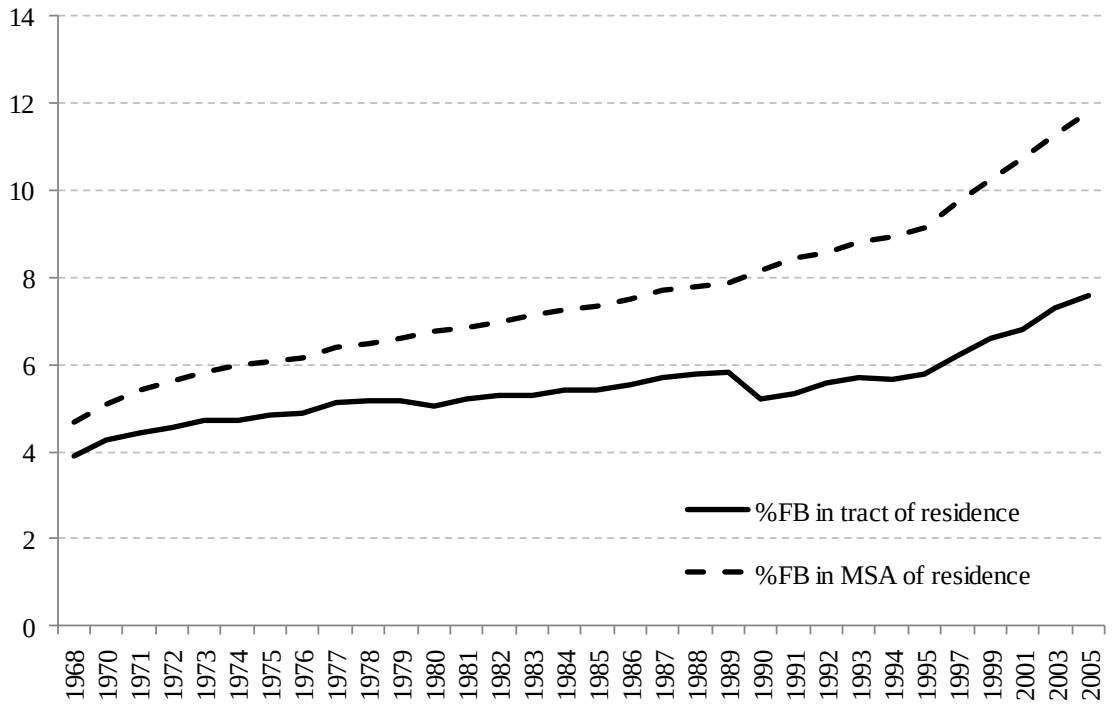


Figure 2. Percent foreign-born in origin and destination tracts for mobile PSID Households, 1968 to 2005

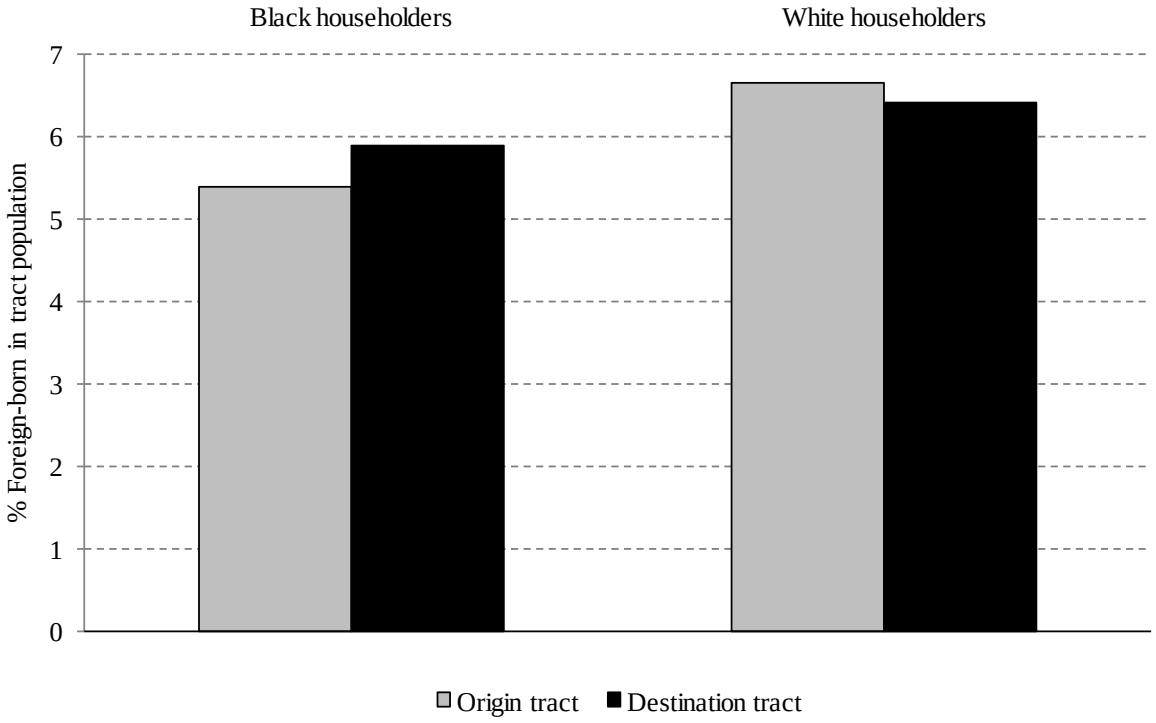
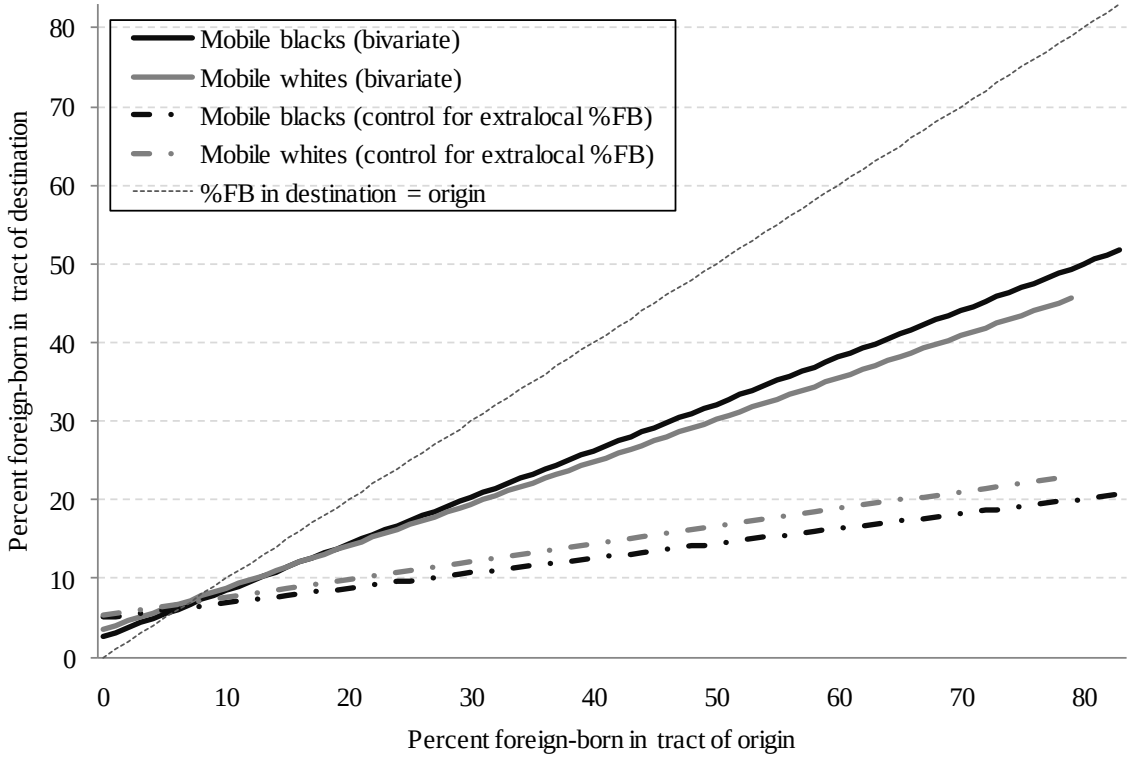


Figure 3. Percent foreign-born in tract of destination by percent foreign-born in tract of origin for mobile PSID householders, 1968 to 2005.



Appendix Table A1. Characterisitcs of Non-Hispanic Black and White PSID Householders, 1968-2005.

		Pooled		Black		White	
Variable	***Definition***	*Mean*	*S.D.*	*Mean*	*S.D.*	*Mean*	*S.D.*
Contextual characteristics							
Immigrant concentration in neighborhood	Percent foreign-born in R's tract of residence at time t	5.486	7.657	4.683	8.067	6.027	7.318
Change in neighborhood immigrant concentration	Difference between times t and t-5 in percent foreign-born in R's tract of residence at time t.	.823	2.111	.819	2.359	.826	1.926
Immigrant concentration in extralocal areas	Distance-weighted average percent foreign-born in tracts within 100 miles of R's tract of residence at time t.	7.130	6.768	6.723	6.919	7.404	6.655
Percent other racial groups in neighborhood	Percent of R's tract of residence at time t with race different from race of the respondent	19.041	25.532	29.065	32.947	12.286	15.694
Average family income in neighborhood	Mean income of families in R's tract of residence at time t, in thousands of dollars	34.368	23.476	26.021	16.364	39.994	25.758
Average rent in neighborhood	Mean rent for renter-ocupied housing units in R's tract of residence at time t, in hundreds of dollars	3.838	2.372	3.348	1.879	4.168	2.602
Vacancy rate in neighborhood	Percent of housing units in R's tract of residence at time t not occupied	7.771	6.443	9.416	6.115	6.661	6.421
Home ownership rate in neighborhood	Percent of housing units in R's tract of residence at time t occupied by the homeowner	61.783	23.161	51.335	24.104	68.825	19.577
New housing concentration in neighborhood	Percent of housing units in R's tract of residence at time t built in preceding ten years	19.395	18.561	14.546	15.880	22.663	19.498
Micro-level characteristics							
Age	Age of R in years at time t	42.068	16.273	39.812	15.128	43.589	16.831
Female	Whether R is female (1=yes)	.336	.472	.476	.499	.242	.428
Married	Whether R has spouse or long-term cohabitor present at time t (1=yes)	.553	.498	.396	.489	.659	.474
Children	Whether R lives in family with any children at time t (1=yes)	.503	.500	.601	.490	.437	.496
Education	Total years of school complete by R by time t	12.423	3.303	11.255	3.020	13.211	3.252
Family Income (in $1000's)	Total taxable income of household head and spouse at time t, in thousands of constant 2000 dollars	48.304	51.239	31.535	26.433	59.605	60.057
Homeowner	Whether R lives in owner-occupied housing unit at time t (1=yes)	.543	.498	.323	.481	.664	.472
Household crowding	Number of persons per room in housing unit at time t	.616	.472	.736	.560	.536	.382
Long-term resident	Whether R had lived in house for 3 or more years as of time t (1=yes)	.550	.498	.511	.500	.576	.494
Moved out of the census tract	Whether R changed census tracts from time t to t+2 (1=yes)	.288	.453	.317	.465	.269	.444
Year	Year of interview, time t	1986.201	9.185	1985.673	9.076	1986.557	9.241
N of person-period observations		154,848		62,342		92,506	
N of persons		16,516		6,978		9,538	