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# WHITE FLIGHT REVISITED: A MULTIETHNIC PERSPECTIVE ON NEIGHBORHOOD OUT-MIGRATION

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## Abstract

Using geo-linked data from the Panel Study of Income Dynamics and the decennial census, we compare probabilities of neighborhood out-migration for Anglos, blacks, Mexicans, Puerto Ricans, and Cubans by varying ethno-racial neighborhood compositions. Analyses for Latinos are disaggregated by nativity status. The results indicate that Anglos have a higher likelihood of moving when they have many minority neighbors and there is little difference whether minority neighbors are black or Latino. Among minorities there is some evidence of "minority flight" from whiter neighborhoods. Cubans, especially foreign-born Cubans, demonstrate the strongest propensity to flee neighborhoods with large black populations, whereas the probability of moving out decreases for Mexicans and Puerto Ricans when their neighbors are more likely to be black. Ethno-racial neighborhood composition has little effect on blacks' decision to leave their neighborhood.

### Keywords

Ethnicity; Neighborhoods; Race; Residential mobility; Segregation

The reluctance of whites to remain in neighborhoods with large and growing minority populations has long been thought to contribute to the creation and maintenance of racially segregated neighborhoods (Birch 1977; Crowder 2000; Duncan and Duncan 1957; Glaster 1990; Krysan 2002; Massey and Denton 1993; Schelling 1971, 1972; Taeuber and Taeuber 1965). However, "white flight" as a primary mechanism of neighborhood change has come into recent question (Ellen 2000). In part, the relevance of "white flight" is suspected to be declining because North American cities are becoming increasingly multiethnic and because the proportion of non-Hispanic white populations in major U.S. cities has decreased. In this context it is often argued that to understand residential settlements in ethno-racially diverse cities, minority locational choices should also be considered (Charles 2003; Clark 1992; Denton and Massey 1991; Fong and Shibuya 2005; Iceland 2004; Maly 2005). Yet, despite this emerging reality, there is a dearth of studies addressing how inter-minority relations shape contemporary urban neighborhoods. Only recently have scholars responded to this limitation and, even then, only for specific cities such as Los Angeles (Charles 2006) and Chicago (Wilson

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and Taub 2006). Here we add to this line of research by asking not only how Anglo households respond to the neighborhood presence of minorities, but also how the residential moves of minorities are affected by having Anglos and other minorities as neighbors.

This study draws from research on neighborhood preferences in order to explain how the racial and ethnic composition of neighborhoods affects moving decisions for Anglo households and minority households. Prior research on race and ethnic neighborhood preferences posits favoritism for in-group members (Clark 1992; Clark and Ledwith 2007) and a hierarchy where by white neighbors are the most preferred ethno-racial out-group and black neighbors are the least preferred ethno-racial out-group (Bobo and Zubrinsky 1996; Bobo 2001; Charles 2000, 2001, 2003, 2006; Harris 2001). The latter aspect is of interest here because whether or not minorities respond to out-group neighbors in a manner similar to Anglos is unknown. By determining the migratory reaction of minorities to their racial and ethnic neighborhood makeup we will gather further insight into the structural constraints and social mechanisms that help maintain racial and ethnic residential segregation.

In this research we focus exclusively on how patterns of neighborhood out-migration are affected by the origin neighborhood's race and ethnic composition. We acknowledge that, among households that move between neighborhoods, the ethno-racial composition of the destination neighborhood is also an important part of the overall story of how inter-neighborhood migration shapes patterns of residential segregation. Indeed, the race and ethnic composition of an area is likely to directly enter into the calculus behind neighborhood destination choice because undesirable crime and poverty rates, real or perceived, are often associated with a neighborhood's racial and ethnic composition (Ellen 2000; Emerson et al 2001; Quillian and Pager 2001). In contrast, the decision to exit a neighborhood is likely influenced by a myriad of factors that are not necessarily related to the racial and ethnic composition of the origin neighborhood. For example, life-cycle characteristics, financial limitations, and social attachments may impede households from moving even if they object to the ethno-racial composition of their neighborhood. However, prior research does suggest that the racial and ethnic composition of a neighborhood is likely to have some effect on exit decisions, at least for whites. For example, Krysan (2002) finds that about 1 in 5 Anglo respondents say they would leave majority black neighborhoods. But the extent to which Anglos actually act on those sentiments, and how minority group members respond to the neighborhood presence of Anglos and other minority groups, is unclear.

To ascertain whether patterns of neighborhood out-migration are influenced directly by neighborhood racial and ethnic composition, or instead, are simply byproducts of different demographic characteristics and socioeconomic factors, we use individual level longitudinal data from the Panel Study of Income Dynamics (PSID) geo-linked to tract level census data. We estimate a series of multivariate logistic regression models that predict the probability of moving from the neighborhood of origin under varying ethno-racial neighborhood compositions. The analysis is done for non-Hispanic whites (i.e. Anglos), non-Hispanic blacks (i.e. blacks), Mexicans, Puerto Ricans and Cubans. We also distinguish between native-born and foreign-born Latinos.

## Revisiting White Flight

The continued salience of white flight as a mechanism of neighborhood change is being contested for several reasons. At the societal level, peoples' publicly expressed views about race have changed. Opinion surveys given since the 1950s show a trend of increasing tolerance among Anglos for minority neighbors (Farley et al 1994; Schuman et al. 1997). According to the Gallup Poll Social Audit (1997), 80 percent of whites in 1958 said they would leave if blacks moved in great numbers to their neighborhood, but this percentage dropped

precipitously to 18 percent by 1997. This social trend suggest that white flight may not be as prominent today as during a time when bigoted behavior was openly accepted by individuals and institutions (cf. Massey and Denton 1993).

Moreover, the ethno-racial composition of metropolitan areas has become increasingly more diverse over the last thirty years. The share of non-Hispanic white population in U.S. metropolitan areas declined from 78 percent in 1980 to 73 percent in 1990 and as of 2000 Anglos make-up roughly 66 percent of urban America (*U.S. Census 2000*, author's calculations). This demographic trend is also reflected in the numerical decline of all-Anglo neighborhoods (Alba et al. 1995; Denton and Massey 1991; Ellen 2000; Maly 2005). These developments suggest that white flight may not be as frequent now as during the post World War II period when the mass construction of suburban housing gave whites incentive and opportunity to flee growing minority neighborhoods (cf. Massey and Denton 1993).

Yet, in the face of increasing racial tolerance and growing ethno-racial diversity scholars are perplexed over the persistence of segregated neighborhoods. As a result different insights are being developed. One new approach focuses on Anglo avoidance of minority neighborhoods in their relocation decisions (Ellen 2000; Quillian 2002; South and Crowder 1998). This argument posits that Anglos are reluctant to move into large minority neighborhoods because neighborhoods with high concentrations of minorities are perceived to be less safe, more disorganized, have fewer amenities, and less effective schools. This viewpoint is captured by Ellen's (2000) "race-based neighborhood stereotyping hypothesis." She asserts that white avoidance of minority neighborhoods are avoidance of poverty and not a reflection of racial prejudice per se (also see Frey 1979). This perspective relegates white flight to a lesser role in the residential separation of whites from minorities while still maintaining a focus on the migration behavior of Anglos.

Despite these social, demographic, and analytic shifts, however, it is difficult to dismiss entirely the existence of white flight. Even when numerous other considerations are taking into account whites are still more likely to prefer fewer rather than more minority neighbors (Charles 2006; Farley et al. 1978, 1994; Harris 2001; Krysan and Farley 2002; Krysan 2002), and the ethno-racial composition of their neighborhoods remains tied to their migration behavior. For example, Birch and colleagues (1977) find that whites in mixed-race neighborhoods are generally more inclined to move than whites in homogeneous neighborhoods, and when Anglos do move they are likely to move to neighborhoods with fewer minorities. Galster (1990) finds that Anglo neighborhoods in Cleveland experienced rapid white population loss after only a few black households arrived. And, Rieder (1985:79–90) attributes the exit of Jews and Italians, in a New York neighborhood experiencing black population growth, to their stereotypes about blacks and their fears about declining property values. Rieder's case study highlights how negative stereotypes about a racial or ethnic group can trigger neighborhood out-migration via material concern, an idea seemingly inline with Ellen's (2001) race-based neighborhood stereotyping hypothesis. More recently, Crowder (2000) finds that the likelihood of leaving a neighborhood for whites increases both with the size of the minority population and when multiple minority groups are present, net of other important demographic and socioeconomic predictors of residential mobility. *Therefore, in classic white flight fashion, we expect that larger minority presence will increase Anglos' propensity to move out of their neighborhood*.

## Is "White Flight" Just for Whites?

Unlike whites, minorities often face discriminatory barriers to attaining and maintaining residence in predominately white neighborhoods (Fischer and Massey 2004; Massey and Denton 1993; Massey and Lundy 2001; Turner et al. 2002; Yinger 1995). The historical record

documents the hostile reaction of whites towards new black neighbors during the Great Migration of southern blacks into northern cities (Massey and Denton 1993, Rieder 1985). More recently, Green and colleagues (1998) find support for the "defended neighborhood hypothesis." The defended neighborhood hypothesis holds that white residents fear neighborhood change and are often proactive in their efforts to ward-off newcomers of different ethno-racial origins. Specifically, Green et al. (1998) find that anti-minority crime is more common in neighborhoods where the Anglo population is large and the minority population is small but growing. This does not deny the possibility that whites may also fear being victimized in minority neighborhoods or that blacks frequently share similar apprehensions as whites about neighborhood poverty and crime (e.g., Anderson 1990; Harris 2001). However, the profile of anti-minority crime corresponds with reasons for why neighborhood preferences are influenced by an area's race and ethnic composition independently of the levels of crime and poverty (Quillian and Pager 2001). For example, Krysan (2002) and Charles (2006) find that the strongest predictor of resistance to racial integration among whites is prejudice, whereas the strongest predictor of black avoidance of white neighborhoods is fear of discrimination. In either case stereotypes about the other ethno-racial group can be influential in affecting moving decisions.

Although outright physical hostility will likely drive minorities from Anglo neighborhoods (and perhaps Anglos from minority neighborhoods), subtler mechanisms that encourage minorities to move may also be at work. Urban renewal and the gentrification of older metropolitan neighborhoods are known to displace minorities (Zukin 1987). Often the places designated for urban renewal are proximate to whiter urban neighborhoods (Massey and Denton 1993), and these government subsidized projects increase property taxes and raise rents causing minorities to flee neighborhoods that are becoming wealthier and whiter (Logan and Molotch 1988). Therefore, compared to whites' disinclination to share neighborhoods with minorities, minorities migratory response to having white neighbors is likely to be less volitional.

Lastly, anti-minority hostility need not be violent or institutionalized to be effective. A more prevalent form of the hostility minorities experience from whites is during mundane day-to-day interactions, in which social status is exchanged, conferred, or denied—a form of hostility that Feagin (1991) describes as common for middle-class blacks in public places. Cumulatively, this actual or perceived hostility can make minorities apprehensive about living with large Anglo populations (Charles 2006; Patterson 1997). For these reasons, *we hypothesize that larger Anglo presence will increase the propensity for neighborhood out-migration among minorities*.

## Do Minorities Flee Other Minorities?

Reports from several U.S. cities indicate that there are frequent tensions between Latinos and African Americans (Mindiola et. al. 2002; Stepick and Grenier 1993) that may surpass conflict between Anglos, on the one hand, and both Latinos and blacks, on the other. Both blacks and Latinos often hold negative stereotypes about, and perceive competition from, the other group (Bobo and Hutchings 1996). Moreover, Latinos and Anglos equally view predominantly black neighborhoods as undesirable (Charles 2006). Evidence also suggests that these racial preferences are coming to the fore in other areas as well. For example, Fairlie (2002) finds "Latino flight" from public to private schools to be more likely as the population of black students increases. Hence, Latinos may be as indisposed as Anglos, or even more so, to having many black neighbors. *Therefore, we expect Latinos to be more likely to move from neighborhoods with large black populations*.

On the other hand, the reaction of African Americans to large and growing Latino populations may be qualitatively different for several reasons. In Chicago, for instance, Wilson and Taub (2006) find that in the black working and middle-class neighborhood of "Groveland," black residents *do not* perceive a threat from the rapidly emerging Latino populations (as do white residents in other Chicago neighborhoods). Wilson and Taub argue that the residents of Groveland are the least ethno-racially antagonistic because the residents do not expect their neighborhood to be subjected to ethno-racial change, and therefore, newcomer Latinos do not trigger negative reactions in black working-class neighborhoods in the same fashion as they do for Anglos that have remained in declining white-ethnic neighborhoods. The same general conclusion is reached by Morenoff and Tienda (1997) in a study of neighborhood transitions in Chicago. Morenoff and Tienda find that older white middle-class neighborhoods are subject to Latino succession, whereas Latino succession does not hold for black neighborhoods. If these observations are generalizable, *we would expect that neighborhood out-migration for blacks will be unaffected by the size of the Latino population.*

## Incorporating Latino Nativity Status

When considering the neighborhood preferences and residential mobility of Latinos it is important to account for national origins and nativity status. Differences in neighborhood contexts exist among Latinos of Mexican, Puerto Rican and Cuban heritage (the three largest Latino groups in the U.S.) because they have come to the U.S. under varied circumstances. These different conditions include refugee status of Cubans, limited access to citizenship for Mexicans, and in the case of subpopulations of Puerto Ricans and Mexicans, the intention of returning to their homelands. These different situations could influence both their neighborhood preferences and moving decisions.

Moreover, it is expected that among the native-born some convergence with neighborhood preferences and migration behavior will have occurred. Assimilation processes suggest that foreign-born Latinos (island-born for Puerto Ricans) are more likely than native-born Latinos (or mainland-born Puerto Ricans) to desire Latinos as neighbors, mostly because of common language and attachments to the home country. There is also evidence that foreign-born Latinos are especially averse to black neighbors. For example, Charles (2006) reports that as many as 38 percent of foreign-born Latinos in Los Angles desire no black neighbors at all, while only 19 percent of native-born Latinos and 20 percent of Anglos desire no black neighbors. *This suggests that foreign-born Latinos will be more likely than native-born Latinos to move from neighborhoods with large black populations*.

## DATA AND METHODS

To test the hypotheses developed above, we use longitudinal data from the Panel Study of Income Dynamics (PSID) for the period 1990–1995, in conjunction with census tract data from the decennial census. We use census tracts to represent neighborhoods. Attaching census data that reports tract-level percentages for the total minority population (which includes all those that are not non-Hispanic white), non-Hispanic black population, and Latino population at each annual PSID interview allows us to determine which PSID respondents move out of neighborhoods of a given racial and ethnic composition.

Begun in 1968 with approximately 5,000 families, the PSID sample has been interviewed continuously, and new families have been added to the sample as children leave home to form new households (Hill 1992). Because prior to 1990, the PSID had no mechanism for incorporating immigrants into the sampling frame, a limitation of the original PSID sample is that it severely under represents Latino residents of the U.S. In 1990 the PSID attempted to remedy this limitation by adding to the database a sample of Latinos. This sample of 2,043

Latino families was originally drawn as part of the Latino National Political Survey (LNPS) (de la Garza et al. 1998). Beginning in 1990 and continuing through the 1995 round of interviews, the PSID interviewed on an annual basis the members of those households and, as with the PSID core sample, followed those members who left the original household. Our analysis uses the original PSID sample merged with the LNPS sample.[1]

## Sample Selection

To examine residential moves made by Latino, black, and Anglo households, our sample includes respondents who were classified as heads of the household either at the beginning *or* at the end of an annual mobility interval. To align our results more closely with prior studies of white flight, we restrict the sample to PSID household heads who began and ended a mobility interval in the same metropolitan area. Excluding inter-metropolitan moves led to a sample reduction of 174 respondents. Applying these selection criteria results in a sample of 9,431 PSID respondents.

Analyses are conducted for five ethno-racial groups: non-Hispanic whites (i.e., Anglos), non-Hispanic blacks (i.e., blacks), Mexicans, Puerto Ricans, and Cubans. We further distinguish between the foreign-born and native-born members of the three Latino groups because neighborhood preference data posits differences between immigrants and native-born Latinos.[2] Our effective sample includes 4,213 Anglos, 3,094 blacks, 1,166 Mexicans, 416 Puerto Ricans, and 542 Cubans.

## Dependent Variable

Our dependent variable is a dichotomous variable indicating whether the respondent moved out of the census tract of origin between consecutive PSID interviews, scored 1 for movers and 0 for nonmovers.

## Independent Variables

The three main independent variables of interest are the percentage of the origin tract that is minority, the percentage of the origin tract population that is non-Hispanic black, and the percentage of the origin tract that is Latino. Tract-level census data are drawn from the Neighborhood Change Database (NCDB) in which census tract boundaries have been normalized across censuses. We use linear interpolation to describe the racial and ethnic composition of census tracts (and metropolitan areas) during intercensal years. We interact these tract level compositional variables with the respondent's ethno-racial identification to test hypotheses regarding the impact of neighborhood racial and ethnic composition on the propensity to move out of the neighborhood of origin between successive PSID interviews.

## Control Variables

Numerous factors are known to influence a household's decision to move. Residential moves are often related to the changes that occur during the life-course, for instance, new housing needs resulting from social partnerships, births, and aging, as well as, employment transitions and increases to a household's income and wealth. Residential choices are also associated with housing supply, neighborhood amenities (such as schools and parks), and overall affordability (Clark 1996; Harris 1999; South and Crowder 1997, 1998). Our analysis includes several control variables that are known to be associated with residential mobility.

[1]Our analysis is limited to the period 1990 to 1995 because those are the only years that the PSID followed the Latino sample. Due to funding cuts the data collection on the original PSID Latino sample ceased in 1995.

[2]Although island-born Puerto Ricans are technically internal migrants rather than immigrants, we consider them immigrants in this analysis in order to draw comparisons with foreign-born Mexicans and Cubans. Latinos of other origins, members of racial groups other than black or white, and foreign-born whites and blacks are represented in too few numbers in the PSID to sustain analysis.

Age is measured in years, and its squared value is included to capture nonlinear effects on the propensity to migrate. Sex and marital status are captured by dummy variables (0 for males, 1 for females; 0 for not married, 1 for married). The presence of children is measured by the total number of children in the household. Family income refers to the total taxable income of husband and wife, measured in thousands of constant 1990 dollars. Education is measured by years of school completed. Home ownership is a dummy variable scored 0 for renters and 1 for owners. Residents of public housing are distinguished from residents of private sector housing by a dummy variable. Household crowding is measured by the number of persons per room. Dummy variables indicate whether a respondent became employed or became unemployed (including retirement), and whether a marital union formed or dissolved, between successive PSID interviews. We control for the percentage of the population that is minority in the metropolitan area of origin to account for the effect of larger local minority populations on rates of white out-migration (Massey and Gross 1991).

In addition to these controls it is also important to account for the desirability of neighborhood that is independent of the neighborhood's racial and ethnic composition. For this purpose we have constructed a composite index composed of the following census tract indicators: percentage of civilian males between 16 and 64 that are not employed, percentage of female headed households with children under 18, inverse median income, and the poverty rate. These indicators are standardized, aggregated, and divided by four to form a scale that measures neighborhood socioeconomic disadvantage, a replication of Hannon (2005). The neighborhood disadvantage index is known to be strongly associated with homicide rates (Hannon 2005), social disorder and poor collective efficacy (Sampson and Raudenbush 1999) and negative health outcomes (Ross and Mirowsky 2001). Cronbach's alpha reliability score for this measure is .90 for 1990 and 2000, and we use linear interpolation to estimate values for intercensal years. Not surprisingly, there are strong correlations between neighborhood ethno-racial composition (percent minority, percent black, percent Latino) and the disadvantage index (in the area of .7), but diagnostics indicate that multicollinearity is not problematic. Controlling for neighborhood disadvantage should attenuate racial disparities in neighborhood quality that result from socioeconomic factors (cf. Clark and Ledwith 2007; Ellen 2000). All of these variables except for respondent's sex, race, and nativity status are measured annually at the beginning of each migration interval and are treated as time-varying covariates.

## Analytical Strategy

Because we are able to identify the PSID respondents' census tract at each annual interview, it is possible to observe more than one residential move for each respondent between 1990 and 1995. To fully exploit this information, we structure the data file in "person-year" format, each observation pertaining to the year between annual consecutive interviews. Each PSID respondent in our sample could contribute a maximum of 5 person-years to the analysis. The 9,431 PSID respondents in our sample contributed 31,594 person-year observations to the analysis.

We use logistic regression to examine the effects of the explanatory variables on the likelihood that respondents will move out of their origin tract between successive PSID interviews. Our modeling approach is comparable to a repeated-events discrete-time hazard model that omits an explicit parameterization of duration dependence as would be captured, for example, through dummy variables tapping the duration of residence in the respondents' neighborhood at the beginning of each annual migration interval (Allison 1984:14–22).[3] Because the same PSID respondent can contribute more than one person-year to the analysis, and because inter-neighborhood mobility is a repeatable event, the usual assumption of the stochastic independence of error terms underlying tests of statistical significance is violated. We correct

for this non-independence of observations by computing cluster specific robust standard errors that derive from the Huber/White estimate of variance (Wooldridge 2002; StataCorp 2005).

## RESULTS

Table 1 reports descriptive statistics for the variables used in the analyses of neighborhood out-migration. Over the study period (1990 to 1995), an average of 14 percent of household heads moved out of their neighborhoods annually. Neighborhood out-migration was slightly higher for blacks (19 percent) and lowest for Puerto Ricans and Cubans (9 and 11 percent, respectively). These differential rates of mobility are matched with distinctive demographic profiles for each ethno-racial group. For example, Cubans tend to be older on average than the rest of the sample. Blacks and Puerto Ricans have roughly half of their households headed by women, while only 24 percent of Anglo households have female heads, with Cubans and Mexicans falling in-between. The number of children living at home is highest for Mexicans and Puerto Ricans and lowest for Cubans, and this difference mirrors the average number of people per room in the home.

There are also pronounced socioeconomic differences among these groups. Anglo households, on average, earn nearly twice the income as the other ethno-racial groups. The lowest family income is for Puerto Ricans with an average of about thirteen-thousand dollars yearly (in 1990 dollars). Average education for Anglos exceeds high school and is lowest for Mexicans. Rates of homeownership range from 67 percent for Anglos to 19 percent for Puerto Ricans. Other notable differences include utilizing public housing and employment transitions. Residence in public housing is the least common for Anglos and Mexicans and more than twice as prevalent for Puerto Ricans as for blacks. For employment changes, Latinos are the most likely to transition into employment, while Anglos are the most likely transition into unemployment/retirement. These different group characteristics likely affect the propensity for residential mobility and are thus controlled for in the regression analyses.

Table 1 also presents the descriptive statistics for the neighborhood characteristics of interest. First, we consider differences in the social class status of the respondents' neighborhoods. The average level of socioeconomic disadvantage for neighborhoods in which Anglos live (−.35) is over one standard deviation better than for neighborhoods inhabited by blacks (1.02) and Puerto Ricans (1.11). Among minorities the highest level of neighborhood socioeconomic disadvantage is for Puerto Ricans. The level of neighborhood disadvantage for Cubans is slightly below the overall mean while the level of neighborhood disadvantage for Mexicans is slightly above the overall mean.

Turning to the main independent variables of ethno-racial neighborhood composition—as indicated by percent minority, percent non-Hispanic black, and percent Latino in a respondent's census tract of origin—several observations are worth noting. Not surprising, members of each

[3]Our reason for omitting a measure of duration of residence at the beginning of each migration interval is that we lack this information for a large portion of our sample. While this information is imperfectly available for white and black respondents in the core PSID sample, it is not available at all for the PSID-Latino sample. The PSID-Latino sample began in 1990 and did not include information in the initial wave on how long Latinos had lived in their current neighborhood. However, for several reasons we do not believe that the omission of an explicit parameterization of the duration dependence of inter-neighborhood residential moves is likely to severely bias our results. First, Lee et al. (1994) and South and Crower (1997) have shown that the effect of key predictors on residential mobility remains largely unaffected by whether or not duration of residence is controlled. Second, in supplementary analyses we included an admittedly crude measure of duration of residence—whether respondents had lived in their neighborhood of origin for one or more years. As recommended by Allison (1984: 57), we removed all observations from the first interval-year (1990) and created a lagged dummy variable for those that have lived in the same neighborhood for more than one year. As expected, the coefficient for the dummy variable indicating duration of residence of greater than one year is significant and negative. More importantly, however, adding this control does little to alter the coefficients of primary interest that estimate the effects of racial and ethnic neighborhood composition on neighborhood out-migration. Overall, then, to the extent that we are able to examine the issue of time dependence, it does not appear that the lack of data on the duration of residence greatly compromises our analysis.

ethno-racial group tend to live in neighborhoods with a greater representation of co-ethnics than of out-group members, although variation in the extent of co-ethnic neighborhood representation is noteworthy. For example, Cubans live in neighborhoods that on average are 72 percent Latino; and blacks on average live in neighborhoods that are roughly 65 percent black. Mexicans and Puerto Ricans also live in neighborhoods that have far greater Hispanic representation than their population share at large would suggest (56 and 50 percent, respectively). Overall, the average metropolitan neighborhood is roughly half minority (i.e. not non-Hispanic white for this period), and there are large differences between the average minority neighborhood composition for blacks and Latinos and the average minority neighborhood composition for Anglos. There are relatively small differences (9 percent at most) among blacks, Mexicans, Puerto Ricans and Cubans in their average minority neighborhood composition.

However, by examining neighborhood compositions with greater detail the differences between minority groups in their neighborhood ethno-racial composition becomes more revealing. Foremost, there is little overall neighborhood integration between blacks and Latinos. For example, blacks live in neighborhoods with roughly the same percentage of Latinos as Anglos (7.03 percent for blacks versus 7.05 for Anglos), and Cubans live in neighborhoods that are slightly less black than the neighborhoods in which Anglos live (roughly 4 percent black for Cubans and 6 percent black for Anglos). Puerto Ricans are the only Latino group to live in neighborhoods where the share of black neighbors (22 percent) is greater than would be expected given the overall size of the non-Hispanic black population. Partial explanation for these initial differences in neighborhood composition are regional clustering of Latinos, similarities and differences in socioeconomic status, and the legacy of a racialized housing-market. What remains unanswered is whether these neighborhood ethno-racial compositions influence neighborhood out-migration for these groups once demographic and socioeconomic factors are taken into account.

Table 2 presents the results of a multivariate logistic regression analysis of neighborhood out-migration. The findings presented in Model 1 are similar to prior research where demographic and socioeconomic characteristics are shown to be associated with residential mobility (Crowder 2000,South and Crowder 1997,1998). The curvilinear relationship between age and out-migration indicates that the likelihood of moving from the tract of origin declines with age, but at a decreasing rate. Being married, having more children at home, and becoming unemployed reduce the odds of neighborhood out-migration. Forming or dissolving a marital union and living in more crowded household conditions increase the likelihood of moving. Education slightly increases the propensity to move while residing in public housing suppresses residential mobility. Homeownership has a large negative effect on neighborhood out-migration. Again, these correlates are consistent with prior research on residential mobility.

Model 1 also illustrates the differences in the propensity for neighborhood out-migration among Anglos, blacks, Mexicans, Puerto Ricans and Cubans. Controlling for other factors, the odds of blacks moving are about 20 percent greater [$(e^{\cdot 181}-1)$ *100] than that of Anglos, and the odds of Cubans moving are 28 percent greater [$(e^{\cdot 247}-1)$* 100] than that of Anglos. For Puerto Ricans the odds are 48 percent lower [$(e^{-\cdot 654}-1)$ *100] than that of Anglos. The propensity of Mexican households to leave their neighborhood does not differ significantly from Anglos once other factors are controlled. Overall, accounting for influential factors related to neighborhood out-migration only modestly changes the initial group differences presented in Table 1. Anglos and Mexicans converge on their propensities for out-migration, while Puerto Ricans remain the least likely to move out of their neighborhood.

### Multivariate Analysis of White and Minority Flight

To address the hypothesis concerning the relevance of white flight, we introduce interaction terms into the regression model. The interaction terms are the products of the neighborhood percent minority and the respondent's ethno-racial identification. Model 2 of Table 2 reports the results. Percent minority in the origin tract has a positive and significant effect (b=.004, $p < .05$) on Anglo out-migration. An increase in the size of the minority population of one standard deviation (19 percentage points) increases the odds of whites leaving their neighborhood by about 8 percent [$(e^{(.004*19)}-1)*100$], net of other influential factors.

In addition to whites being averse to large minority populations, we also hypothesized that minorities are likely to flee largely Anglo neighborhoods (albeit for potentially different reasons). By taking the inverse of the coefficients for percent minority in Model 2, in conjunction with the coefficients for the interaction terms, we can assess the relationship of non-Hispanic white population size on neighborhood out-migration. The net effects of Anglo population size on neighborhood out-migration for blacks (b=.005 −.004= .001), Mexicans (b=.008−.004= .004), Puerto Ricans (b= .016 −.004= .012) are all positive and significant, indicating a tendency for blacks, Mexicans and Puerto Ricans to flee whiter neighborhoods. The exception is for Cubans who are as likely as Anglos to not move from whiter neighborhoods (b= .000 −.004= −.004). For Puerto Ricans the interaction effect is larger in absolute value than the effect for Anglos (.012 versus .004, respectively) suggesting that Puerto Ricans are more likely to move from whiter neighborhoods than are Anglos to move from larger minority neighborhoods.

The key findings in Model 2 are illustrated in Figure 1, where we graph the predicted annual probabilities of neighborhood out-migration under increasing shares of minority neighbors (Figure 1a), and alternatively, increasing shares of non-Hispanic white neighbors (Figure 1b). The calculations for the predicted probabilities are derived by holding all non-relevant covariates at their group specific means. For Anglos the predicted annual probability of out-migration is .07 when the neighborhood minority population is 10 percent, compared to .10 when the neighborhood minority population is 90 percent, a fairly modest .03 net difference annually in the probability of neighborhood out-migration, controlling for socioeconomic and demographic determinants.

In Figure 1b the focus turns to minorities' propensity for out-migration when their neighbors are increasingly white. As noted above, the reaction of Cubans to increasing Anglo neighborhood presence is similar to Anglos themselves, and this effect is illustrated by the parallel slopes for Cubans and Anglos. Among blacks the effect of white neighbors is not statistically significant from zero (significance test not shown), and this is reflected in the visually flat slope for blacks. In fact, the predicted annual probability of out-migration for blacks is roughly .14 whether they live in neighborhoods that are 10 percent white or 90 percent white.

Among Mexicans and Puerto Ricans the relationship between neighborhood percent non-Hispanic white and neighborhood out-migration is positive and statistically significant from zero (significance test not shown). The annual predicted probability for Mexicans is .08 when Anglos represent 10 percent of the neighborhood population compared to .10 when Anglos represent 90 percent of the neighborhood population, a small but meaningful .02 net difference annually in the predicted probability of out-migration. The effect of Anglo neighborhood population size is substantially stronger among Puerto Ricans: in 10 percent Anglo neighborhoods Puerto Ricans' probability of out-migration is .05 compared to .12 at 90 percent Anglo, a .07 net difference annually in the predicted probability of neighborhood out-migration. That Mexicans and Puerto Ricans are found to be more likely to move from whiter

neighborhoods is a previously unrecognized factor that may be associated with increasing levels of Latino/White residential segregation (Logan et al 2004).

### Multiethnic Comparisons of Neighborhood Out-Migration

While Anglo versus minority comparisons illustrate important societal and demographic patterns, there is growing concern in multiethnic cities that inter-minority relations shape neighborhood demographic change. To examine this possibility we decompose the minority composition of neighborhoods into percent non-Hispanic black and percent Latino. The results are presented in Model 3 and Model 4 of Table 2. As shown in Model 4, Anglos respond fairly similar to neighborhood percent black (b=.006) and neighborhood percent Latino (b=.004), though only the coefficient for percent non-Hispanic black attains statistical significance.

Figure 2 illustrates these neighborhood out-migration patterns under varying levels of black and Latino neighborhood compositions. Again, the slopes represent predicted annual probabilities of neighborhood out-migration and are calculated by holding all covariates at their group specific means except for the neighborhood percent black (Figure 2a) and neighborhood percent Latino (Figure 2b.). Looking at the slopes for Anglo, we see a slight gradual increase in the probability of neighborhood out-migration as the relative sizes of the black and Latino populations grow larger. The independent effect of black neighbors on white exit decisions is stronger than the effect of Latino neighbors. The predicted annual probability of white out-migration is .12 when the neighborhood is 90 percent black compared to .10 when the neighborhood is 90 percent Latino. The predicted annual probability of white out-migration is .08 whether the neighborhood is 10 percent Latino or 10 percent black. These findings support the expectation that Anglo households will be increasingly more likely to exit a neighborhood when there are larger percentages of black and Latino neighbors.

Continuing with the results in Model 4 of Table 2, we compare the reaction of Latinos to black neighbors while controlling for Latino neighborhood composition and other determinants of neighborhood out-migration. The interaction terms indicate that the effect of neighborhood percent non-Hispanic black is significantly different from Anglos for Mexicans and Puerto Ricans (b=.006 + −.012= −.006) and for blacks (b=.006 + −.007= −.001). Perhaps surprisingly, the odds of neighborhood out-migration decrease by 6 percent for Mexicans [($e^{.006-.012*11}$ -1) *100] and decrease by 13 percent for Puerto Ricans [($e^{.006-.012*23}$ -1)*100] for a one standard deviation increase in the percentage of the neighborhood population that is black. Among blacks, the odds of neighborhood out-migration decline only slightly with larger shares of black population in the tract. Interestingly, these findings indicate that Mexicans (z-score=2.28, one-tail $p < .05$) and Puerto Ricans (z-score= 1.67, one-tail $p < .05$) are significantly less likely than blacks to flee neighborhoods with larger shares of black neighbors.

In Figure 2a we illustrate these findings for Latinos. Mexicans and Puerto Ricans appear to be retained in neighborhoods with comparatively large black populations, as indicated by the steep decline in the probability of out-migration. Cubans, on the other hand, appear averse to large shares of black neighbors, exhibiting a slope that is steeper than that of Anglos (although the difference is not statistically significant from Anglos). The slope for Cubans is, however, significantly different from the other three minority groups (significance test not shown). For Cubans the predicated annual probabilities of neighborhood out-migration is .08 when their neighborhood is 10 percent black compared to .22 when the neighborhood is 90 percent black, a .14 net annual difference in predicted probability of out-migration. This trajectory for Cubans is what we would expect given a generalized notion of Latino neighborhood preferences and reports of inter-minority tension. The only evidence thus far we find of “Latino flight” from blacks neighbors is for Cuban residents.

Turning to how minority household heads respond to the presence of Latinos, the interactions between neighborhood percent Latino and ethno-racial group membership show that Mexicans and Puerto Ricans are significantly less likely to flee Latino neighborhoods than comparable Anglos (Table 2, Model 4). As the relative size of the Latino population increases, the log-odds of moving from their neighborhood of origin decline by .002 for Mexicans and .011 for Puerto Ricans. The effect of Latino neighbors on Cubans is not statistically different from Anglos, with all other variables held constant.

Comparing the reaction of blacks to Latino neighbors there is no evidence that blacks flee neighborhoods with large Latino populations. Among blacks, the effect of neighborhood percent Latino on out-migration is not statistically different from zero, Anglos, or any of the Latino subgroups. Figure 2b illustrates this finding: the flat slope for blacks indicates that there is no net effect of Latino neighborhood population size on the probability that blacks will exit the neighborhood of origin. This finding is consistent with Wilson and Taub's (2006) observation that blacks do not consider Latinos to be a grave threat to the quality or stability of their neighborhoods.

### Nativity Status and the Effect of Ethno-Racially Diverse Neighborhoods

Table 3 examines the differences between native and foreign-born Latinos in the likelihood of moving from their neighborhoods at varying percentages of Latino and black neighbors. In Table 3 (Models 1b, 2b, and 3b), the interactions between neighborhood racial and ethnic composition and foreign-born status attain statistical significance only for Cubans (Model 3b). Among native-born Cubans the odds of leaving their neighborhood decrease by 17 percent for a one standard deviation (11 percentage points) increase in black neighbors[$(e^{-.017*11}-1)*100$]. In contrast, among foreign-born Cubans the odds of leaving a neighborhood increase by 26 percent for a one standard deviation (11 percentage point) increase in black neighbors [$(e^{-.017+.038*11}-1)*100$]. Thus, the odds of out-migration are about 2 percent greater for foreign-born Cubans relative to similarly situated native-born Cubans for each additional percentage of neighbors that are black. Of the groups considered here foreign-born Cubans appear the most likely to exit African American neighborhoods.

## CONCLUSION AND DISCUSSION

When studying the causes of neighborhood segregation along ethno-racial lines it is important to consider patterns of residential mobility. For decades a major focus of segregation research has been on the exiting decisions of whites from large minority—particularly black—neighborhoods. Here we revisit this issue by suggesting that "white flight" is just one of several migration behaviors that generate ethno-racial neighborhood change. More specifically, we explore the possibility that the decision to move for minority households are just as affected by their ethno-racial neighborhood composition as it is for Anglo households. In order to evaluate this possibility, we compare the propensity for neighborhood out-migration among blacks, Anglos, Mexicans, Puerto Ricans and Cubans under varying race and ethnic neighborhood compositions. The results provide several key insights that call for a broader understanding of the social constraints and mechanisms that sustain residential segregation and generate ethno-racial neighborhood change.

First, with regards to the notion of white-flight as a classic aspect of neighborhood change, we find modest support for this claim during the study period. The evidence suggests that whites' aversion towards minority neighbors remain a motivation for their neighborhood out-migration. Specifically, we find that an increase in percent black and percent Latino neighbors produces a greater likelihood of Anglo neighborhood out-migration, although the effect is only statistically significant when minority neighbors are black. These modest findings are not

unexpected given the proportional decline of white populations in major U.S. cities and the liberalizing trend of Anglo attitudes towards minority neighbors.

However, a possible limitation to this finding is that the study's time frame is not recent enough to capture the effect of increasing dispersion of foreign-born populations and the mass politicizing of immigration, and hence, the potential heightened awareness and xenophobic reaction of whites. If this is the case we may find in a more recent assessment, as Van Hook and Snyder (2007) find for white school children in California, and Wilson and Taub (2006) find in an earlier period for Chicago, that whites are feeling increasingly uncomfortable with foreign-born groups as neighbors, many of which are Latino.

Second, when we assess out-migration under percent Anglo neighbors we find a greater likelihood of out-migration from whiter neighborhoods for blacks, Mexicans, and Puerto Ricans. Given the established hierarchy of neighborhood preferences that favor whiter neighborhoods for their resources and advantages (Charles 2006) this finding is telling. We have suggested that a legacy of racial discrimination leaves minorities apprehensive about being among the few minorities in Anglo neighborhoods because of real or perceived hostility. Future research would be wise to identify in more detail the specific mechanisms that are producing "minority flight" from Anglo neighborhoods. Outright physical threats and the political economy of urban development are suspects, but we have also suggested a "softer" explanation that looks beyond housing discrimination to the fabric of contemporary race relations in day-to-day interaction (Feagin 1991). It is also possible that minorities leave predominantly white neighborhoods in order to seek in-group members as neighbors (cf., Clark 1992, Clark and Ledwith 2007).

A third key finding is that the out-migration patterns for Latino groups under varying levels of black neighborhood representation are varied. Cubans conform the closest to our expectation that Latinos will be as likely, if not more likely, than Anglos to move from neighborhoods containing large shares of black residents, and this holds especially true for foreign-born Cubans. On the other hand, the trend for Mexicans and Puerto Ricans is counter to what we would expect given what is known about Latino neighborhood preferences. The finding that Mexicans and Puerto Ricans are less likely to move when their neighbors are more likely to be black may reflect a growing affinity between these two ethno-racial groups.

Fourth, we find that among blacks the propensity for out-migration is the least affected by neighborhood ethno-racial composition. On the one hand, this could mean, as Wilson and Taub (2006) find, that the African American community does not perceive Latinos to be a threat to their neighborhood quality and stability. On the other hand, the inability of blacks and other minorities to actualize their neighborhood preference can be seen as a cause for concern. For instance, it could be that housing discrimination for blacks limits their ability to react to the presence of other minorities even when ethno-racial antagonisms are high. This possible discord between people's residential wishes and the opportunities to actualize those wishes may feedback to amplify urban racial and ethnic tension. Accordingly, further research on how minorities' migration behavior responds to the relative numbers of both majority group members and the members of other minority groups is warranted.

In this research we have also considered the possibility that ethno-racially diverse neighborhoods are more preferable than neighborhoods that consist entirely of members from another ethno-racial group (Charles 2006; Ellen 2000; Maly 2005). In supplementary analysis (not shown here), we investigated this possibility by looking for nonlinear effects of neighborhood racial and ethnic composition on the likelihood of neighborhood out-migration. However, the results for the groups considered here during this period indicate that a linear function is the proper specification of the effect of neighborhood ethno-racial composition on

neighborhood out-migration. The linear response of Anglo out-migration to the relative size of the minority population is not entirely consistent with some research on this issue (Crowder 2000). Perhaps our inability to detect nonlinear effects is a consequence of the study's rather short time frame or that the functional form of the relationship between neighborhood racial composition and out-migration might have changed over time. Of course, it is also possible that patterns of neighborhood entry correspond more closely with theoretical models that anticipate nonlinear effects (i.e., Schelling 1971).

As mentioned in the introduction, neighborhood out-migration is only part of the residential mobility process, and out-migration is unlikely to contribute to persistent levels of residential segregation unless matched with equally aversive destination decisions. Ellen (2000) and Quillian (2002) posit that a significant factor in the maintenance and persistence of white/minority neighborhood segregation is not only white-flight from minority neighborhoods, but also Anglo reluctance to move *into* minority neighborhoods when Anglo households do move. In support of this claim, South and Crowder (1998) and Quillian (2002) have shown that when white households do move from their origin neighborhoods, they tend move to neighborhoods that are "whiter" than their neighborhoods of origin, hence increasing levels of white-minority segregation. Although a thorough examination of the origin and destination neighborhood characteristics for multiple ethno-racial groups would correspond nicely with prior research that has focused solely on Anglos, it is unfortunately beyond the scope of this paper to analyze the effect of racial and ethnic neighborhood composition for multiple groups on both entry and exit decisions. Accordingly, a complete account of how minority inter-neighborhood migration impacts racial and ethnic residential segregation awaits further research. It is possible, for example, that minorities' decision to move into a neighborhood of a given racial and ethnic composition correspond more closely than their exit decisions to their ethno-racial neighborhood preferences than do their out-mobility patterns.

Lastly, we acknowledge that some of the observed associations between neighborhood racial and ethnic composition and out-migration may reflect the effect of neighborhood characteristics that are correlated with ethno-racial composition. Nonetheless, according to our results, accounting for the level of neighborhood socioeconomic disadvantage does not eliminate the effect of neighborhood ethnic and racial composition on out-migration. We find this result to be consistent with the research on neighborhood stereotyping whereby the racial composition of the neighborhood has an effect on the assessment of neighborhood quality independent of crime levels, housing values, and other neighborhood characteristics (Emerson et al. 2001; Quillian and Pager 2001).

In addition to evaluating minority destination decisions in light of these out-migration patterns, future research might benefit by extending these analyses in several other directions as well. First, although we were unable to include Asian ethnicities into the analysis, they are certainly an important part of today's urban fabric. The uniqueness of Asian subgroups should not be overlooked, and their migratory responses to other minorities hold perhaps the greatest potential to develop further theoretical insight. Secondly, we were also unable to evaluate the relationship between the foreign-born composition of neighborhoods and neighborhood out-migration. Exploring the migratory reaction of native-born residents to different groups of recent immigrants is a research project worth pursuing. And finally, research showing how patterns of neighborhood out-migration respond to changes in the social and demographic structure of neighborhoods will likely enhance our understanding of how inter-neighborhood migration contributes to ethnic and racial residential segregation. This longitudinal approach should incorporate racial and ethnic residential decisions over more recent time frames to directly assess the effects of neighborhood migration on levels of, and changes in, residential segregation.

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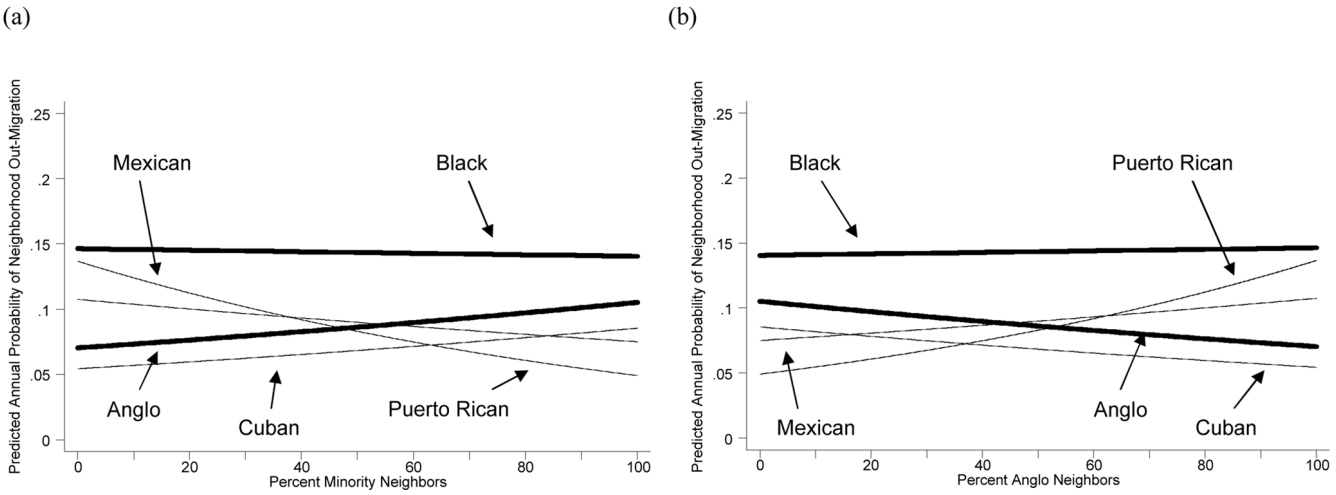


**Figure 1.**

Predicted Annual Probabilities of Neighborhood Out-Migration, by Percent Minority Neighbors and Percent Anglo Neighbors [1]

1) All probabilities are calculated using the coefficients from Table 2, Model 2 holding non-relevant covariates constant at their group specific means.

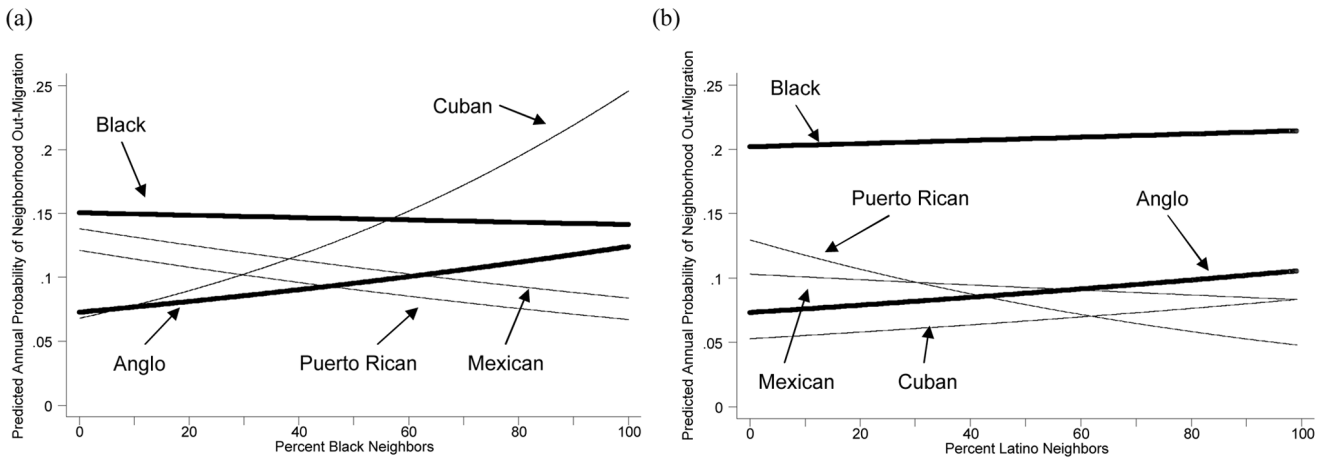


**Figure 2.**

Predicted Annual Probabilities of Neighborhood Out-Migration, by Percent Black and Percent Latino Neighbors [1]

1) All probabilities are calculated using the coefficients from Table 2, Model 4 holding non-relevant covariates constant at their group specific means.

## Table 1

Descriptive Statistics for Variables Used in the Analysis of Neighborhood Out-Migration, by Race and Ethnicity: Panel Study of Income Dynamics, 1990–1995.

| | Metric | | Full Sample | | Anglos | | Blacks | | Mexicans | | Puerto Ricans | | Cubans | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Min | Max | Mean | (S.D.) | Mean | (S.D.) | Mean | (S.D.) | Mean | (S.D.) | Mean | (S.D.) | Mean | (S.D.) |
| **Dependent Variable** | | | | | | | | | | | | | | |
| Moved from origin neighborhood | 0 | 1 | .14 | (.35) | .12 | (.32) | .19 | (.39) | .13 | (.34) | .09 | (.29) | .11 | (.31) |
| **Independent Variables** | | | | | | | | | | | | | | |
| *Demographic Characteristics* | | | | | | | | | | | | | | |
| Age | 15 | 104 | 44.33 | (16.47) | 45.10 | (16.82) | 42.20 | (15.74) | 42.62 | (15.48) | 45.09 | (16.22) | 52.92 | (16.63) |
| Female | 0 | 1 | .34 | (.47) | .24 | (.43) | .48 | (.50) | .27 | (.44) | .50 | (.50) | .30 | (.46) |
| Married | 0 | 1 | .54 | (.50) | .64 | (.48) | .36 | (.48) | .63 | (.48) | .40 | (.49) | .59 | (.49) |
| Number of Children | 0 | 9 | .98 | (1.26) | .79 | (1.09) | 1.09 | (1.33) | 1.49 | (1.48) | 1.17 | (1.35) | .61 | (.93) |
| Family Income (in $1,000s) | −809 | 4451 | 28.01 | (45.40) | 40.55 | (61.77) | 17.87 | (21.42) | 19.78 | (22.12) | 12.91 | (17.83) | 20.42 | (23.58) |
| Education (years) | 1 | 20 | 11.93 | (3.31) | 13.25 | (2.62) | 11.63 | (2.67) | 9.46 | (4.09) | 9.66 | (3.97) | 10.91 | (3.81) |
| Homeowner | 0 | 1 | .51 | (.50) | .67 | (.47) | .34 | (.47) | .50 | (.50) | .19 | (.39) | .51 | (.50) |
| Persons per room | 0 | 8 | .60 | (.40) | .49 | (.26) | .62 | (.40) | .87 | (.59) | .74 | (.43) | .66 | (.38) |
| Public housing resident | 0 | 1 | .08 | (.27) | .02 | (.14) | .14 | (.35) | .06 | (.24) | .30 | (.46) | .08 | (.27) |
| Became employed (t-1 to t) | 0 | 1 | .08 | (.27) | .04 | (.19) | .06 | (.24) | .20 | (.40) | .15 | (.36) | .18 | (.39) |
| Became unemployed (t-1 to t) | 0 | 1 | .17 | (.38) | .19 | (.39) | .18 | (.38) | .15 | (.36) | .11 | (.31) | .14 | (.34) |
| Change in marriage status (t-1 to t) | 0 | 1 | .08 | (.26) | .07 | (.26) | .08 | (.28) | .08 | (.26) | .06 | (.24) | .07 | (.25) |
| Foreign-born | 0 | 1 | .15 | (.36) | na | | na | | .49 | (.50) | .74 | (.44) | .87 | (.34) |
| MSA percent minority | 1 | 95 | 33.71 | (17.83) | 25.14 | (14.78) | 33.55 | (11.50) | 45.67 | (18.04) | 44.33 | (16.19) | 62.21 | (17.31) |
| *Origin Neighborhood Characteristics* | | | | | | | | | | | | | | |
| Socioeconomic disadvantage index | −3 | 5 | .30 | (1.02) | −.35 | (.64) | 1.02 | (1.03) | .47 | (.67) | 1.11 | (1.06) | .23 | (.54) |
| Neighborhood percent minority | 0 | 100 | 48.72 | (37.02) | 16.84 | (18.89) | 74.20 | (28.76) | 68.94 | (27.04) | 77.57 | (24.21) | 77.91 | (19.92) |
| Neighborhood percent black | 0 | 100 | 26.00 | (34.47) | 6.11 | (11.29) | 65.07 | (32.58) | 7.29 | (11.32) | 22.24 | (20.52) | 4.27 | (11.33) |
| Neighborhood percent Latino | 0 | 99 | 19.35 | (28.49) | 7.05 | (13.07) | 7.03 | (13.57) | 55.70 | (29.42) | 50.39 | (23.15) | 72.32 | (23.92) |
| Total person-years | | | 31594 | | 13875 | | 10247 | | 4050 | | 1432 | | 1990 | |

| | Metric | | Full Sample | | Anglos | | Blacks | | Mexicans | | Puerto Ricans | | Cubans | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Min | Max | Mean | (S.D.) | Mean | (S.D.) | Mean | (S.D.) | Mean | (S.D.) | Mean | (S.D.) | Mean | (S.D.) |
| Total persons | | | 9431 | | 4213 | | 3094 | | 1166 | | 416 | | 542 | |

## Table 2

Logistic Regression Analysis of Neighborhood Out-Migration: Panel Study of Income Dynamics, 1990–1995.

| | Model 1 | | Model 2 | | Model 3 | | Model 4 | |
|---|---|---|---|---|---|---|---|---|
| **Independent Variables** | ***b*** | **(s.e)** | ***b*** | **(s.e.)** | ***b*** | **(s.e.)** | ***b*** | **(s.e.)** |
| *Race and Ethnicity:* | | | | | | | | |
| Anglo (ref.) | -- | | -- | | -- | | -- | |
| Non-Hispanic black | .181** | (.062) | .291** | (.093) | .184** | (.067) | .293*** | (.088) |
| Mexican | −.152 | (.081) | .195 | (.137) | −.150 | (.086) | .102 | (.128) |
| Puerto Rican | −.654*** | (.127) | .252 | (.297) | −.652*** | (.130) | .060 | (.281) |
| Cuban | .247* | (.113) | −.027 | (.335) | .250* | (.122) | −.085 | (.318) |
| *Demographic Characteristics:* | | | | | | | | |
| Age | −.123*** | (.007) | −.123*** | (.007) | −.123*** | (.007) | −.123*** | (.007) |
| Age squared | .001*** | (.000) | .001*** | (.000) | .001*** | (.000) | .001*** | (.000) |
| Female | .010 | (.053) | .010 | (.053) | .010 | (.053) | .011 | (.053) |
| Married | −.385*** | (.054) | −.389*** | (.054) | −.385*** | (.054) | −.390*** | (.054) |
| Number of Children | −.095*** | (.020) | −.095*** | (.020) | −.095*** | (.020) | −.096*** | (.020) |
| Family Income (in $1,000s) | .001 | (.000) | .001 | (.000) | .001 | (.000) | .001 | (.000) |
| Education (years) | −.008 | (.008) | −.009 | (.008) | −.008 | (.008) | −.009 | (.008) |
| Homeowner | −1.150*** | (.049) | −1.134*** | (.049) | −1.149*** | (.049) | −1.134*** | (.049) |
| Persons per room | .364*** | (.053) | .371*** | (.053) | .364*** | (.053) | .370*** | (.052) |
| Public housing resident | −.391*** | (.067) | −.387*** | (.067) | −.392*** | (.067) | −.394*** | (.067) |
| Became employed (t-1 to t) | −.007 | (.064) | −.014 | (.064) | −.007 | (.064) | −.012 | (.064) |
| Became unemployed (t-1 to t) | −.198*** | (.049) | −.206*** | (.049) | −.198*** | (.049) | −.206*** | (.049) |
| Change in marriage status (t-1 to t) | .917*** | (.058) | .917*** | (.058) | .917*** | (.058) | .916*** | (.058) |
| MSA percent minority | −.004* | (.002) | −.005** | (.002) | −.004* | (.002) | −.005** | (.002) |
| *Origin Neighborhood Characteristics:* | | | | | | | | |
| Socioeconomic disadvantage index | −.015 | (.033) | −.009 | (.033) | −.013 | (.034) | −.011 | (.034) |
| Neighborhood percent minority | .000 | (.001) | .004* | (.002) | | | | |
| Neighborhood percent black | | | | | .000 | (.001) | .006* | (.003) |

| | Model 1 | | Model 2 | | Model 3 | | Model 4 | |
|---|---|---|---|---|---|---|---|---|
| **Independent Variables** | ***b*** | **(s.e)** | ***b*** | **(s.e.)** | ***b*** | **(s.e.)** | ***b*** | **(s.e.)** |
| Neighborhood percent Latino | | | | | .000 | (.002) | .004 | (.003) |
| *Interactions* | | | | | | | | |
| *Neighborhood percent minority x:* | | | | | | | | |
| Black | | | −.005* | (.002) | | | | |
| Mexican | | | −.008*** | (.002) | | | | |
| Puerto Rican | | | −.016*** | (.004) | | | | |
| Cuban | | | .000 | (.004) | | | | |
| *Neighborhood percent black x:* | | | | | | | | |
| Black | | | | | | | −.007* | (.003) |
| Mexican | | | | | | | −.012* | (.005) |
| Puerto Rican | | | | | | | −.012* | (.006) |
| Cuban | | | | | | | .009 | (.008) |
| *Neighborhood percent Latino x:* | | | | | | | | |
| Black | | | | | | | −.003 | (.003) |
| Mexican | | | | | | | −.006* | (.003) |
| Puerto Rican | | | | | | | −.015** | (.005) |
| Cuban | | | | | | | .001 | (.005) |
| Constant | 2.188*** | (.183) | 2.124*** | (.184) | 2.189*** | .183 | 2.135*** | (.183) |
| Wald $\chi^2$ (df) | 3505.62 (20) | | 3538.62 (24) | | 3505.70 (21) | | 3561.52 (29) | |
| Pseudo-$R^2$ | .17 | | .18 | | .17 | | .18 | |
| N person -years | 31594 | | 31594 | | 31594 | | 31594 | |

* p< .05;

** p< .01;

*** p< .001

## Table 3

Logistic Regression Analysis of Neighborhood Out-Migration, by Latino Origin: Panel Study of Income Dynamics, 1990–1995.

| | Mexican Model 1a | | Puerto Rican Model 2a | | Cuban Model 3a | | Mexican Model 1b | | Puerto Rican Model 2b | | Cuban Model 3b | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Independent Variables** | ***b*** | **(s.e.)** | ***b*** | **(s.e.)** | ***b*** | **(s.e.)** | ***b*** | **(s.e.)** | ***b*** | **(s.e.)** | ***b*** | **(s.e.)** |
| Age | −.134*** | (.022) | −.160*** | (.036) | −.108** | (.034) | −.134*** | (.022) | −.161*** | (.036) | −.110** | (.034) |
| Age squared | .001*** | (.000) | .001** | (.000) | .001 | (.000) | .001*** | (.000) | .001** | (.000) | .001 | (.000) |
| Female | .030 | (.156) | .030 | (.285) | −.083 | (.247) | .036 | (.156) | .045 | (.283) | −.122 | (.244) |
| Married | −.409** | (.151) | .169 | (.330) | −.415 | (.247) | −.409** | (.151) | .180 | (.327) | −.414 | (.247) |
| Number of Children | .015 | (.045) | −.332*** | (.100) | −.235* | (.104) | .017 | (.045) | −.332** | (.101) | −.205* | (.104) |
| Family Income (in $1,000s) | .003 | (.003) | −.004 | (.007) | −.001 | (.004) | .003 | (.003) | −.004 | (.008) | −.001 | (.004) |
| Education (years) | −.007 | (.019) | −.059 | (.040) | −.001 | (.030) | −.007 | (.019) | −.060 | (.039) | .001 | (.031) |
| Homeowner | −.783*** | (.126) | −1.036** | (.401) | −1.142*** | (.199) | −.780*** | (.126) | −1.014* | (.405) | −1.144*** | (.203) |
| Persons per room | .201* | (.098) | .456 | (.261) | .492 | (.261) | .201* | (.098) | .468 | (.261) | .512 | (.268) |
| Public housing resident | −.515* | (.224) | −.374 | (.254) | −.579 | (.350) | −.515* | (.225) | −.369 | (.253) | −.525 | (.358) |
| Became employed (t-1 to t) | −.217 | (.130) | .153 | (.293) | −.285 | (.212) | −.220 | (.130) | .153 | (.293) | −.268 | (.211) |
| Became unemployed (t-1 to t) | −.520** | (.167) | −.205 | (.330) | −.269 | (.252) | −.524** | (.168) | −.194 | (.331) | −.280 | (.252) |
| Change in marriage status (t-1 to t) | .997*** | (.164) | .560 | (.293) | 1.047*** | (.257) | .996*** | (.164) | .549 | (.295) | 1.014*** | (.254) |
| Foreign-born | −.313* | (.124) | .110 | (.254) | .063 | (.273) | −.636* | (.263) | −.169 | (.575) | −1.338* | (.641) |
| MSA percent minority | −.002 | (.004) | −.010 | (.007) | −.003 | (.008) | −.002 | (.004) | −.010 | (.008) | −.003 | (.008) |
| *Origin Neighborhood Characteristics* | | | | | | | | | | | | |
| Socioeconomic disadvantage index | .094 | (.122) | −.200 | (.160) | .096 | (.224) | .112 | (.122) | −.209 | (.162) | .107 | (.222) |
| Neighborhood percent black | −.008 | (.006) | .000 | (.007) | .013 | (.009) | −.011 | (.008) | −.003 | (.009) | −.017 | (.018) |
| Neighborhood percent Latino | −.003 | (.003) | −.006 | (.007) | .003 | (.006) | −.005 | (.004) | −.007 | (.009) | −.010 | (.009) |
| *Interaction of Foreign-Born Status x:* | | | | | | | | | | | | |
| Neighborhood percent black | | | | | | | .005 | (.010) | .007 | (.010) | .038* | (.019) |
| Neighborhood percent Latino | | | | | | | .005 | (.004) | .003 | (.010) | .018* | (.009) |
| Constant | 2.465*** | (.510) | 3.641*** | (.962) | 1.864 | (.960) | 2.596*** | (.515) | 3.807*** | (1.035) | 2.854** | (1.049) |
| Wald $\chi^2$ (df) | 447.78 (18) | | 139.62 (18) | | 194.49 (18) | | 455.49 (20) | | 141.69 (20) | | 188.19 (20) | |

| | Mexican Model 1a | | Puerto Rican Model 2a | | Cuban Model 3a | | Mexican Model 1b | | Puerto Rican Model 2b | | Cuban Model 3b | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Independent Variables** | ***b*** | **(s.e.)** | ***b*** | **(s.e.)** | ***b*** | **(s.e.)** | ***b*** | **(s.e.)** | ***b*** | **(s.e.)** | ***b*** | **(s.e.)** |
| Pseudo-$R^2$ | .16 | | .15 | | .17 | | .16 | | .15 | | .17 | |
| N person-years | 4050 | | 1432 | | 1990 | | 4050 | | 1432 | | 1990 | |

* p< .05;

** p< .01;

*** p< .001