WEALTH, RACE, AND INTER-NEIGHBORHOOD MIGRATION

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Abstract

Racial differences in wealth have long been thought to underlie racial differences in residential segregation and neighborhood attainment, but research supporting this claim is limited. We use data from the 1988-2001 waves of the Panel Study of Income Dynamics (PSID), in conjunction with tract-level decennial census data, to examine the effects of household and parental wealth on the migration of black and white families between neighborhoods comprised of varying percentages of anglos (i.e., non-Hispanic whites). We find generally modest effects of wealth on these patterns of inter-neighborhood migration. Consistent with the weak version of the place stratification model, the effects of both family and parental wealth are stronger among black households than among white households. However, racial differences in the levels and effects of wealth can account for only a small portion of the pronounced racial difference in migration into neighborhoods containing large percentages of anglo residents. We conclude that explanations for the racially-stratified inter-neighborhood migration streams that underlie and reinforce black-white residential segregation will need to look beyond the influence of socioeconomic resources.
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Persistently high levels of residential segregation between blacks and whites in American cities continue to attract the attention of scholars and policymakers. Although it is generally acknowledged that some combination of racial economic inequality, housing discrimination, and race-specific residential preferences explain the marked tendency for blacks and whites to live in neighborhoods dominated numerically by their own racial group, the relative contribution of these factors has been vigorously debated (Clark 1988; Galster 1988; Massey and Denton 1993). Most studies find that racial differences in economic resources can explain only a small fraction of racial residential segregation levels (Alba, Logan, and Stults 2000; Massey and Fischer 1999). But, as several observers have noted (Clark 1986; Fischer 2003; Freeman 2000; Thernstrom and Thernstrom 1997), research examining the contribution of racial economic differences to residential segregation has been severely hampered by the inability to consider the independent role of wealth. Not only is wealth thought to enhance migration into more advantaged (and thus “whiter”) neighborhoods (Shapiro 2004), but the substantially larger racial difference in wealth than in income (Oliver and Shapiro 1995) raises the possibility that high levels of residential segregation are attributable in large measure to blacks’ restricted access to financial assets—both their own and their parents’. As Thernstrom and Thernstrom (1997, p. 224) contend, “wealth, the size of a family’s nest egg—a variable ignored in the studies to date—may influence residential patterns more than income does.”

In this study we use longitudinal data from the Panel Study of Income Dynamics (PSID), in conjunction with tract-level decennial census data, to examine the effects of household and parental wealth on the migration of black and white families between neighborhoods of varying racial composition. Our longitudinal analysis of the race-specific migration propensities that
underlie and reinforce racial residential segregation overcomes a critical limitation of cross-sectional designs that attempt to address this issue (e.g., Freeman 2000), namely, that wealth accumulation (especially through home ownership) is a consequence, as well as a determinant, of neighborhood racial composition (Flippen 2004). We explore the possible impact of both household wealth and the wealth of the parents’ of these householders to answer three questions. First, net of the effects of other factors (including income), do family and parental wealth facilitate migration into neighborhoods that are inhabited by a larger percentage of non-Hispanic whites? Second, do the effects of household and parental wealth on these inter-neighborhood migration patterns vary by race? And third, to what extent can racial differences in migration between neighborhoods of varying racial composition be attributed to racial differences in the levels and effects of wealth?

THEORETICAL AND EMPIRICAL BACKGROUND

Research into the determinants of minority locational attainment is frequently guided by the model of spatial assimilation, which holds (among other things) that members of racial and ethnic minority groups seek to convert human capital and financial endowments into greater proximity with the ethnic majority (Massey 1985). Given the correlation between neighborhood racial composition, on the one hand, and neighborhood housing values, on the other, advanced levels of human and financial capital are often prerequisites for purchasing residences in predominantly Anglo communities (Logan, Alba, McNulty, and Fisher 1996). High levels of socioeconomic attainment are also thought to provide minority group members with the incentive to interact with the majority, interactions that are facilitated by physical proximity (Alba and Nee 1997; 2003). But most applications of spatial assimilation theory have failed to consider wealth as an independent determinant of minorities’ geographic proximity to whites. Indeed, the
inability of the spatial assimilation model to fully explain the locational attainments of African Americans—particularly the concentration of even high-income blacks in predominantly black neighborhoods—has led some observers to speculate that racial differences in wealth might account for racial residential segregation (e.g., Clark 1986). This possibility has led some observers to question, if not dismiss, the claim that racial discrimination in the housing market helps to account for racial differences in neighborhood attainment (Thernstrom and Thernstrom 1997).

Over and above the effects of other socioeconomic resources, including income and education, wealth is likely to increase the likelihood that African American (as well as white) families will locate in “whiter” neighborhoods for several reasons. For current or prospective homeowners, financial assets can be used for the outright purchase of homes or, more frequently, down payments on the purchase of homes (Charles and Hurst 2002). Because higher down payments reduce mortgage payments, even among families with the same income those with greater wealth will be able to buy and maintain homes in more expensive neighborhoods. More generally, wealth provides a “safety net” that cushions families against temporary financial setbacks that might drive them into poor (and hence less largely nonwhite) neighborhoods (Shapiro 2004), so that even the neighborhood attainment of renters is likely to benefit from the accumulation of financial assets.

The emerging research on wealth highlights not only the importance of a family’s own assets, but those of their parents as well (Conley 1999). Parental wealth is likely to facilitate a family’s neighborhood attainment in a variety of ways, but its impact on the ability to purchase homes in more expensive areas is particularly important. Oliver and Shapiro (1995) contend that that a family’s first home purchase triggers the second largest transfer of assets between
generations, trailing only inheritances following parental death. The families interviewed by Oliver and Shapiro (1995) and Shapiro (2004) describe numerous other ways that parental assets are used to facilitate moves into higher-SES neighborhoods, including paying mortgage closing costs and points. Even among renters, parental wealth is likely to enhance prospects for moving into predominantly white neighborhoods, since these assets are frequently used for other obligations (e.g., child care) that enable families’ to pay higher rents.

Race, Wealth, and Neighborhood Attainment

Racial differences in wealth are substantial and far exceed racial differences in income (Keister 2000; Oliver and Shapiro 1995). Even among black and white families with similar incomes, racial differences in wealth, particularly in the form of home equity, are pronounced (Krivo and Kaufman 2004). Racial differences in parental wealth are also marked (Shapiro 2004). Perhaps as a result, blacks are substantially less likely than whites to receive financial help from their parents for down payments and other forms of assistance (Jayakody 1998). Charles and Hurst (2002) find that some of the racial difference in the transition to homeownership can be explained by the black parents’ lesser ability to provide down-payment assistance. Racial differences in lifetime inheritances are contributing to a growing racial disparity in wealth (Avery and Rendall 2002). These sharp racial differences in wealth raise the possibility that differences in the locational attainments of blacks and whites—in particular, differences in the racial composition of their neighborhoods—may be attributable largely, if not entirely, to black-white differences in family or parental financial assets. Should we observe that black-white differences in migration between neighborhoods containing varying percentages of whites can be explained entirely by racial differences in wealth, then explanations for racial residential segregation that emphasize contemporaneous housing discrimination against blacks
(Yinger 1995) or the preferences of blacks and whites for neighborhoods of a particular racial composition (Bobo and Zubrinsky 1996; Clark 1992) may be unneeded. Alternatively, a sizable residual racial difference in these migration behaviors even after controlling for racial differences in wealth would imply the need to supplement class-based explanations of racial residential segregation with additional mechanisms.

It is also possible that the impact of wealth on locational attainment varies by race. An alternative to the spatial assimilation model of minority locational attainment is the *place stratification* model (Logan and Molotch 1987). This model draws attention to the barriers to residential mobility faced by black residents, especially in the form of housing discrimination (Galster and Keeney 1988; Massey and Denton 1993). The discriminatory practices of real estate agents (Pearce 1979; Yinger 1995), local governments (Shlay and Rossi 1981), and mortgage lenders (Squires and Kim 1995) create a racially-segmented housing market that obstructs the mobility aspirations of African Americans, especially for those wishing to move to racially-integrated neighborhoods. White stereotyping of, and hostility towards, black residents may also impede blacks' migration into racially-mixed or predominantly white neighborhoods (Krysan and Farley 2002; Harris 1999; 2001; Quillian and Pager 2001). The place stratification model also highlights the unwillingness of majority groups to share neighborhoods with minority residents and how whites in particular seek to vacate racially-mixed areas (Crowder 2000; Krysan 2002).

Logan and Alba (1993) propose two versions of the place stratification model. In the "strong version" of this model, the effects of economic resources on locational attainments are weaker for minority groups than for majority groups. Housing discrimination reduces the return that minority group members (African Americans especially) receive for their human and financial capital. This version of the place stratification model thus implies that the impact of
wealth on migration into neighborhoods containing larger percentages of whites will be weaker for blacks than for whites. However, Logan and Alba (1993) also propose a “weak version” of the place stratification model, in which blacks receive greater locational returns to their resources than do whites, but in which even the most advantaged blacks have poorer locational attainments than the least advantaged whites. African Americans require enhanced levels of financial and human capital in order to attain residence in predominantly anglo neighborhoods, but these neighborhoods remain open to whites largely regardless of their socioeconomic resources. This version of the place stratification model thus implies that the impact of wealth on migration into neighborhoods containing larger percentages of whites will be stronger for blacks than for whites. Prior studies have generated somewhat inconclusive results on the relative merits of these two versions of the place stratification model (Logan, Alba, and Leung 1996; South and Crowder 1997; Tolnay 2003), but no study has yet tested for racial differences in the effects of wealth on blacks’ and whites’ ability to achieve spatial proximity to the anglo majority.

Prior Research

Prior research has generally been unable to explore the degree to which racial differences in either household or parental wealth contribute to the disparate neighborhood locations of blacks and whites. Simplifying somewhat, research into the causes of racial residential segregation has taken three forms. Perhaps the most common strategy is to compute measures of racial residential segregation (e.g., indices of dissimilarity or exposure) for a sample of cities or metropolitan areas, and to examine how these scores (and changes therein) covary with other characteristics of these areas, such as minority composition, racial economic inequality, and the presence of other minority and immigrant groups (e.g., Farley and Frey 1994; Frey and Farley 1996; Krivo and Kaufman 1999; Logan, Stults, and Farley 2004; Massey and Denton 1993;
White and Glick 1999). The degree to which blacks (and other minorities) are “hyper-segregated” from whites is also explored in this research tradition (Massey and Denton 1989; Wilkes and Iceland 2004). These studies find slight declines in black-white residential segregation over recent decades, and that high levels of racial income inequality are associated with higher levels of segregation (e.g., Logan et al. 2004). Studies in this tradition occasionally compute measures of racial and ethnic segregation specific for various socioeconomic groups (e.g., Darden and Kamel 2000; Denton and Massey 1988). As noted above, these studies generally find high levels of racial residential segregation even within socioeconomic groups, although the observed levels appear to vary by the particular segregation measure and socioeconomic indicators chosen (Massey and Fischer 1999; St. John and Clymer 2000).

However, because studies of racial segregation at the city or metropolitan-area level must rely on U.S. census data, and because the decennial census does not collect data on family or household wealth, these studies cannot assess levels of segregation between blacks and whites with similar net worth and thus cannot evaluate the degree to which racial differences in wealth might explain racial segregation patterns. Indeed, it has become almost perfunctory for studies of racial residential segregation (e.g., Fischer 2003) and race-specific migration patterns (Quillian 2002; South and Deane 1993) to conclude with the proviso that black-white differences in neighborhood attainment may stem from the operation of unobserved racially-neutral market forces, particularly wealth.

A second research design explores the determinants of segregation at the individual level through models of locational attainment. These studies typically use cross-sectional (most often census) data to examine the associations between individual-level characteristics and the racial, ethnic, and socioeconomic composition of neighborhoods (Alba and Logan 1993; Alba, Logan,
and Stults 2000; Logan and Alba 1993; Logan, Alba, McNulty, and Fischer 1996; Logan, Alba, and Leung 1996; White and Sassler 2000). These studies tend to find that, compared to their lower-SES counterparts, higher-SES blacks reside in neighborhoods that contain a larger percentage of whites, but that even the most advantaged blacks live in neighborhoods with fewer whites than do the least advantaged whites. Like the city-level studies of segregation described above, however, these census-based studies of individual locational attainment are unable to consider the role of wealth as a determinant of neighborhood racial composition.

Using non-census sources, two recent studies in this genre have examined the association between wealth and neighborhood racial composition, while controlling for other possible determinants, including income. Freeman (2000), using data from the Boston and Los Angeles samples of the Multi City Study of Urban Inequality (MCSUI), finds that African Americans’ proximity to whites increases slightly with their net worth, as theories of spatial assimilation predict. Similarly, Woldoff (2003), using data from the National Longitudinal Study of Youth (NLSY), finds that higher levels of wealth increase blacks’ residential proximity to whites and, moreover, that this ostensible effect is stronger among blacks than among whites, a result consistent with the weak version of the place stratification model.

While these studies of locational attainment begin to highlight the potential importance of wealth for explaining racial differences in neighborhood racial composition, their ability to shed light on the causal role of wealth is nonetheless limited. Perhaps most importantly, both studies use cross-sectional designs, and are thus open to the criticism that the observed association between wealth and residential proximity to whites reflects not an impact of wealth on locational attainment, but rather higher levels of wealth accumulation, particularly through home ownership, in predominantly white neighborhoods.¹ Housing values—and thus home equity—
are strongly affected by the racial composition of the neighborhood, with appreciation rates sharply lower (frequently negative) in neighborhoods with large or growing minority populations (Denton 2001; Flippen 2004). Because home equity is a key component of family wealth (Oliver and Shapiro 1995), this potential endogeneity may severely bias any observed cross-sectional effects of wealth on locational attainment. Second, neither Freeman (2000) nor Woldoff (2003) consider how parental wealth might influence residential attainment. Yet, as argued above, parents’ financial resources appear to play a key role in enhancing their adult children’s ability to locate in more prosperous, and hence generally whiter, neighborhoods. Parents’ provision of down payments for the purchase of homes seems a particularly common route to mobility into higher-income communities (Shapiro 2004). And, the pronounced racial differences in parental wealth raise the possibility that black-white differences in residential proximity to whites might be partly explained by racial differences in parental financial resources.

In light of the limits of both aggregate and individual-level cross-sectional analyses of racial residential segregation, a third approach to investigating the causes of segregation focuses on the differential inter-neighborhood migration patterns of blacks and whites (Massey, Gross, and Shibuya 1994; Quillian 2002; South and Crowder 1998b). These studies use longitudinal data and examine how race and other factors influence the likelihood of moving between neighborhoods of varying racial composition. Race-specific patterns of inter-neighborhood migration reinforce residential segregation, as blacks tend to leave (or avoid moving into) predominantly white areas and whites tend to leave (or avoid moving into) black neighborhoods. Consistent with the spatial assimilation model, among African Americans socioeconomic status (e.g., education or income) generally increases the likelihood of moving to a whiter neighborhood. However, even among blacks and whites with similar socioedemographic and
economic characteristics, blacks move to neighborhoods that contain fewer whites than the neighborhoods that whites move to. A key advantage of this longitudinal approach over cross-sectional designs is that factors that might explain the differential neighborhood racial compositions of blacks and whites are related to subsequent migration propensities, thus reducing substantially the endogeneity problems that plague cross-sectional locational attainment models. To date, however, studies taking this approach have yet to consider how wealth (either household or parental) might influence migration into neighborhoods of varying racial composition, or whether racial differences in wealth can explain differences between blacks and whites in the inter-neighborhood migration streams that sustain and contribute to high levels of racial residential segregation.

DATA AND METHODS

Our primary data source for this analysis is the Panel Study of Income Dynamics (PSID). Begun in 1968 with approximately 5,000 families, the sample has been interviewed annually through 1997, and biennially thereafter. New families have been added to the sample as children leave home to form new households (Hill 1992). The PSID has been an extraordinarily rich source of data for analyzing patterns of inter-neighborhood migration (Gramlich, Laren, and Sealand 1992; Massey, Gross, and Shibuya 1994; Quillian 1999). What makes the PSID uniquely suited for the study of migration between neighborhoods of varying racial and ethnic composition are the PSID-Geocode Match Files that link the addresses of the PSID respondents to the corresponding census codes for tracts and other geographic areas. We use census tracts to represent neighborhoods. While census tracts are imperfect operationalizations of neighborhoods, they likely come the closest of any commonly available spatial entity in approximating the usual conception of a neighborhood (Jargowsky 1997; White 1987), and their
use in this capacity is widespread in sociological and demographic research. Attaching census data on the racial composition of census tracts at each annual interview allows us to track prospectively which PSID households move between neighborhoods comprised of varying percentages of non-Hispanic whites.

Sample Selection: We select black and white PSID respondents who were between the ages of 18 and 59 during the period 1988 to 2001 and who were classified as heads of the household either at the beginning or at the end of a migration interval. Many moves, of course, are undertaken by families, and thus a decision to move made by the household head (or made jointly by the family) perforce means a move by other family members. If all respondents were included in the sample, a single move would be counted several times, one for each family member. Imposing this selection criterion avoids counting as unique and distinct those moves made by members of the same family (e.g., children and spouses) since only moves by the head of the household are included. At the same time, moves by family members who were not the household head at the beginning of the interval but become the head at the end of the interval—e.g., when a child leaves the parental home or when an ex-husband or ex-wife establishes a new residence—are included in our effective sample. We focus on the period from 1988 to 2001 because information regarding PSID respondents’ parental wealth was first gathered in 1988 and because data for interview years after 2001 were not available at the time of this study. Our sample includes 2,943 black householders and 4,532 white householders.

Dependent Variables: We follow prior work by treating inter-neighborhood residential mobility as a two-stage process involving, first, the decision to move and, second, the choice of destination (Massey, Gross, and Shibuya 1994). Accordingly, the first dependent variable in our analysis is a dichotomous variable indicating whether the respondent moved out of the census
tract of origin between PSID interviews. The second (and more theoretically important) dependent variable is the percentage of the population in the census tract of destination that is non-Hispanic white (i.e., anglo). Tract-level census data are drawn from the Neighborhood Change Database (NCDB) in which census tract boundaries have been matched across the 1980, 1990 and 2000 censuses (GeoLytics 2003). The consistency of tract boundaries in the NCDB allows us to employ linear interpolation based on data from these censuses to describe the racial and ethnic composition of PSID respondents’ census tracts and metropolitan areas of residence during intercensal years.

Independent Variables: Our key explanatory variables are measures of the respondents’ household wealth and that of their parents. The PSID gathered data on household wealth in 1984, 1989, 1994, 1999, and 2001. In each of these years information was collected separately on the level of assets of various types, including (but not limited to) savings, businesses, pensions, stocks, inheritances, and housing equity. When necessary, we use the midpoints of bracketed categories. The PSID household wealth data generally compares favorably in quality to other sources of wealth data (Juster, Smith, and Stafford 1999). We use total household wealth in 1989 to predict inter-neighborhood migration between the 1989 and 1994 interviews, total household wealth in 1994 to predict inter-neighborhood migration between the 1994 and 1999 interviews, and total household wealth in 1999 to predict inter-neighborhood migration between the 1999 and 2001 interviews. All household wealth figures are measured in thousands of constant 2000 dollars.

In 1988 only, the PSID also collected data from respondents on the nonpension wealth (net worth) of the living parents of household heads and their spouses. Respondents were asked: “Suppose your (and your spouse’s) parents were to sell off all their major possessions, including
their home, turn their investments and all their other assets into cash and pay off all of their debts. Would they have money left over, break even, or be in debt? If they have money left over, how much would it be?” For respondents who could not estimate an actual total, bracketed response categories were suggested. We use the sum of the head’s and (if present) spouse’s estimated parental wealth, measured in thousands of constant 2000 dollars.

Other independent variables include demographic, life-cycle, socioeconomic, and geographic characteristics. Race is captured by a dummy variable distinguishing black (scored 1) from white (scored 0) respondents. Respondent’s education is measured by years of school completed. Family income refers to the total taxable income of husband and wife, measured in thousands of constant 2000 dollars. Age is measured in years, and its squared value is included to capture nonlinear effects on the propensity to migrate. The sex of the household head is captured by a dummy variable scored 0 for males and 1 for females. Marital status is a dummy variable distinguishing respondents who are married or long-term cohabiters at the beginning of the migration interval (scored 1) from the unmarried (scored 0). The presence of children is measured by the total number of children in the household at the beginning of the migration interval. 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 separate dummy variable. Household crowding is measured by the number of persons per room. Duration of residence is measured by a dummy variable scored 1 for respondents who have resided in their current residence for three or more years. We also control for the percentages of the population that is non-Hispanic white in the tract of origin and in the metropolitan area of origin and destination. All of these variables except for respondent’s sex and race are measured biennially at the beginning of each migration interval and treated as time-varying covariates.4
Analytical Strategy: Because we have information on the racial composition of the respondents' census tract at each annual interview, it is possible to infer more than one residential move for each respondent between 1988 and 2001. Accordingly, we structure the data file in "person-period" format, each observation pertaining to the two-year period between annual interviews. We use a two-year period rather than a single-year period to accommodate the PSID’s shift to biennial interviews beginning in 1997. The 2,943 black householders in our sample contribute 8,632 person-periods, and the 4,532 white householders contribute 14,382 person-periods.

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 PSID interviews. Then, we estimate linear regression models in which the dependent variable is the percentage of the population in the tract of destination that is anglo. Because this variable is unobserved for non-movers, we estimate these models using a maximum-likelihood Heckman procedure (Heckman 1979). In our application of the Heckman procedure, the “selection” equation includes all of the regressors described above, while the “substantive” equation (percentage anglo in the destination tract) omits the sociodemographic predictors (age, sex, marital status, children, home ownership, public housing, duration or residence, and household crowding) because their influence is restricted largely to the likelihood of moving out of the origin tract.

Because the same PSID respondent can contribute more than one person-period 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 (Bye and Riley 1989). We correct for this non-independence of observations using the cluster procedure available in Stata to compute robust standard errors (StataCorp 2001).
RESULTS

Table 1 presents descriptive statistics for all variables used in the analysis, separately for blacks and whites. Blacks are more likely than whites to move out of their neighborhood of origin. Over the typical two-year migration interval, approximately 40% of black householders, but only 32% of white householders, move to a different census tract. Perhaps more importantly, differences between black and white inter-neighborhood movers in the racial composition of their new neighborhoods are pronounced. Conditional upon moving out of their origin tract, black householders move to tracts whose population is on average about 34% non-Hispanic white. In sharp contrast, mobile white householders relocate to tracts that on average are comprised of 82% anglos.

Racial differences in both household and parental wealth are also pronounced. At the beginning of the typical two-year period defining the migration intervals, the mean black householders’ net worth is approximately $30,000, compared to over $182,000 for white householders. The racial difference in parental wealth is even larger. On average, black householders report the net worth of their parents to be about $36,000, while white householders estimate the net worth of their parents to be over $242,000.

Black disadvantage in other dimensions of socioeconomic status is also apparent. Black householders report on average completing 12.1 years of school, versus 13.6 years for white householders. The mean family income of black householders (about $27,000) is about half that of the white householders (about $58,000). Consistent with prior studies, then, the racial difference in income pales in comparison to the racial difference in wealth.
Table 1 also presents descriptive statistics for the conventional sociodemographic and socioeconomic predictors of inter-neighborhood migration and neighborhood attainment. Although black and white householders tend to be of roughly the same age (mean for blacks = 36.1, mean for whites = 37.8), a much larger percentage of black than white householders are female (47% for blacks, 20% for whites) and a much smaller percentage of black than white householders are married or long-term cohabitators (39.5% for blacks, 67.6% for whites). Black households tend to have more children under the age of 19 living at home (mean for blacks = 1.37, mean for whites = .98). Black householders are substantially less likely than white householders to own their homes (34.8% versus 67.1%), and they tend to live in more crowded dwellings (.66 persons per room for blacks versus .51 persons per room for whites). A much greater percentage of black than white householders resides in public housing (13% versus 1%). Reflecting blacks’ higher rate of residential mobility, as of the beginning of the migration interval, black householders have resided in their current dwelling for a shorter amount of time than have white householders; about 49% of blacks, but over 56% of whites, have lived in their current dwelling for 3 or more years.

Finally, blacks and whites differ substantially in the racial composition of their origin tracts and, to a lesser extent, their metropolitan areas of residence. Black householders (including both inter-tract movers and non-movers) begin the typical migration interval in a tract comprised of 31% anglos, while white householders begin the typical migration interval in a tract comprised of 84% anglos. And, while black householders live in metropolitan areas with an average racial composition that is 68% anglo, white householders live in metropolitan areas with an average racial composition that is 77% anglo.
Table 2 examines how these factors are related to the likelihood that black and white householders will move out of their tract of origin over a two-year span. Model 1 presents the coefficients from the additive, multivariate equation, and tells a generally familiar story regarding the sociodemographic and life-cycle determinants of geographic mobility. The odds of moving from the tract of origin decline significantly with age, but at a decreasing rate. Female householders are significantly more likely than male householders to move, and married householders are significantly less likely than unmarried householders to move. Number of children in the household is inversely and significantly related to the odds of leaving the tract of origin. Homeownership, residence in public housing, and a longer duration of residence in the current dwelling all significantly deter inter-neighborhood migration, while household crowding significantly increases the odds of leaving the tract of origin. For the sample as a whole, the percentage of the population in the origin tract that is non-Hispanic white is not significantly associated with moving out, but the percentage of the metropolitan area population that is anglo is inversely and significantly associated with the odds of leaving the tract of origin.

Table 2 about here

The effects of the socioeconomic explanatory variables are somewhat mixed. Education and family income are both significantly and positively associated with out-migration from the neighborhood, but the effect of parental wealth is nonsignificant. The coefficient for household wealth is significantly negative, but fairly weak. To illustrate, a difference of $100,000 in household wealth reduces the (net) odds of moving out of the origin neighborhood by only about 1% \( (.99 = e^{-0.009}) \). This deterrent effect of household wealth on inter-neighborhood geographic might reflect the difficulties in selling (and buying) more expensive housing units.
Interestingly, when the other predictors of neighborhood out-migration are controlled, the racial difference in inter-tract mobility observed in Table 1 completely disappears. In Model 1 of Table 2, the coefficient for black householders is negative, but small and statistically nonsignificant. (The bivariate racial difference, shown in Table 1, is statistically significant.) In supplementary analyses, we explored the reasons for the sharp diminution in the racial difference in inter-tract migration when other predictor variables are controlled. By far the most important variable accounting for the higher gross rate of migration among blacks than among whites is homeownership. Blacks are substantially less likely than whites to own their homes, and homeowners are substantially more likely than renters to move. In fact, controlling only for homeownership causes the coefficient for \textit{black} race to become \textit{negative} and statistically significant (equation not shown). Thus, blacks are significantly less likely than whites of similar housing status to move, a finding consistent with claims that black households face greater barriers than white households to residential mobility (Crowder 2001; South and Deane 1993).

More importantly for our purposes, however, racial differences in household and parental wealth do little to explain racial differences in inter-neighborhood migration; controlling for these variables, either singly or in combination, leaves the coefficient for \textit{black} positive, quite strong, and statistically significant (equations not shown). Thus, not only is wealth only weakly related to inter-neighborhood migration, but the stark racial difference in wealth cannot explain blacks’ higher (unadjusted) rate of moving out of their neighborhoods of origin.

The second model in Table 2 allows the effects on inter-neighborhood migration of three explanatory variables—household wealth, parental wealth, and tract-of-origin racial composition (percentage anglo)—to vary between black and white householders by adding to Model 1 the appropriate product terms. As indicated by the non-significant coefficients for the interaction
terms involving the two wealth variables, we cannot reject the null hypotheses that the slopes for blacks and whites are equal. But the coefficient for the product term representing the interaction between race and the percentage of the population in the tract of origin that is anglo is statistically significant, and suggests markedly different effects of neighborhood racial composition on the likelihood of moving out of the origin tract between blacks and whites.

Models 3 and 4 of Table 2 describe these differential effects by estimating Model 1 separately for the two racial groups. Among black householders (Model 3), the coefficient for the percentage of the origin tract population that is anglo is positive, statistically significant, and nontrivial in magnitude. To illustrate, a 10 percentage point difference in the percentage of the tract population that is anglo increases the predicted odds that black householders will leave their tract of origin by about 4% \( \Delta \text{odds} = e^{0.004 \times 10} - 1 \). In contrast, among white householders, a 10 percentage point difference in the percentage of the tract population that is anglo significantly decreases the predicted odds of out-migration by 7% \( \Delta \text{odds} = e^{-0.007 \times 10} \). Thus, net of the effects of other established predictors of inter-neighborhood migration, black households tend to move out of neighborhoods comprised of relatively large anglo populations, while whites tend to remain in these types of neighborhoods. With only minor exceptions, the effects of the explanatory variables on the odds of moving out of the tract of origin are generally similar for blacks and whites.

Determinants of Neighborhood Racial Composition

The relatively weak effects of household and parental wealth on black and white householders’ propensity to migrate out of their neighborhoods of residence imply that wealth does not play a particularly important role for this dimension of the locational attainment process. But theoretical arguments for wealth’s role in shaping patterns of racial residential segregation
are concerned as much, if not more so, with the racial composition of the neighborhoods that black and householders move to as with patterns of neighborhood out-migration per se. Accordingly, Table 3 presents the results of a series of linear regression models examining the determinants of the percentage of the destination tract population that is anglo. As noted above, because the racial composition of the destination tract is unobserved for non-movers, these regression models apply a Heckman correction in which the sociodemographic characteristics (age, sex, marital status, children, home ownership, household crowding, public housing, and duration of residence) are used only in the selection equation.\(^5\)

**Table 3 about here**

Model 1 of Table 3 includes only householder’s race as a predictor variable. The very strong, negative, and statistically coefficient for *black* race indicates that on average black householders move to neighborhoods with anglo population percentages approximately 46 points below that of the neighborhoods that white householders move to. The positive and statistically significant coefficient for the sample selection term (λ) indicates that householders with a higher latent probability of moving out of their origin neighborhood move to tracts with larger percentages of anglo residents.

Model 2 adds to Model 1 the conventional socioeconomic determinants of locational attainment (education and family income) and the two measures of geographic context (percent anglo in the tract of origin and the percent anglo in the metropolitan area of destination). The coefficients for all four variables are statistically significant. As anticipated by classical theories of spatial assimilation, migration into “more anglo” neighborhoods increases with increasing levels of education and family income. The percentage of the origin tract population that is anglo is strongly and positively related to the percentage of the destination tract population that is
anglo, thus indicating considerable similarity in the racial composition of householders’ old and new neighborhoods. The percentage of the population in the destination metropolitan area is also strongly and positively associated with the percentage of the destination tract population that is anglo, perhaps because, by definition, predominantly anglo metropolitan areas are comprised of predominantly anglo neighborhoods, thus constraining movers to relocate to tracts with relatively large percentages of non-Hispanic whites.

Controlling for these additional predictors of destination tract racial composition sharply reduces the racial difference in the percentage of the population that is anglo in the destination tract. When these explanatory variables are considered, the coefficient for black drops almost in half—from -46.29 in Model 1 to -23.81 in Model 2. In supplementary analyses we explored which of the added explanatory variables most accounted for this racial difference by adding them singly to Model 1. By far the most important explanation for the bivariate racial difference observed in Model 1 is the black-white difference in the racial composition of the origin tract. Controlling solely for the percentage anglo in the tract of origin reduces the racial difference in the percentage anglo in the tract of destination by about half (equation not shown). In contrast, black-white differences in householders’ education attainment, family income, and the racial composition of the metropolitan area do little to explain the racial difference in the racial composition of the neighborhoods that blacks and whites move to. Thus, a large part of the reason why blacks move to neighborhoods that are substantially less anglo than the neighborhoods that whites move to is that blacks originate in neighborhoods that are substantially less anglo than the neighborhoods whites originate in. At the same time, however, even after adjusting for the racial composition of the origin tract and the effects of the other predictors, blacks move to neighborhoods that on average contain 24 percentage points fewer anglos than do
the neighborhoods whites move to (Table 3, Model 2)—a large and statistically significant difference.

The results of Model 3 speak directly to the role of wealth in the locational attainment process by adding to Model 2 the measures of household wealth and parental wealth. Although the coefficients for both variables are, as hypothesized, positive, only the coefficient for parental wealth attains significance, and even it is quite small in magnitude. A difference of $100,000 in parental wealth translates into a difference of only .04 points in the percentage of the destination tract population that is anglo. Moreover, controlling for these measures of wealth does virtually nothing to explain the net black-white difference in the racial composition of the destination tract: the coefficient for black declines only trivially from Model 2 (b = -23.81) to Model 3 (b = -23.75) and remains statistically significant.

As noted above, the place stratification model of locational attainment argues that the impact of socioeconomic resources on neighborhood racial composition varies by race. The strong version of this model proposes that blacks are less able than whites to convert socioeconomic resources into spatial proximity with anglos, while the weak version posits the reverse. Model 4 of Table 3 tests these expectations by adding to Model 3 the product terms representing the interactions between householders’ race, on the one hand, and household and parental wealth, on the other. Consistent with the weak version of the place stratification model, the coefficients for both product terms are positive and statistically significant. The facilitative impact of both household wealth and parental wealth on migration into more anglo tracts is significantly stronger among blacks than whites.

To show these effects more clearly, Models 5 and 6 of Table 3 estimate the additive model (Model 3) separately for black and white householders, respectively. Among blacks, the
coefficients for both household wealth and parental wealth are positive and statistically significant, but fairly modest in size. A $100,000 difference in either household or parental wealth (equaling about .8 of a standard deviation in household wealth and about 1 standard deviation in parental wealth) translates into a predicted difference of only about 1 to 1½ points in the percentage of the destination tract that is anglo. Among white householders, only the coefficient for parental wealth is statistically significant, and it is even weaker than the corresponding coefficient for blacks. Among whites, a difference of $100,000 translates into a predicted difference of only .047 points in the percentage of the destination tract population that is anglo.\textsuperscript{6}

Figures 1 and 2 illustrate these effects further by graphing the predicted value of the percentage anglo in the destination tract by levels of household and parental wealth, separately for black and white householders. Figure 1 presents the results for household wealth, and Figure 2 for parental wealth. These simulations draw on the results of regression Models 5 and 6 in Table 3 and hold constant all other explanatory variables at their race-specific means.\textsuperscript{7}

\textbf{Figures 1 and 2 about here}

As shown in Figure 1, although the slope for household wealth among black householders is fairly modest, it is considerably more positive than the corresponding slope for white householders. Importantly, however, even the wealthiest of mobile black households move to neighborhoods that have substantially fewer anglos than the neighborhoods that the lowest-wealth whites move to. Very similarly, although the slope for parental wealth among blacks is much greater than the analogous slope for whites (Figure 2), blacks with the wealthiest parents still move to substantially less anglo neighborhoods than whites with the poorest of parents. These findings are consistent with a central tenet of the place stratification model: enhanced
levels of financial capital are needed for African Americans to begin to attain spatial proximity with anglos, but even the most economically advantaged blacks remain more segregated from anglos than do the most economically disadvantaged whites. Moreover, in contrast to the situation among blacks, high levels of wealth are not a prerequisite for whites to move into largely anglo neighborhoods.

Decomposing the Racial Difference

While the preceding analyses suggest that black-white differences in migration between neighborhoods of varying racial composition cannot be readily attributed to racial differences in household or parental wealth, Table 4 presents a more formal decomposition of this difference. Drawing on the results of regression Models 5 and 6 of Table 3, as well as racial differences in the means of the key variables (Table 1), these simulations ask to what extent the black-white difference in the percentage of the destination tract population that is anglo would change if 1) blacks were assigned whites’ mean on household wealth, parental wealth, and the other explanatory variables, but retained their own coefficients; and 2) blacks were assigned whites’ coefficients on household wealth, parental wealth, and the other explanatory variables, but retained their own means.

Table 4 about here

As shown in column 1 of Table 4, after adjusting for the differential selection of householders into the category of mover, the predicted percentage anglo in the tract of destination for black householders is 25.72, compared to 81.02 for white householders. Of this difference of 55.30 percentage points, about 33 percentage points (60 percent of the total difference) can be attributed to racial differences in the means of the explanatory variables. But racial differences in wealth account for very little of this difference. Assigning the white mean on household wealth
to blacks would reduce the racial difference in the destination tract percentage anglo by only 2.13 percentage points (3.85% of the total difference). Similarly, assigning the white mean on parental wealth to blacks would reduce the racial difference in the destination tract percentage anglo by only 2.47 percentage points (4.47% of the total difference). The black-white difference in the racial composition (percentage anglo) of the origin tract is a far more important source of the racial difference in the percentage anglo in the destination tract, accounting for over one-third (36.64%) of the total racial difference.

Moreover, racial differences in the effects of the explanatory variables on the percentage anglo in the destination tract all tend to exacerbate, rather than attenuate, the black-white difference, a function of blacks’ greater returns to wealth and the other predictors (as anticipated by the weak version of the place stratification model). Assigning to blacks whites’ coefficients on all of the explanatory variables would *increase* the predicted difference in the percentage anglo in the destination tract by about 15 percentage points. The contributions to this increase from racial differences in the effects of wealth are minuscule, each raising the difference by only .42 points. Rather, the majority of this increase would be attributable to blacks’ greater return to education (b = .998 for blacks, b = .331 for whites) in facilitating migration into neighborhoods comprised of a larger percentage of anglo residents.

**DISCUSSION AND CONCLUSION**

High levels of residential segregation between blacks and whites remain a defining feature of the American urban landscape, and the racial differences in inter-neighborhood migration that underlie and reinforce these patterns of segregation are pronounced. Although it has frequently been suggested that racial differences in wealth may account wholly or in part for the concentration of blacks and whites in neighborhoods dominated numerically by same-race
residents (e.g., Clark 1986; Thernstrom and Thernstrom 1997), the limitations of prior studies have prohibited a compelling assessment of this claim. We address this issue here through a longitudinal analysis of black and white households’ migration propensities between neighborhoods comprised of varying representations of non-Hispanic whites (i.e., anglos). At the broadest level, then, our study bridges the longstanding research tradition on racial residential segregation, spatial assimilation, and neighborhood attainment with a rapidly growing concern with wealth as a key dimension of social stratification, and racial stratification in particular. Two main conclusions emerge from our analysis.

First, consistent with Shapiro’s (2004) ethnographic account, we find that greater household and parental wealth is associated with migration into neighborhoods that are comprised of a comparatively large percentage of anglo residents. These effects obtain even after controlling for conventional socioeconomic predictors of neighborhood attainment, such as education and income. However, while these effects are in most cases statistically significant, the magnitude of wealth’s impact is generally modest. The effects of household and parental wealth on inter-neighborhood migration patterns are also stronger for blacks than for whites, a finding consistent with what has been termed the “weak version” of the place stratification model.

Second, and perhaps more importantly, we find very little evidence that racial differences in either levels or effects of wealth can explain the markedly lower rate of black than white migration into neighborhoods with sizable anglo populations. Racial differences in levels of household and parental wealth can explain no more than 10% of the black-white difference in these migration propensities. A much larger portion of this difference is attributable to racial differences in starting points, that is, the initial overconcentration of blacks in neighborhoods
with relatively few anglo residents. In short, while household and parental wealth do encourage the migration of black families into neighborhoods containing a comparatively large share of anglo residents, racial differences in wealth cannot explain the pronounced difference between blacks and whites in their residential proximity to non-Hispanic whites. Racial difference in wealth can account for black-white differences in some markers of success and well-being (Conley 1999; Huie et al. 2003), but neighborhood attainment, at least as measured here, is not one of them.

Wealth, of course, is a difficult concept to measure. Survey respondents are likely to have particular difficulty estimating the net worth of the parents, making our finding of a significant (albeit modest) association between parental wealth and migration into neighborhoods comprised of a relatively large percentage of anglo residents all the more remarkable. Under most circumstances measurement error will bias downward the estimated parameter estimates, so we cannot dismiss the possibility that the true effects of wealth—especially parental wealth—are larger than we report here. However, it seems unlikely that measurement error could explain the inability of racial differences in wealth to account for racial differences in migration into “more anglo” neighborhoods, since there is little reason to expect that the extent of measurement error in the estimates of household and parental wealth would vary by race. Nevertheless, confidence in our findings would be enhanced by their replication through alternative datasets that offer different approaches to the measurement of wealth.8

In light of these findings, efforts to explain racial residential segregation and the inter-neighborhood migration dynamics that sustain it would be advised to look beyond racial differences in socioeconomic resources, including wealth. Future research might profit by continued efforts to quantify the impact of housing market discrimination on blacks’ (and
whites’) geographic mobility into neighborhoods of varying racial and ethnic composition (e.g., South and Crowder 1998a), as well as to quantify the impact of race-specific residential preferences (Farley et al. 1994) and racial differences in the housing search process (Farley 1996). Our results show clearly that the migratory responses of blacks and whites to the racial composition of their neighborhoods are quite different, with blacks tending to move out of neighborhoods with large anglo populations and whites tending to remain in such areas (see also Crowder 2000; Quillian 2002). Like the pronounced difference in the racial composition of the neighborhoods that blacks and whites move to, this differential response to the racial composition of the neighborhood of origin is not attributable to racial differences in wealth or other socioeconomic resources. Given that blacks’ tolerance for white neighbors exceeds whites’ tolerance for black neighbors (Farley et al. 1994), whites’ avoidance of neighborhoods with substantial non-anglo (especially black) populations deserves increased attention as an explanation for persistently high levels of racial residential segregation. Despite frequent claims to the contrary, the racial difference in wealth, while admittedly pronounced, appears incapable of explaining the disparate neighborhood locations of black and white families.
ENDNOTES

1 This endogeneity problem would, of course, also plague aggregate cross-sectional studies of racial residential segregation, even if measures of wealth were available in the census.

2 Woldoff (2003) is less susceptible than Freeman (2000) to this criticism, since she includes only non-housing wealth in her measure of wealth. At the same time, failing to consider housing equity—and racial differences in housing equity—likely leads to an incomplete picture of the impact of wealth on locational attainment.

3 We do not use the 1984 household wealth data because our observation period begins after the parental wealth data were collected in 1988. We do not use the 2001 wealth data because we have no information on migration behavior subsequent to that interview. In addition, because some components of household wealth (e.g., home equity) may be more instrumental than others (e.g., vehicle wealth) in facilitating migration into more advantaged neighborhoods, in supplementary analyses we also explored the effects of the separate components of wealth on inter-neighborhood migration patterns. However, the results of these analyses were appreciably similar to those for the combined measure of wealth that we report in the text.

4 In the models predicting migration out of the census tract of origin, we use as an independent variable the percentage of the population that is anglo in the metropolitan area of origin. In the models predicting the percentage anglo in the tract of destination, we use as an independent variable the percentage of the population that is anglo in the metropolitan area of destination.

5 We acknowledge the considerable debate over the utility of the standard Heckman correction for sample selection bias and the varying conditions under which its application increases the accuracy of regression coefficient estimates (Stolzenberg and Relles 1997; Winship and Mare
Accordingly, we experimented with alternative procedures, including simple OLS models based on the selected observations (i.e., inter-tract movers). The results from these experiments suggested strongly that our substantive findings are not appreciably affected by the Heckman estimation.

6 In supplementary analyses we further disaggregated these analyses by homeownership status. Among white homeowners, we do observe a statistically significant effect of household wealth on the percentage anglo in the destination tract (b = .092, p < .01), but as is the case in Models 5 and 6, this coefficient is considerably smaller than the corresponding coefficient for black homeowners (b = 1.355, p < .05).

7 In constructing these figures, we use a maximum value of $2,000,000 for household and parental wealth because this figure is close to the maximum observed values for black householders on these variables ($2,055,000 and $2,554,000 for household and parental wealth, respectively).

8 Parental wealth is measured only in 1988, and thus it is possible that this measure becomes increasingly a weaker proxy for unobserved levels of parental wealth in later years. In supplementary analyses we explored this possibility by estimating models that include product terms for the interaction between year of observation and parental wealth. However, for neither blacks nor whites did we observe a significant decay over time in the effects of parental wealth on the percentage of the population that is anglo in the census tract of destination.
REFERENCES


Table 1. Descriptive Statistics for Variables Used in Analyses of Inter-Tract Migration, by Race: Panel Study of Income Dynamics, 1988-2001

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<tr>
<th>Dependent Variables</th>
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<tr>
<td>Changed tract</td>
<td>Whether R moved out of origin tract between t and t + 2 (1=yes)</td>
<td>.40</td>
<td>.49</td>
<td>.32</td>
<td>.47</td>
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<tr>
<td>Pct anglo in destination</td>
<td>Percent of population in destination tract that is non-Hispanic white</td>
<td>34.47</td>
<td>30.74</td>
<td>81.86</td>
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<td>Household wealth</td>
<td>Total household wealth in 1989, 1994, or 1999 in 1000s of 2000 $s</td>
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<td>82.45</td>
<td>182.41</td>
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<td>Parental wealth</td>
<td>Net nonpension wealth of living parents in 1988 in 1000s of 2000 $s</td>
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<td>Family income</td>
<td>Taxable income of R and spouse in 1000s of 2000 $s, time t</td>
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<td>65.56</td>
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<td>Age</td>
<td>R’s age, in years, at time t</td>
<td>36.11</td>
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N of person-periods        | 8632                                              |        |        | 14382  |        |
N of persons               | 2943                                              |        |        | 4532   |        |

*aComputed for movers only.*

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**Interactions**

| Black*household wealth \(^{a}\) | .046         | .030         |
| Black*parental wealth \(^{a}\)  | .000         | .024         |
| Black*pct anglo in origin tract | .010***      | .001         |

**Constant** 3.374*** 4.114*** 3.543*** 3.864***

Likelihood ratio \(\chi^2\) 3814.44 3863.77 1234.00 2525.77

N of person-periods 23014 23014 8632 14382

N of persons 7475 7475 2943 4532

Note: Entries are logistic regression coefficients and robust standard errors.

\(^{a}\)Coefficients and standard errors are multiplied by 100.

\(* p<.05  ** p<.01  *** p<.001\)

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<td>N of uncensored observations</td>
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<td>7475</td>
<td>2943</td>
<td>4532</td>
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</table>

Note: Models estimated with maximum-likelihood Heckman selection using regressors shown in Table 2 in selection equation. Entries are linear regression coefficients and robust standard errors.

$^a$Coefficients and standard errors are multiplied by 100.

* p<.05 ** p<.01 *** p<.001
Table 4. Components of the Black-White Difference in the Percentage Anglo in Destination Tract:

<table>
<thead>
<tr>
<th>Components</th>
<th>Predicted % Anglo</th>
<th>Difference</th>
<th>% of Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blacks</td>
<td>25.72</td>
<td>-55.30</td>
<td>100.00</td>
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<tr>
<td>Whites</td>
<td>81.02</td>
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<td></td>
</tr>
<tr>
<td>Difference</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Due to racial differences in means of:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Household wealth</td>
<td>-2.13</td>
<td>3.85</td>
<td></td>
</tr>
<tr>
<td>Parental wealth</td>
<td>-2.47</td>
<td>4.47</td>
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</tr>
<tr>
<td>Education</td>
<td>-1.42</td>
<td>2.57</td>
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<tr>
<td>Family income</td>
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<td>2.98</td>
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<tr>
<td>Pct anglo in origin tract</td>
<td>-20.26</td>
<td>36.64</td>
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<tr>
<td>Pct anglo in destination MSA</td>
<td>-5.17</td>
<td>9.34</td>
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<tr>
<td>All variables</td>
<td>-33.10</td>
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<td></td>
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<tr>
<td>Household wealth</td>
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<td>-.76</td>
<td></td>
</tr>
<tr>
<td>Parental wealth</td>
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<td>-.76</td>
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<tr>
<td>Education</td>
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<tr>
<td>Family Income</td>
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<td>-2.24</td>
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<td>Pct anglo in origin tract</td>
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<td>-4.85</td>
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<tr>
<td>Pct anglo in destination MSA</td>
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<td>All variables</td>
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<tr>
<td>Due to racial difference in constants:</td>
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<tr>
<td></td>
<td>-49.23</td>
<td>89.02</td>
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</tbody>
</table>

Note: Component of difference due to joint racial difference in means and coefficients not shown.