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## Relative deprivation and internal migration in the United States: A comparison of black and white men

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### Abstract

While the link between geographic and social mobility has long been a cornerstone of sociological approaches to migration, recent research has cast doubt on the economic returns to internal U.S. migration. Moreover, important racial disparities in migration patterns remain poorly understood. Drawing on data from the 2000 census, I reappraise the link between migration and social mobility by taking relative deprivation into consideration. I examine the association between migration, disaggregated by region of origin and destination, and absolute and relative earnings and occupational prestige, separately by race. Findings lend new insight into the theoretical and stratification implications of growing racial disparities in migration patterns; while both blacks and whites who move north-south generally average lower absolute incomes than their stationary northern peers, they enjoy significantly higher relative social position. Moreover, the relative “gains” to migration are substantially larger for blacks than whites. The opposite patterns obtain for south-north migration.

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The idea that geographic mobility is a means of achieving social mobility is a cornerstone of sociological approaches to migration. This assumption undergirds human capital and status attainment models, in which relocation is viewed as an investment that is undertaken to maximize socioeconomic returns, typically in the form of higher earnings or occupational status. For instance, in their classic analysis of the U.S. occupational structure during the post-World War II economic boom, Blau and Duncan (1967) documented that the careers of migrants were superior to those of non-migrants and concluded that migration was an essential mechanism furthering social mobility. More recently, though, a number of studies have failed to demonstrate significant wage and employment gains to internal migration (Greenwood, 1997; Jacobsen and Levin, 1997; Maxwell, 1988; Smits, 2001), prompting the need to reexamine the theoretical and empirical link between geographic and social mobility. The issue is especially salient given current mobility trends. Beginning in the 1970s and accelerating thereafter there has been a steady movement of the U.S. population from Rustbelt states in the Northeast and Midwest to Sunbelt states in the South and West. However, the social mobility rationale for these patterns is not readily apparent, especially in light of expectations from human capital and status attainment models. While wage and occupational disparities between the South and other regions have narrowed considerably in recent decades, average wages are still lower there than in migrant-sending regions and higher status occupations still tend to be more prominently concentrated in the North and West.

Even more puzzling are the pronounced disparities in regional migration patterns by race. For instance, between 1995 and 2000 the Net Migration Rate (NMR) for whites in the Northeast was  $-22.2$  per thousand but the loss was nearly double ( $-41.6$ ) for blacks.

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Likewise, in the West the NMR was 6.7 for whites and -18.0 for blacks. The NMR in the South was 19 and 21 for whites and blacks, respectively (Schachter, 2003). Moreover, for blacks, the increase in southward migration represents a sharp reversal of the Great Migration that witnessed decades of black exodus out of the South in favor of other regions. Despite its historical significance, the consequences of this reversal and the implications for racial stratification are not well understood (Falk et al., 2004).

This study examines the connection between geographic and social mobility in light of recent changes in the direction of migration flows and their considerable variation by race. I broaden previous studies of internal migration in three critical ways. First, I re-conceptualize the link between social mobility and internal migration by incorporating relative deprivation considerations. An important limitation of prior studies is their tendency to focus almost exclusively on the gains resulting from migration to the *absolute* position of individuals, typically earnings. Building on classical sociological studies and research on developing countries and international migration, I argue that migration can improve a person's social standing *relative* to their peers even in the absence of absolute gains. Despite its potential significance for understanding the seemingly anomalous lack of wage returns to internal migration, relative deprivation has not been incorporated into analyses of contemporary population movements in the United States.

Second, I extend the common focus on wages by incorporating occupational status into the evaluation of the consequence of geographic mobility. While occupational status was at the center of early sociological studies of internal migration, more recent work has tended to neglect the concept in favor of earnings considerations. This is particularly limiting since occupational status more directly connects with long-term mobility over the life course and is not affected by local price differentials that might affect the utility derived from earnings. Finally, I explicitly compare how the connection between migration and social mobility varies by region of origin and destination to better understand the implications of current trends in population redistribution. To the extent that absolute and relative gains to migration vary by race and the direction of the move they can help illuminate the consequences of recent migration patterns, including black southern migration, and their implications for racial stratification.

## Trends in U.S. internal migration

One of the most significant population movements in the history of the United States occurred during the first half of the 20<sup>th</sup> century, when millions of Americans, both black and white, left the rural South in favor of industrial centers in the Northeast, Midwest, and West. Between 1910 and 1960, the combination of rising demand for industrial labor (heightened by both world wars); limited immigration from Europe (due to both war and restrictive immigration laws); sharp downturn in the cotton industry; and relaxation of Jim Crow era restrictions on black geographic mobility (Cohen, 1991) resulted in the net out-migration of nearly 9 million people from the South (Kirby, 1983). While both blacks and whites participated in this migration stream, the event was particularly salient for the former. Blacks were not only over-represented in the northern flow, but their Great Migration also had a lasting impact on black geographic distribution across the country (Tolnay, 2003; Lemann, 1991). In 1900 an astounding 90 percent of U.S. blacks lived in the South; by 1970 that figure had dropped to 53 percent. During those same years, the share of the population that was black rose from 4 to 19 percent in the Northeast, from 6 to 20 percent in the Midwest, and from 1 to 9 percent in the West (McHugh, 1987). Even as late as 1965-70 black migration out of the South exceeded black in-migration to the region (Frey, 2004).

Since the 1970s, though, this long-standing trend has reversed and the South has become a regional magnet for a variety of populations, again with important differences by race. Hunt and colleagues (2008) estimate that during the 1970s out-migration from the South slowed and in-migration increased, more so for whites than blacks (with the percent of northern-born whites and blacks moving south being 2.2 and 1.4, respectively). During the 1980s, though, black in-migration grew more rapidly than white, and by 1990 the share of northerners moving south (2.7) was roughly comparable for both groups. After 1990 black migration to the South exceeded that of whites, with the percentage of northern blacks moving south reaching 3.5 by 2000, compared to only 2.5 for whites. Thus over time there has been a clear change in the racial composition of regional mobility with blacks becoming significantly more likely to migrate south than whites after 1990.

While a complex array of social and economic forces contributes to contemporary southern migration flows, including industrial restructuring, globalization, public policies, and firm decisions on plant and office locations, the role of regional wage disparities is less straightforward. When the Great Migration began wages and occupational opportunities in the South were starkly lower than in other regions. While there has been considerable convergence over time, most of it occurred between 1929 and 1979, before the southward shift in population gained momentum. Since then, convergence in wages essentially stalled (Bernat, 2001; Nissan and Carter, 1993). In 2000 average wages in the South were more than \$7,000 lower than in the Northeast (\$45,106 relative to \$38,410), and a smaller share of the working population was engaged in professional or service occupations (47 vs. 52 percent). If migration is indeed often undertaken to achieve social mobility then it would seem that in order to account for contemporary patterns we would need to take a broader view of mobility itself.

## Theoretical background

### Migration and social mobility

Studies assessing the socioeconomic consequences of internal migration typically follow a neoclassical economic approach. Migration is viewed as an investment in human capital aimed toward maximizing economic well-being by enhancing employment prospects, wages, or both (Sjaastad 1962). According to this view, individuals move when the expected gains of relocation exceed the expected costs (Clark 1986; DaVanzo, 1981; Wilson, 1985). In essence, this calculation implies that individuals will offer their labor in the market with higher wages (or occupational opportunities), net of mobility and other costs.

In a review of the literature, Greenwood (1997) documents considerable variation in findings regarding the earnings benefit from migration. While model specifications vary, the majority of studies compare the absolute wages or income of migrants against those of otherwise comparable individuals who remain at their place of origin (the comparison group), and thus focus on short-term monetary “gains” from migration. A common finding is that internal migrants tend to experience no higher, and sometimes even lower, wages than their counterparts who remained in their communities of origin (Greenwood, 1997).

Considerably less recent research has examined the relationship between migration and occupational status, even though classical sociological approaches regarded it as a central component of migration-related social mobility. Prior research suggests that in the 1960s migration resulted in considerable gains in occupational attainment and that the gains were comparable for whites and blacks (Wilson, 1985). It is unclear whether these findings hold for the recent period or how they vary according to the regions of origin and destination. This is particularly limiting since occupational attainment might be a better predictor of

long-term gains associated with migration than earnings and is not influenced by price and amenity differentials across local areas that could affect the utility derived from earnings.

### Relative deprivation and migration

Regardless of the different dimensions of social status considered, I argue that an exclusive focus on absolute characteristics does not fully capture the socioeconomic and mobility consequences of migration. Migration can also engender changes in the *relative* position of individuals and households. The salience of relative considerations for understanding the implications of social behaviors can be traced back to the notion of relative deprivation, developed in Stouffer and colleague's 1949 examination of adjustment to army life in *The American Soldier* (see also Merton and Kitt, 1950). An unexpected finding in Stouffer's study was that despite their resentment of local racial discrimination, northern black soldiers stationed in the South were as well or even better adjusted than their black peers stationed in the North. They argued that the black soldiers stationed in the South compared themselves to local black civilians and found themselves to be better off, and thus experienced less distress than their counterparts in the North, who enjoyed a similar or higher absolute but lower relative social position.

Relative deprivation theory stresses processes of intra-group inequality, rather than absolute position, for understanding the motivations and implications of social behaviors. The theory assumes that utility is a function not only of one's own consumption, but also of the consumption level of others in one's reference group. The perspective has been instrumental for explaining a wide range of empirical regularities that cannot be accounted for by absolute conditions, such as the frequent dissociation between income and subjective well-being in cross-sectional analyses and the lack of improvement in average happiness over time as societies become richer (Easterlin, 1995), or the fact that the income gradient in health persists across all levels of socioeconomic status and does not disappear above a certain threshold (Marmot et al., 1991).

Runciman (1966) elaborated a more precise formulation of the concept, defining four conditions for an individual to feel relatively deprived: "We can roughly say that [a person] is relatively deprived of X when (i) he does not have X, (ii) he sees some other person or persons (possibly including himself at some previous or future time) as having X, (iii) he wants X, and (iv) he sees it as feasible that he should have X" (Runciman 1966:10). Stark was the first to systematically apply the concept to international migration and internal migration within developing countries (1984; 1991). He argued that processes of intra-group comparisons also undergird geographic mobility. While not denying the importance of wage differentials to migration decisions, Stark emphasized that any given level of earnings or occupational status, individuals will vary in their level of satisfaction depending on their position in the overall wage/status hierarchy within the local community. Like Runciman, he argued that individuals feel relatively deprived when they see those in their reference group enjoying higher status. Individuals who feel more relatively deprived are then more likely to migrate in search of better opportunities than those who earn similar wages but feel less deprived.

It is worth emphasizing that absolute and relative deprivation perspectives on migration are not inherently incompatible. The main difference separating the two approaches is that the latter stresses the existence of a reference group against which individuals assess the benefits of migration over and above absolute income considerations. It is also important to note that the reference group is conceived differently in international and internal migration applications of relative deprivation theory. The difference stems from varying expectations about whether migrants compare themselves against members of the origin or host community. In the case of international migration the expectation is that cultural, language,

and other social discontinuities across societies prevents, or at least significantly delays, immigrants from comparing themselves to members of the host community. As a result, the community of origin remains the salient reference group (Stark and Taylor, 1991). In the case of internal migration, on the other hand, the absence of language and rigid cultural barriers within most national boundaries makes internal migrants more comparable to the residents of the communities that receive them. As a result, they are expected to quickly substitute the reference group from the origin to the host community (Stark and Taylor, 1991). This reference group substitution is also implicit in Stouffer's classic elaboration of relative deprivation and undergirds our expectations about the relative consequences of U.S. internal migration flows

### Reappraising the social mobility consequences of migration

Prior empirical applications have shown that relative considerations can explain some migration patterns that cannot easily be accounted for by income-maximizing perspectives, such as the fact that rural-to-urban migration rates are not highest from the poorest areas within developing countries, that migration rates are higher from areas where the income distribution is more unequal, and the frequent return migration of successful migrants from richer to poorer countries (Quinn, 2006; Stark and Taylor 1989; Stark and Wang, 2000).

While the importance of relative considerations for understanding migration outcomes has been shown for international migration and internal migration within developing countries, they have not been systematically applied to contemporary internal migration dynamics in the United States. There are hints of the importance of these considerations, however, in prior studies, particularly in the assessment of the socioeconomic impact of the Great Migration. Most of the extant research on the Great Migration focuses on absolute conditions, with studies showing that black participants in this migration were positively selected from their region of origin with respect to educational attainment and urban status, and that they fared relatively well in their destinations, at least compared to northern-born blacks (Lieberson, 1978; Lieberson and Wilkinson, 1976; Tolnay, 2003). However, some authors did comment on the influence of social position relative to local peers when interpreting their findings. For instance, in their classic study, Blau and Duncan (1967) concluded that:

“Regional migration has different implications for the ultimate achievement of southern whites and blacks. The white profits by remaining south, where he need not compete with the superior background, education, and experience of northerners, and where stronger discriminations in employment against blacks favors him. The southern black, on the other hand, profits by moving north accepting the handicap of inferior education in exchange for escaping from the more rigorous racial discrimination in the south” (p. 219).

Eichenlaub and colleagues lend empirical support to this contention with their rigorous evaluation of the short- and long-term impact of the Great Migration (2010). They show that while black southerners who moved north were no more likely than other black southerners to be employed, they did average higher wages in both the short and long term than both stationary southerners and those who moved within the South. They emphasize that black wage gains were accounted for by economic conditions at origin and destination – in other words, that while migration resulted in absolute gains for blacks, it did not result in relative gains. For whites, the results of northern migration were generally negative, with little evidence of gains in relative or absolute income or occupational status. Thus, the race differences in migration outcomes were generally supportive of Blau and Duncan's observations.



Overall, decades of research attention have been devoted to the socioeconomic consequences of the Great Migration and their variation by race, and yet the implications of the movement are still debated today. Our comprehension of the consequences of contemporary migration patterns remains more limited still. In a 2001 study of the impact of migration on locational attainment, Crowder and colleagues showed that compared to non-migrants, black north-south migrants lived in areas with lower unemployment, family instability, segregation, and crime. Yet research that explicitly compares the socioeconomic status of migrants and non-migrants according to region of origin and destination are lacking, limiting our ability to assess the implications of current trends and their variation by race. It would seem, based on blacks' greater proclivity to move southward, that the social dynamics observed by Blau and Duncan have changed in fundamental ways, necessitating a comprehensive analysis that incorporates both income and occupation as well as absolute and relative considerations for assessing racial and regional variation in migration outcomes.

Specifically, I argue that given prevailing economic conditions in the North and South, the socioeconomic consequences of migration will vary according to the direction of the move, and that absolute and relative implications could potentially be at odds. That is, the persistence of regional inequality in the United States implies that south-north migrants are likely to average higher absolute but lower relative income and occupational prestige. The converse is likely to be true of north-south migrants, who are less likely to reap absolute income and occupational rewards with migration, but stand to benefit from higher relative social status.

In addition, juxtaposing regional economic differences with the larger system of racial and class stratification, we can also theorize about why Blau's observations on racial differences in migration returns during the Great Migration could have reversed. While racial inequality has fallen substantially since the Civil Rights Movement, blacks in the North nevertheless compete for relative social position with increasingly prosperous whites. Moving south holds the potential to substantially raise relative social position both because blacks start from a relatively low position in the overall status hierarchy, and because the earnings distribution in the South houses more lower income individuals. Whites, on the other hand, are already relatively high status in the North. While they stand to gain from moving to a less prosperous area, they have less room to improve than blacks, on average. Thus even in the absence of positive absolute monetary or occupational gains, the combination of racial inequality and regional variation in social structures translate into greater potential improvements in relative position for blacks than whites stemming from north-south moves.

It is worth emphasizing that I do not argue for an either/or explanation of absolute versus relative considerations, nor do I intend to examine all possible outcomes of migration. Rather, I argue that integrating absolute and relative dimensions provides a more comprehensive account of the consequences of migration for an individual's social position, helps contextualize the reversal in south-north migration flows, and illuminates racial differences that connect with stratification and social mobility.

## Data and Methods

Data for the analysis are drawn from the public use 5 percent samples of the 2000 Census (Ruggles et al., 2010). I limit the sample to the civilian, non-institutionalized black and white male population between the ages of 25 to 59, to eliminate involuntary moves and those related to education and retirement that do not directly connect with labor market outcomes.<sup>2</sup> I focus on men for several reasons. A common theme in contemporary stratification studies is that the experience of women is not a simple extension of the male experience. Rather, an intersectionality approach is needed to integrate the multiple

dimensions of inequality that interact to produce disparate outcomes by race and gender simultaneously (Collins, 2000). For instance, racial disparities in earnings and occupational standing are less pronounced among women than men, with important implications for the potential for migration to influence social mobility. Moreover, while the growing number of unmarried and dual-career households has given women greater stakes in mobility decisions, gender inequality within families render women more likely to defer to their partner's career needs than men. Thus there remain pronounced gender disparities in migration outcomes that interact with marital status (Geist and McManus, 2012; Jacobsen and Levin, 1997). A thorough incorporation of women into the analysis would therefore have to take into consideration interactions between race and gender *and* between race, gender, and marital status. In short, the topic of racial variation in internal migration among women warrants its own careful theoretical and empirical exposition (Cebula, 2005).<sup>3</sup>

Migration status was ascertained with information on place of residence five years prior to the census. The geographic unit of analysis is a composite of metropolitan area (METAREA) and Consistent Public Use Microdata Area (CONSPUMAs) constructed by the IPUMS project (Ruggles et al., 2010). Specifically, in cases where an individual was not residing in a metropolitan area I assigned CONSPUMA as area of residence, which allows us to include individuals residing outside of metropolitan areas in the analysis. By defining migration as mobility across metropolitan or CONSPUMA areas I exclude residential mobility within local areas.

### Model specification

The empirical model is similar to that employed by income-maximizing approaches, except for the incorporation of relative deprivation dimensions as migration outcomes. Consistent with prior formulations, evaluating the consequences of migration can be accomplished by comparing the absolute and relative position of migrants against comparable individuals who remain at their place of origin (Greenwood, 1997). Empirically, this implies estimating an Ordinary Least Squares (OLS) equation of the following form:

$$Y = M\alpha + I\beta + C\gamma + \varepsilon \quad (1)$$

Where  $Y$  corresponds to absolute or relative measures of earnings and occupational standing,  $M$  is a vector of migration characteristics indicating migrant status and region of origin and destination, and  $I$  and  $C$  are vectors of individual and contextual explanatory variables, respectively. In this formulation,  $\alpha$  captures the difference between migrants and non-migrants ( $M$ ) in absolute and relative outcomes and  $\beta$  and  $\gamma$  are additional parameters to be estimated.

### Dependent variables: absolute and relative deprivation outcomes

We depart from prior studies of migration and social mobility in the range of dependent variables under consideration. Dependent variables include both absolute and relative indicators of socioeconomic position. The first absolute indicator is men's total pretax earnings during the prior year which captures variation in absolute monetary returns.

<sup>2</sup>To facilitate estimation the white sample was further reduced to a quarter of the 5 percent sample, which yields a sample size comparable to the black sample (approximately 600,000). Models were also estimated using a more truncated age range, from 25 to 49, with results consistent across specifications.

<sup>3</sup>Preliminary analyses bear out this argument. While the broad findings presented below for men also hold for women, there are important interactions between gender and marital status, in particular, that warrant detailed elaboration. Specifically, while both married and single men tend to enjoy the same migration outcomes, single women are much more likely to benefit from migration than their married counterparts.

Nominal earnings are arguably the most straightforward indicator of absolute socioeconomic standing since higher earnings confer greater opportunities for both consumption and the accumulation of wealth (including private savings and social security and employer-contributed retirement savings, both of which are dependent on absolute income). As such, nominal earnings have received the most attention in the literature examining the socioeconomic outcomes of migration.

However, the monetary returns to mobility are potentially affected by spatial differences in prices, or the cost of living, which determines the purchasing power of earnings. There is considerable debate about how to interpret and potentially adjust for cost of living differences when comparing earnings across locales (Abelson 1979; Benson 1998; Greenwood 1997).<sup>4</sup> However, the case can be made that housing costs, in particular, should be taken into consideration when evaluating the earnings impact of migration. Housing is by far the largest household expenditure, and also the largest component of regional variation in prices. Indeed, information from the Bureau of Labor Statistics indicates little regional variation in prices of food, clothing, electronics, and other consumer goods, in part due to the ubiquity of national chains and internet shopping. Moreover, except in rare circumstances people cannot avoid spending at least part of their income on shelter, and thus variation in housing costs are central to purchasing power.

Accordingly, in addition to nominal earnings I include a housing-cost adjusted measure of earnings as dependent variable. The adjustment follows the approach applied in the calculation of the Consumer Price Index that monitors price differences over time.<sup>5</sup> Specifically, nominal earnings are adjusted according to an index that measures differences in the price of rents across local areas. The CPI relies on rents rather than housing values for price comparisons because rents more directly capture the cost of shelter, i.e. the service that housing units provide their occupants, rather than the capital investment value of housing units.<sup>6</sup> The calculation of rents includes both the rents paid by renters as well as an estimate of owners' equivalent rents to represent the implicit rent that owners would have to pay if they were renting their homes. The index is constructed as the weighted average of differences in rents and owners' equivalent rents across areas. Specifically:

$$H\_index_i = [(Avg\_rent / Avg\_rent_i) * P\_renters_i] + [(Avg\_eq\_rent / Avg\_eq\_rent_i) * P\_owners_i]$$

where *Avg\_rent* and *Avg\_eq\_rent* are the average rents and owners' equivalent rents across all local areas, respectively. *Avg\_rent<sub>i</sub>* and *Avg\_eq\_rent<sub>i</sub>* are the average rents and owners' equivalent rents in local area *i*. The index is constructed by weighting the differences by the proportion of renters and owners in local areas, *P\_renters<sub>i</sub>* and *P\_owners<sub>i</sub>*, respectively. Owners' equivalent rents were calculated assuming monthly rents to equal .9% of housing values. Thus, in areas where rents are higher than the average across local areas the index is less than 1 and the opposite applies to areas where rents are lower than on average. In the

<sup>4</sup>Cost-of-living adjustments are predicated on the notion that comparable goods have different prices across locales. However, it is difficult to find goods, particularly housing, that are truly *comparable* across space (Abbott and Klaiber 2011; Abelson 1979; Deaton and Heston 2010; Deaton 2010). Housing prices are strongly shaped by amenities, of which location is one of the most determinant. While it may be possible to compare the average value of houses of a given size and age across locations, it is virtually impossible to have “comparable amenities” across contexts. Empirical studies have in fact shown that housing values are affected by a plethora of amenities, ranging from proximity to cultural attractions and coasts, to the perception of crime in the area, to air quality and airport noises (Benson et al. 1998; Bolitzer and Netusil 2000; Fraser and Spencer 2002; Garrod and Willis 1992; Pope 2008). Thus housing price differentials across locales reflect more than just differences in the minimum cost of providing shelter; they also reflect different levels of consumption.

<sup>5</sup>See <http://www.bls.gov/cpi/cpifact6.htm>

<sup>6</sup>For homeowners, housing is both expenditure and investment. When individuals in more expensive areas sell their homes they recover part of those higher costs.



sample rents comprise approximate 25 percent of individual earnings (22 percent among whites and 25 percent among blacks). Rent adjusted earnings are then computed as:

$$Y_{adj} = (Y * .75) + [(Y * .25) * H_{index}]$$

where  $Y_{adj}$  and  $Y$  are adjusted and nominal earnings, respectively.<sup>7</sup>

Our final indicator of absolute socioeconomic position is occupational status as measured by the Duncan Socioeconomic Index (SEI) which assigns a prestige score to occupations based on educational attainment and income using the 1950 occupational classification scheme (Duncan, 1961). Duncan's SEI, which ranges from 4 to 96 with higher scores indicating greater prestige, is arguably the most commonly used instrument for measuring occupational status, and has been applied to internal migration in previous studies (Eichelaub et al, 2010).<sup>8</sup>

Our relative indicators of social standing are constructed following Runciman's definition of relative deprivation. Two dependent variables capture relative earnings deprivation based on the income distribution of local areas of residence, the reference group. The first can be described as a measure of relative standing deprivation (RSD), defined simply as the proportion of the local area population with higher wages.<sup>9</sup> Formally, RSD is defined as:

$$RSD_{ij} = \text{prob}(Y_{rj} > Y_{ij})$$

where  $RSD_{ij}$  and  $Y_{ij}$  are the relative standing deprivation and personal income, respectively, of individual  $i$  in area  $j$ . RSD assumes that an individual's deprivation increases as the proportion of the area population with higher earnings increases.

The second measure of earnings deprivation is Yitzhaki's index (1979) which not only captures the position of individuals in the earnings distribution but also the distance relative to those with higher earnings. Formally, relative earnings deprivation (RED) is defined as:

$$RED_{ij} = \text{prob}(Y_{rj} > Y_{ij}) \times [E(Y_{rj} | Y_{rj} > Y_{ij})]$$

<sup>7</sup>To assess the robustness of this approach I also estimated models using four different specifications, correcting earnings: for differences in observed rents only; for expected mortgage payments only; for average housing values; and for regional price parities as calculated by Aten and D'Souza (2008). Results are consistent across specification (estimates available upon request).

<sup>8</sup>I also tested alternative measures of occupational prestige, specifically the Nakao-Treas prestige score (PRENT in the IPUMS data set). Aside from differences in scale, the Duncan SEI and the Nakao-Treas prestige score produced very similar findings.

<sup>9</sup>Position in the earnings distribution is calculated relative to the total population and is not race-specific. While it could be argued that pervasive and racial inequalities would result in individuals restricting their reference group to only those of the same race, I argue that a wider conception is preferable for a number of reasons. First, internal migrants are disproportionately young, college educated, and professional. Imposing the assumption that racial segregation is so severe that blacks do not compare themselves to others across racial lines is especially dubious among this highly selective population. Second, relying on general, rather than race-specific, measures of relative deprivation lends a conservative bias to the findings. An example from the data illustrates the point. Black northern non-migrants average incomes of \$37,000, which translates into 61% of the total population with higher earnings and 37% of the black population with higher earnings. Black north-south migrants average slightly lower wages (around \$35,000) which translates into 57% of the total population and 29% of the black population with higher earnings. Thus, using the total population migration is associated with a 4 percentage point reduction in RSD, while using a race-specific measure is associated with a 7 percentage point reduction.

where  $E(Y_{rj} | Y_{rj} > Y_{ij})$  is the mean excess income of individuals richer than  $i$  in area  $j$ . Intuitively, this implies that an individual feels deprived not only when more people have higher wages, as in RSD, but also when the wage gap between the individual and higher earners is larger. RED falls as the gap between personal and average higher earnings declines and also when the proportion of individuals with higher earnings is lower.<sup>10</sup>

An additional dependent variable captures relative occupational deprivation (ROD) and is produced taking into account the local distribution of occupational prestige. Similar to its wage counterpart, ROD captures the proportion of the local area population with higher Duncan's SEI. Formally, ROD is defined as:

$$ROD_{ij} = \text{prob}(SEI_{rj} > SEI_{ij})$$

where  $ROD_{ij}$  and  $SEI_{ij}$  are the relative occupational deprivation and Duncan's SEI, respectively, of individual  $i$  in area  $j$ . As before, ROD assumes that an individual's deprivation increases as the proportion of the area population with higher occupational prestige increases.

### Independent variables

The key independent variables combine migration status with the region of origin and destination. My definition of different regions incorporates historical as well as present considerations, and allows for comparability with research on the Great Migration. The North/Midwest/West includes 14 states that were historical places of destination during the Great Migration. They include California, Connecticut, Illinois, Indiana, Maryland, Massachusetts, Michigan, New Jersey, New York, Ohio, Pennsylvania, Rhode Island, Washington-DC, and Wisconsin. For convenience, I refer to the North/Midwest/West region as simply the North. The South includes 13 states of the Confederacy (Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Texas, and Virginia) plus Kentucky and Oklahoma, which recent surveys have found increasingly identified with the South (Reed, 1999).<sup>11</sup> The rest of the states are included in a residual 'other' region. Based on this classification and information on metropolitan and CONSPUMA area of residence in 2000 and in 1995 I construct 6 dummy variables indicating migration status: north-north, north-south, south-south, south-north, and other region movers with non-movers being the reference group.

In order to compare migrants and non-migrants from the same region of origin the model includes three dummy variables indicating whether a person was residing in the North, South, or other region in 1995, with the reference category being northern residents. Jointly incorporating region of residence in 1995 and direction of migration between 1995 and 2000 technically results in an interaction term between the dummy variables for region of origin

<sup>10</sup>One concern with this specification is that if the income distribution is highly skewed, the measures of earnings deprivation might not be normally distributed, violating one of the assumptions of OLS models. However, the nature of the index, which subtracts individual wages from the average wages among higher earners, results in a distribution that is very close to normal. To investigate the impact of the distribution on results, I estimated the models using the log of Yitzhaki's index as the independent variable. The estimated coefficients were virtually identical across specifications. I also estimated the models measuring departure from the median instead of departure from the mean. Once again, results were virtually identical to those presented below. In both cases the R-squared was higher for the standard, untransformed index using the mean, which I report in the paper.

<sup>11</sup>These historically grounded definitions are in fact very similar to the Census' regional classifications. My definition of the South, though, excludes the District of Columbia, Maryland, West Virginia, and Delaware. While there has been considerable black mobility into Maryland between 1995 and 2000 it is not currently regarded as a southern state. West Virginia and Delaware have relatively small black populations and were never historical areas of black settlement. I tested for alternative definitions of "north" and "south" including relying on Census regions. Results do not differ substantively from those reported below.

and those for migration status and direction of the move. The end result is that estimates for the migration variables capture the effect of migration to a region of destination as compared to non-migrants from the same region of origin. To illustrate, a resident of the North in 1995 that remains in the North in 2000 has a value of 1 for the dummy variable indicating northern residence in 1995 and 0 for the migration status variable. A resident of the North in 1995 that moves to the South by 2000 has a value of 1 for the dummy variable indicating northern residence in 1995 and 1 for the north-south mover dummy indicator. A resident of the South in 1995 has 0 for all the same variables. Thus, the dummy indicator of north-south migration captures the difference in absolute or relative position associated with migrating south from the North relative to northern non-migrants. The alternative approach, to run separate analyses by region of origin, produces almost identical results but generates an inordinate number of models.

Human capital indicators include a measure of labor market experience, together with a squared term, that is computed as current age minus years of schooling, minus 6. Both absolute and relative positions are expected to increase with labor market experience. Educational attainment is captured by three dummy variables for less than high school, high school or some college, and a college degree or more. Better educated individuals are expected to average higher absolute and relative wages and occupational prestige than those with lower levels of education. Demographic controls include four dummy variables for whether a person is foreign-born, married, household-head, or disabled. Native-born, married, household-head, and non-disabled persons are expected to average higher absolute and relative social position than their respective counterparts. The model also controls for the size of the local area of residence to account for agglomeration effects on socioeconomic outcomes.

### Sample selection controls

One difficulty in studies assessing the impact of migration on social position is that it is impossible to observe the same individual as migrant and as non-migrant, a problem that applies to both cross-sectional *and* longitudinal data. Instead, studies typically compare migrants to similar individuals that did not migrate (equation 1) (Greenwood, 1997). However, relying on non-movers as the comparison group raises two potential sources of selection bias. First, individuals are not randomly selected into migration. Second, since earnings and occupations are observed only for those in the labor market and migration can sometimes be undertaken as a search for jobs, there is also non-random sorting of individuals into employment. If unobserved factors affect selection into migration and employment as well as the absolute and relative position of individuals then parameter estimates from equation 1 above will be biased.

Accordingly, the statistical formulation takes these two sample selection processes into consideration. The methodology follows the formal presentation in Tunali (1986) and applied to the case of migration in Tienda and Wilson (1992) and to the case of elderly care in Wolf and Soldo (1994). The correction is an extension of Heckman's sample selection procedures (1979) to the case in which two selection rules affect sample inclusion, in this case migration and employment. The double selection estimation involves a two-step procedure. The first step estimates a bivariate probit model jointly predicting the likelihood of migration and employment.

From this model the inverse Mill's ratio for migration and employment propensities are obtained that are then included as predictors in a second step that estimates the equation for absolute and relative earnings. While my focus is on the socioeconomic consequences of internal migration, an advantage of this specification is that by modeling the likelihood of a

move in the first step, it allows to us to understand the selectivity of the migration flow and employment. Formally, the model is specified as follows:

$$Y = M\alpha + I\beta + C\gamma + \theta\lambda_M + \eta\lambda_E + \varepsilon_2 \quad (2)$$

$$M^* = X\tau + \varepsilon_3 \quad M=1 \text{ if } M^* > 0 \text{ and } M=0 \text{ otherwise} \quad (3)$$

$$E^* = P\pi + M\delta + \varepsilon_4 \quad E=1 \text{ if } E^* > 0 \text{ and } E=0 \text{ otherwise} \quad (4)$$

Equation 2 is the same as equation 1 except for two additional regressors,  $\lambda_M$  and  $\lambda_E$  that are obtained from equations 3 and 4 and are direct analogues of the inverse Mill's ratio proposed by Heckman in the single-selection context.  $M$  and  $E$  in equations 3 and 4 denote migration and employment statuses, respectively,  $X$  and  $P$  are vectors of individual and contextual explanatory variables, and  $\tau$  and  $\pi$  are parameters to be estimated. The error terms  $\varepsilon_3$  and  $\varepsilon_4$  are assumed to have a bivariate normal distribution with  $\text{Cov}[\varepsilon_3, \varepsilon_4] = \rho$ . The formulation is a specific case of the bivariate probit model, denoted a recursive model, since the endogenous variable  $M$  appears on the right hand side of Equation 4, with  $\delta$  capturing the effect of migration on employment while accounting for the correlation between the two decisions ( $\rho$ ) (Greene, 2003).

The models of migration and employment include common human capital predictors, such as age (experience), years of education, nativity, and population size. The employment model also includes indicators of marital status, household headship, and disability status, as well as controls for the regional direction of migration. In addition, it is generally recognized that the use of exclusion restrictions or instruments (i.e., variables affecting migration and employment but *not* socioeconomic outcomes) enhances the performance of selection models. I therefore also include a number of instrumental variables that have been shown to influence migration and employment decisions more strongly than they influence income and occupational status. Specifically, local economic conditions are expected to predict both migration propensities (as individuals are less likely to leave opportunity-rich environments) and employment patterns. Equations 3 and 4 therefore include controls for the share of the local population that is unemployed as well as median wages. In addition, since housing considerations might also undergird migration decisions I also control for the share of housing that is owner occupied and median housing values. To account for the potential impact of ethno-racial composition of local areas on migration and employment I also include measures of percent black and percent foreign born in the local population. Large co-ethnic communities could act as an amenity that deters migration. And, some have argued that large immigrant populations heighten competition and repel native workers. Finally, as relative deprivation theory posits that inequality encourages migration, I also model the impact of the local Gini coefficient on migration propensities.<sup>12</sup> Local area indicators for the migration equation are measured in 1990 to capture conditions before migration between 1995 and 2000. In the case of employment, they are measured in 2000. Given the clustering of observations within local areas, the analysis estimates robust standard errors. Finally, the models are estimated separately for blacks and whites in order to compare the direction and size of the effects.

I also conducted analyses to assess the adequacy of the instrumental variable specification. While the use of instrumental variables is central to controlling for unobserved selection

<sup>12</sup>I also tested models using the coefficient of variation in income instead of the Gini coefficient. Results do not vary according to the measure of inequality used.

effects, in practice it is often difficult to theoretically identify appropriate variables. For instance, it is difficult to conceive of variables that would influence employment and yet have no effect whatsoever on wages.<sup>13</sup> Rather than relying on a theoretical justification of the instrumental variables I evaluate the appropriateness of the model specification following the statistical test proposed by Leung and Yu (1996) and Puhani (2000). The degree of collinearity between the explanatory regressors and the inverse Mills ratio for migration and employment in equation (2) is the decisive statistical criterion to judge the appropriateness of the model specification.<sup>14</sup> The main rationale for the use of instrumental variables is to reduce collinearity problems. Leung and Yu (1996) propose to test for collinearity affecting results by calculating the condition number of the matrix of the regressors in equation (2). If the condition number exceeds 20 then the model is not robust and the instrumental variables are not separating the probability of migration and employment from the outcomes of migration. In our case, results show the condition number (estimated using the “cndnmb3” command in Stata) from models including restriction criteria to be 17.2 and 16.7 for the black and white samples, respectively. Without restrictions the condition numbers increase to 30.1 and 18.1 for blacks and whites, respectively. This supports the expectation of reduction in the collinearity between the independent variables and the inverse Mills ratios in the instrumental variable specification.

## Results

Table 1 presents descriptive statistics for the dependent variables in the analysis. The top and bottom panels report estimates for men residing in the North and South in 1995, respectively, and compares three groups: non-migrants, inter-regional migrants, and intra-regional migrants, by race. The main motivation for the analysis is to evaluate the link between inter-regional migration flows and socioeconomic position, though the comparison with intra-regional migrants is also instructive.

Table 1 shows that overall whites are more mobile than blacks and intra-regional moves are more common than inter-regional moves for men of both races. However, consistent with prior accounts, blacks were more likely than whites to move from north to south (4.2 vs. 3.1 percent), and less likely to move from south to north (2.1 vs. 2.8 percent). Thus, while whites are nearly equally likely to move north-south as the reverse, for blacks migration to the South is much higher than migration to the North.

Table 1 also documents a slight positive association between migration and employment, especially among blacks. Among blacks residing in the North in 1995, 78.5 percent of non-movers were employed in 2000, compared to 85.8 and 86.2 percent among intra-northern movers and north-south movers, respectively. A similar pattern is evident among blacks residing in the South in 1995; 80.3 percent of non-movers were employed in 2000 relative to 87.3 and 86.2 percent of intra-southern and south-north migrants, respectively. Migration-related employment differentials are less evident among whites, among whom north-south migrant men actually average lower rates of employment than non-movers. The varying association between migration and employment by race highlights the importance of accounting for selectivity issues in multivariate results.

<sup>13</sup>For example, in one of the most thorough elaborations of the instrumental variables approach, Punhani described models of women's earnings as follows: "... one has to find variables that determine the probability of work (selection equation), but not the wage rate (outcome equation). Practical examples of such variables could be the income of the spouse, household wealth, non-labor household income, or children" (Punhani, 2000: 64). However, women with higher earning spouses or household wealth may be more likely to choose lower paying but more rewarding jobs, and those with children may sacrifice wages for greater flexibility. The key criteria is thus not so much that the income of the spouse *does not* affect women's earnings, but that it is likely that it is more strongly associated with labor force participation than earnings.

<sup>14</sup>The presence of collinearity, in addition to compromising the performance of the models, limits the power of the t-test for the role of selectivity in affecting results.



The pattern of absolute indicators of socioeconomic position among migrants and non-migrants does not consistently fit simple income maximizing or status attainment theories of migration. On the one hand, for residents of the South in 1995 (bottom panel), both black and white men who moved north average higher nominal earnings than non-migrant southerners. Among blacks, for instance, south-north migrants earned 13 percent more than non-migrants (\$34,737 vs. \$30,481), while among whites the difference was 12 percent (\$54,864 vs. \$48,402). Although reduced, the pattern remains even after adjusting from differences in rents. Among blacks, south-north migrants earned 5 percent more in adjusted earnings than non-migrants (\$32,354 vs. \$30,767). The difference is 7 percent among whites.

For those residing in the North in 1995, on the other hand, the opposite pattern holds. Compared to their stationary northern peers, average earnings among north-south migrants are almost 5 percent *lower* (\$34,763 vs. \$36,515) among blacks and 2 percent lower among whites (\$54,864 vs. \$55,425). Intra-regional migration within the North is associated with higher wages among both black and white men, though the same cannot be said of intra-regional southern migration. Once again, adjusting for rents captures some of the difference in earnings between migrants and non-migrants among black men, but the overall pattern remains. Black south-north migrants earn 4 percent less in adjusted earnings than their northern non-migrant peers. Among whites, however, cost-of-living considerations could be more significant, as rent-adjusted earnings are slightly higher for north-south migrants than northern non-migrants, while the opposite was the case for nominal earnings.

Regional migration-related disparities in Duncan's SEI show a similar pattern. Among blacks residing in the North in 1995 there are minor differences in occupational prestige between non-migrants (SEI of 36.7) and north-south movers (SEI of 39.4). Only movers within the North average markedly higher occupational prestige (SEI of 43.1). Among whites who lived in the North in 1995 all migrants average higher SEI than non-migrants (45.7), though again occupational prestige is higher among those migrating within the North (52.1) than north-south migrants (51.1). For those residing in the South in 1995 the opposite pattern is evident. Among blacks, for instance, south-north migrants average considerably higher occupational prestige (42.8) than non-migrants (31.9), with intra-southern migrants falling in between (37.3). For whites in the South in 1995 differences in SEI scores are more modest across migration statuses, though like blacks south-north migrants average the highest occupational prestige (52.0), followed closely by intra-southern migrants (49.2), and non-migrants averaging the lowest SEI (44.5).

In sum, compared to non-migrants, absolute income and occupational prestige are generally higher among migrants moving from south to north, and often lower for those moving from north to south, and these disparities are even more marked for blacks than for whites. It is thus difficult to find a clear rationale for the recent increase in southern-bound migration, and for why this pattern should be stronger for blacks than for whites.

When we consider relative aspects of social position, on the other hand, a very different pattern emerges that is more consistent with contemporary migration flows. That is, relative "gains" to migration are generally greater for north-south than south-north moves, and this is more so for black than for white men. For instance, among those living in the North in 1995 the average black north-south migrant lives in an area with 3 percentage points fewer higher income earners (57.9 vs. 60.8), 22.2 percent lower RED (\$22,547 vs. \$28,993), and 7 percentage points fewer people with higher occupational prestige (SEI of 53.7 vs. 60.4) than the average northern non-migrant. For whites, the average north-south migrant lives in an area with only 1 percentage point fewer higher income earners (44.1 vs. 45.4), 8.1 percent lower RED (\$18,213 vs. \$19,805), and 6 percentage points fewer people with higher

occupational status (41.4 vs. 47.2) than the average northern non-migrant. For those living in the South in 1995 the opposite pattern holds; both black and white south-north migrants average markedly higher earnings deprivation relative to southern non-movers, and once again the difference is more pronounced for black than white men. Among blacks, south-north movers average 5 percentage points and 33 percent higher RSD and RED than non-migrants, respectively (RSD of 63.0 vs. 58.0 and RED of \$28,625 vs. \$21,436). Among whites, instead, south-north movers average 3.7 percentage points and 21 percent higher RSD and RED, respectively, than non-migrants (RSD of 49.5 vs. 45.5 and RED of \$21,225 and \$17,446). For ROD, on the other hand, migrants more consistently score higher in the distribution than non-migrants, irrespective of region of origin and destination.

### Multivariate results

Descriptive results suggest that there are pronounced differences in the “gains” to migration according to the region of origin and destination, and that absolute and relative considerations often work in opposing directions. However, it is possible that these differences merely reflect the uneven human capital and demographic characteristics of movers relative to non-movers. The next set of analyses therefore assesses the extent to which these patterns remain after controlling for observed characteristics, as well as unobserved selection into migration and employment.

We first focus on comparing the absolute position of migrants and non-migrants. Table 2 reports results from OLS models that predict nominal earnings, rent adjusted earnings, and occupational status by race, and include controls for selection into migration and employment. Bolded coefficients indicate statistically significant ( $p < .05$ ) differences in estimates between blacks and whites. One of the most striking findings from these models is the absence of evidence for a short-term wage effect of internal migration. There is no positive association between migration and wages, including rent-adjusted earnings, for any of the regions of origin or destination. In fact, for both blacks and whites, migrants within the South and to or from ‘other’ regions earn significantly *lower* wages than their non-migrant counterparts. While these differences no longer hold among white men once earnings are adjusted for differential cost of living across locales, they remain significant and negative for black men. More importantly, for blacks, even north-south migration, which has increased dramatically in recent decades, is associated with a significant wage penalty, with northern blacks who move south earning a full 13 percent less than their stationary northern counterparts. Adjusting for rents reduces much of the difference, though even with this adjustment moving north-south is associated with a 5 percent reduction in earnings relative to black northern non-movers.

The case for the link between migration and social mobility is significantly stronger when it comes to occupational status, however. Here, for most regions of origin and destination migrants average significantly higher occupational status than their non-migrant peers, even after controlling for selection. Thus it could be that recent studies that failed to identify a positive economic impact of internal migration would have come to different conclusions if they had also considered occupational attainment as an outcome of migration. However, it is critical to point out that while the overall picture supports gains in occupational mobility associated with migration, there are important differences by race that seem to run counter to regional variation in migration patterns. Specifically, while white north-south migrants enjoy significantly higher (3.09 points) SEI than their stationary northern peers, blacks do not. Moreover, the converse pattern is evident for south-north moves; among blacks occupational status is significantly higher (4.13 SEI points) among southerners who move north than among stationary southerners, but among whites the difference is not statistically significant. Thus blacks seem to benefit more than whites from moving from south to north,

and whites to benefit more than blacks from moving from north to south – directly opposite the actual migration patterns evident in Table 1.

When we consider the association between migration and relative social status, on the other hand, the pattern that emerges is one that is more consistent with contemporary migration flows. Results of OLS models predicting individuals' position in the earnings distribution (RSD), Yitzhaki's index (RED), and position in the occupational distribution (ROD) are presented in Table 3. Negative values indicate lower relative deprivation, and thus higher social position. One of the most striking patterns evident in this table is the higher relative earnings position of migrants relative to non-migrants, that was conspicuously absent in the models of absolute wages. Moreover, unlike absolute wages, the pattern of relative wage differentials favors north-south migration over south-north migration for both blacks and whites. Specifically, while blacks who moved from the South to the North average 3.93 percentage points *more* people above them in the earnings distribution and \$3,260 *higher* RED compared to their stationary southern peers, blacks who moved from the North to the South average 5.85 percentage point *fewer* higher earners and \$7,460 *lower* RED. A similar pattern is evident among whites, though RED is not significantly different between inter-regional migrants and non-migrants.

There is also a strong positive relationship between migration and relative occupational status. With the sole exception of blacks who move from south to north, migrants average significantly fewer people above them in the occupational hierarchy than their non-migrant counterparts, regardless of region of origin or destination. To illustrate, compared to their non-migrant peers in their region of origin, the share of local residents with higher occupational status is 7.41 percentage points lower for black north-south migrants, and 5.78 and 4.07 percentage points lower for blacks who migrate within the north and within the south, respectively.

As was the case for absolute wages and occupational status, there are also important differences by race in the association between migration and relative social position. Unlike absolute indicators, however, racial disparities in the relative “returns” to migration are consistent with contemporary migration differentials. That is, while white north-south migrants enjoy 2.38 percentage points fewer higher earners and 2.41 percentage points fewer individuals with higher occupational status than their stationary northern counterparts, the differences are significantly more pronounced for blacks. Among blacks moving from north to south, the average number of higher-earning and higher occupational status individuals is 5.85 and 7.41 percentage points lower, respectively, than their peers who remained in the North. And, while the difference is not statistically significant for whites, black north-south migrants average \$7,460 lower RED than black northern non-migrants. Given that average RED among southern black non-migrants is \$21,436 (from Table 1), this represents a dramatic 34 percent reduction in relative earnings deprivation.

Part of the explanation for racial differences in absolute and relative occupational gains lies in the different status attainment context for whites and blacks across the North and South. Referring back to Table 2, we see that both blacks and whites average lower wages in the South than their statistically equivalent counterparts in the North. However, the disparity is significantly larger for blacks than for whites ( $-0.15$  versus  $-0.07$ ). Southern blacks also average lower occupational status than northern blacks, though this is not the case for whites. Similar racial disparities in regional relative position are evident in Table 3, which shows that southern blacks and whites average *lower* RSD and RED than their counterparts in the North. Again, this pattern is significantly stronger for blacks than for whites. Taken together, these figures imply that for both black and white men, north-south migration entails entry into a lower wage and occupational status environment in which they enjoy

relatively higher status than comparable peers who remained in the North. Because blacks started off lower in the hierarchy in the North, they tend to average bigger “gains” from entering this lower-status environment than white migrants.

Though not central to the analysis, it is worth noting that human capital and demographic characteristics affect both absolute and relative earnings and occupational status in the expected direction. Higher levels of labor market experience and education increase earnings and occupational prestige and lower relative deprivation of all kinds. While the effects are consistent across races, differences in the size of coefficients suggest that the returns to human capital are somewhat higher for whites than blacks, particularly for earnings. Similar results obtain for the effects of foreign-born status, being married, household head, and disabled. In all cases, positive effects on earnings and occupational status correspond with improvements in relative social standing. Unobserved selectivity controls are for the most part statistically significant and affect results similarly for blacks and whites. Models estimated without correction for selectivity yield larger estimates for the effect of migration on absolute and relative earnings.

## Selection into migration and employment

The primary objective of this paper was to evaluate the relationship between internal migration and social status. In order to do so, I also modeled the determinants of migration and employment so as to control for the impact of their joint selection on migration outcomes. As the purpose was not to contribute to the vast literatures on the social and economic determinants of migration and employment per se, I present the results of the bivariate probit models jointly predicting the likelihood of migration between 1995 and 2000 and employment in 2000 by race in Appendix A. Results from these models mirror those of prior studies. Not surprisingly, both migration and employment are more likely among those of intermediate age and with greater educational attainment. It is worth highlighting, however, that employment probabilities do not help explain contemporary migration patterns, or their variation by race. Migration is not significantly associated with the odds of being employed for either blacks or whites, regardless of region of origin or destination (with the sole exception of the small proportion of blacks migrating to or from ‘other’ regions). Thus the greater probability of employment does not seem to be an important migration outcome, at least in the short term.

Among the contextual variables, results show that residents of areas with higher wages are less likely to migrate and more likely to be employed. The share of the local area that is black is negatively associated with out migration for black but not white men, supporting the view that co-ethnics communities may shape migration decisions. The percent foreign born in local areas has no effect on employment and marginally decreases the likelihood of out-migration among blacks. Thus I find no evidence to support the assertion that immigrant competition drives migration decisions among men. Housing market conditions, on the other hand, do appear to shape migration dynamics with resident of areas with higher housing values and lower rates of homeownership more likely to migrate (though the former effect was only significant for black men). Contrary to relative deprivation theory I do not find evidence that the extent of inequality in local areas motivates migration.

## Discussion and Conclusions

While migration has long been viewed as a mechanism for attaining social mobility, recent research has called into question the economic returns to relocation within the United States. Moreover, the current prevailing trend of movement from the North/Midwest/West to the South on the surface seems to contradict income-maximizing perspectives on migration. The growing racial disparity in migration trends, and the sharp break from historical patterns for

blacks, in particular, further invites systematic analysis. This paper contributes to the discussion of the social mobility implications of internal migration in three principal ways. First, it incorporates relative deprivation in addition to absolute considerations into the analysis of the socioeconomic consequences of internal migration. Relative deprivation explanations stress processes of intra-group comparisons for evaluating migration outcomes, which might include improvements in social standing that do not directly correspond with improvements in absolute socioeconomic conditions. Second, it broadens the general focus on earnings by evaluating the connection between migration and occupational status, which is a critical indicator of long-term social status. Finally, the analysis examines the implications of migration separately by region of origin and destination to shed light on the implications of prevailing trends in regional population redistribution.

Several specific expectations guided the analysis. Given the specific prevailing economic conditions in the American North and South, I expected absolute and relative earnings and occupational prestige to relate to migration in opposing directions. That is, compared to their stationary northern peers, north-south migrants were expected to average higher relative wages and occupational prestige, but no higher or even possibly lower absolute wages and prestige. The opposite pattern was expected for south-north moves, which were expected to be positively associated with absolute and negatively associated with relative social position. In addition, juxtaposing regional economic differences with the larger system of racial stratification, I expected absolute and relative gains to vary by race since the different socioeconomic contexts faced by blacks and whites in the North and South would also translate into different absolute and relative consequences of migration.

We tested these expectations comparing the social mobility implications of migration during the 1995-2000 period using Census data among black and white men. Results document pronounced differences between migrants and non-migrants in absolute and relative socioeconomic position that vary systematically by the direction of the move and race. Consistent with prior recent findings, these results show little evidence of positive wage returns to migration. Migrant men did not average higher wages than their non-migrant peers, irrespective of region of origin or destination. In fact, blacks migrating north-south and both blacks and whites migrating within the South actually averaged lower wages than their stationary counterparts. While adjusting earnings for cost of living differentials across locales attenuated the size of these disparities, particularly for inter-regional moves, the same overall pattern applied even to rent-adjusted earnings.

The assessment of the link between absolute considerations and geographic mobility is somewhat different, however, when we consider occupational prestige instead of wages. In most cases, migrants average significantly higher occupational prestige than non-migrants. Thus, results suggests that prior studies that failed to identify a significant positive wage "return" to migration could be missing an important mobility outcome of migration. Even if it is not associated with higher short-term wages, movement into a higher occupational status is important in its own right and for its potential to confer greater wage growth over time.

It is important to point out, though, that even with the positive association between occupational status and migration, the pattern of absolute indicators by race does not seem to match contemporary migration differentials. That is, compared to stationary northern whites, those who move south average higher occupational prestige, even if their incomes are not significantly higher. For blacks, in contrast, those who move from north to south do not average higher occupational status and actually average significantly lower wages than their non-migrant black peers. Indeed, the corollary is also true; blacks moving from south to north enjoy higher average occupational status than their stationary southern peers, while the



difference for whites is not significant. From these patterns it would seem that blacks have more to gain than whites from moving south-north, and whites have more to gain than blacks from moving north-south – the opposite of actual racial variation in migration patterns.

Applying relative deprivation theory to the evaluation of the socioeconomic implications of geographic mobility produces a dramatically different assessment. Results show that there is a much more consistent positive association between geographic and social mobility when we focus on relative social standing rather than absolute position. Overall migrants fare significantly better than their non-migrant peers on all dimensions of relative deprivation considered. With the sole exception of south-north movers, migrants average a higher position in the overall earnings hierarchy than their stationary peers for both blacks and whites. And for blacks migration is also associated (again with the exception of south-north moves) with a significantly lower average distance from higher income earners. And finally, for all regions of origin and destination and both black and white men, migration is positively associated with one's position in the hierarchy of occupational prestige.

Moreover, unlike absolute considerations, the relative position of migrants varies systematically across regions and by race in a manner that is consistent with contemporary migration patterns. Specifically, for both blacks and whites, the relative “gains” to migration are greater for those moving from north to south than for those moving from south to north, helping to explain the popularity of southern migration even in the absence of an absolute wage differential. More importantly, these relative “gains” to north-south migration are significantly stronger for blacks than whites for all 3 relative dimensions considered. To illustrate, controlling for individual human capital characteristics and selection into migration and employment, black north-south migrants average 5.9 percentage points fewer higher earners than their peers who remained in the North. This might sound like a minor difference, but given that the average stationary northern black male is at the 60.8<sup>th</sup> percentile, this represents a 10.7 percent rise in the earnings distribution. For whites the comparable figure is only 4.1 percent. While white north-south migrants average no lower relative earnings deprivation, as measured by Yitzhaki's index, than northern white non-migrants, among blacks RED is a full 25 percent lower among migrants than non-migrants. And finally, while the share of those with higher occupational prestige falls 7.41 percentage points for blacks, a full 18 percent lower than the average for non-migrant northern blacks, the comparable figure for whites is only 2.41 percentage points, or a drop of 5.3 percent.

These patterns represent a striking departure from those observed during the post-war period by Blau and Duncan. In the 1960s, they stressed that migration had different implications for blacks and whites that were explained by their different starting points at origin and the social structure of destinations. Similar considerations apply today. While blacks in the North exhibit higher levels of earnings and occupational status than their peers in the South, they reside relatively far down in the overall hierarchy due to the relatively high level of inequality there and the continuing force of racial stratification. By moving south and into a setting marked by both lower wages *and* lower inequality, blacks earn slightly less in absolute terms but stand to gain substantially in relative terms. For northern whites, in contrast, the lack of positive wage gain associated with north-south migration is not offset by large relative gains; because they start off far higher in the earnings and occupational status hierarchy than blacks, there is less room for gain by moving to a lower wage setting.

Overall, results support the importance of integrating relative deprivation dimensions when considering the socioeconomic consequences of migration. Jointly considering absolute and relative dimensions provides a far more nuanced understanding of regional migration patterns than a purely income-maximizing approach alone. It also adds to our long-term

assessment of the Great Migration and its impact on racial stratification. The over-riding consensus on the Great Migration is that it had a both long and short term positive impact on black social mobility, which was extremely curtailed in the Jim Crow South. Indeed, it could be argued that the mass exodus out of the South helped hasten the demise of the overt, institutionalized discrimination that prevailed there for centuries. However, current patterns also suggest the limitations of black social mobility implied in the Great Migration. As the black population in northern and Midwestern industrial centers grew, so too did the discriminatory treatment they received at the hands of northern whites; residential segregation increased dramatically, as did incidents of racial violence and hostility (Massey and Denton, 1993). The highly segregated communities that were forged during the Great Migration were then devastated by industrial restructuring and the relocation of employment outside of central cities that began in the 1970s and accelerated thereafter (Wilson, 1996). The failure of northern cities to integrate their black populations, and to offer them educational and occupational opportunities commensurate to whites, dramatically undermined black social mobility in the North. Perhaps this is one reason that southern migration, and the quick improvement in relative social position (and residential integration) it confers, is becoming an increasingly attractive option for black Americans.

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## Appendix A

### Results from bivariate probit models jointly predicting the likelihood of migration and employment by race

	Migration		Employment	
	Blacks	Whites	Blacks	Whites
<i>Migration status (Reference: Non-movers from same region of origin)</i>				
North-South			0.28	(0.17) –0.01 (0.14)
South-North			0.23	(0.17) 0.19 (0.14)
North-North			0.26	(0.16) 0.15 (0.14)
South-South			0.32 *	(0.16) 0.15 (0.14)

	Migration				Employment			
	Blacks		Whites		Blacks		Whites	
Other					0.39 **	(0.15)	0.12	(0.14)
<i>Region of origin in 1995 (Reference: North)</i>								
South	0.12	(0.10)	0.14 **	(0.06)	<b>0.07**</b>	(0.03)	<b>-0.05**</b>	(0.02)
Other	-0.08	(0.13)	0.08	(0.07)	-0.03	(0.04)	-0.02	(0.02)
<i>Human capital</i>								
Age/Experience	<b>-0.03**</b>	(0.00)	<b>-0.10**</b>	(0.00)	0.00	(0.00)	0.01 **	(0.00)
Age/Experience Sq.	<b>0.00**</b>	(0.00)	<b>0.00**</b>	(0.00)	<b>0.00**</b>	(0.00)	<b>0.00**</b>	(0.00)
Less than High School	<b>-0.53**</b>	(0.04)	<b>-0.43**</b>	(0.02)	<b>-0.75**</b>	(0.03)	<b>-0.51**</b>	(0.02)
High School + some coll.	-0.33 **	(0.02)	-0.34 **	(0.01)	<b>-0.33**</b>	(0.02)	<b>-0.15**</b>	(0.01)
<i>Demographic characteristics</i>								
Foreign born	0.06	(0.11)	-0.13 **	(0.03)	<b>0.18**</b>	(0.03)	<b>-0.09**</b>	(0.02)
Married					<b>0.44**</b>	(0.01)	<b>0.40**</b>	(0.01)
Household head					0.41 **	(0.01)	0.39 **	(0.01)
Disabled					<b>-0.19**</b>	(0.02)	<b>-0.69**</b>	(0.01)
<i>Local Area Characteristics in 1990</i>								
Median wage	<b>-0.04**</b>	(0.01)	<b>0.00</b>	(0.01)	0.00 **	(0.00)	0.00 **	(0.00)
% unemployed	0.01	(0.02)	-0.01	(0.01)	-0.05 **	(0.00)	-0.04 **	(0.00)
Gini coefficient	-0.02	(0.04)	0.00	(0.02)	0.00	(0.00)	0.00	(0.00)
% foreign born	-0.01 *	(0.01)	0.00	(0.01)	0.00	(0.00)	0.00	(0.00)
% black	<b>-0.03**</b>	(0.00)	<b>0.00</b>	(0.00)	0.00	(0.00)	0.00 **	(0.00)
Total population	-0.01 **	(0.00)	-0.01 **	(0.00)	0.00 *	(0.00)	0.00 **	(0.00)
% housing owner occupied	-0.01 **	(0.01)	-0.02 **	(0.00)				
Mean housing values (0000s)	0.05 **	(0.01)	0.01	(0.01)				
Constant	3.10 **	(1.36)	3.04 **	(0.83)	<b>0.94**</b>	(0.20)	<b>1.48**</b>	(0.13)
Rho					-0.10 *	(0.08)	-0.10 *	(0.08)

\* p < .10

\*\* p < .05



**Table 1**  
**Migration, employment status, and absolute and relative social position by race and region of residence in 1995, men aged 25-59 (standard deviations in parenthesis)**

	<i>Residing in North in 1995</i>					
	Blacks			Whites		
	Non-migrants	North	South	Non-migrants	North	South
<b>Migration status (%)</b>	88.1	6.7	4.2	85.1	9.4	3.1
<b>Economic status</b>						
Employed (%)	78.5	<b>85.8</b>	<b>86.2</b>	92.2	<b>93.7</b>	<b>91.0</b>
<b>Absolute socioeconomic position</b>						
Average Earnings	\$36,515 (33,662)	<b>\$39,726</b> (39,131)	<b>\$34,763</b> (36,493)	\$55,502 (57,135)	<b>\$56,757</b> (58,834)	<b>\$54,898</b> (59,560)
Rent Adjusted Earnings	\$35,620 (33,683)	<b>\$36,695</b> (35,833)	<b>\$34,186</b> (35,598)	\$52,205 (52,216)	<b>\$52,897</b> (53,323)	<b>\$53,866</b> (57,433)
Duncan's SEI	36.7 (23.3)	<b>43.1</b> (25.0)	<b>39.4</b> (24.4)	45.7 (24.5)	<b>52.1</b> (24.3)	<b>51.1</b> (24.3)
<b>Relative socioeconomic position</b>						
RSD - % higher earnings	60.8 (26.0)	<b>58.7</b> (27.3)	<b>57.9</b> (27.7)	45.4 (28.1)	45.4 (28.8)	<b>44.1</b> (29.6)
RED - Yitzhaki's index	\$ 28,993 (12,835)	<b>\$ 27,031</b> (13,370)	<b>\$ 22,547</b> (11,307)	\$ 19,805 (12,201)	<b>\$ 19,912</b> (12,495)	<b>\$ 18,213</b> (10,631)
ROD - % higher Duncan's SEI	60.4 (27.1)	<b>52.4</b> (29.0)	<b>53.7</b> (29.5)	47.2 (28.2)	<b>40.3</b> (27.6)	<b>41.4</b> (27.9)
N	105,982	8,394	5,451	239,745	27,044	8,049
<b>RESIDING IN SOUTH IN 1995</b>						
<b>Migration status (%)</b>						
<b>Economic status</b>						
Employed (%)	86.7	10.6	2.1	81.8	13.4	2.8
	80.3	<b>87.3</b>	<b>86.2</b>	90.7	<b>92.4</b>	<b>93.8</b>

	Blacks						Whites					
	<i>Residing in North in 1995</i>											
	Non-migrants		Migrants		Non-migrants		Migrants		Non-migrants		Migrants	
	North	South	North	South	North	South	North	South	North	South	North	South
<b>Absolute socioeconomic position</b>												
Average Earnings	\$30,481 (28,717)	\$30,205 (27,459)	<b>\$34,737</b> (32,775)	\$48,490 (51,286)	<b>\$47,124</b> (48,767)	<b>\$55,786</b> (60,641)	\$30,767 (28,717)	\$30,232 (27,503)	<b>\$32,354</b> (30,342)	\$49,129 (50,907)	<b>\$47,823</b> (48,772)	<b>\$52,406</b> (55,875)
Rent Adjusted Earnings	31.9 (21.8)	<b>37.3</b> (23.6)	<b>42.8</b> (24.9)	44.5 (24.0)	<b>49.2</b> (23.9)	<b>52.0</b> (24.2)						
Duncan's SEI												
<b>Relative socioeconomic position</b>												
RSD - % higher earnings	58.0 (26.7)	<b>58.8</b> (26.1)	<b>63.0</b> (25.8)	45.5 (28.0)	45.9 (28.6)	<b>49.2</b> (29.9)	\$21,436 (11,465)	<b>\$22,158</b> (10,760)	<b>\$28,625</b> (12,920)	\$17,446 (9,806)	<b>\$17,783</b> (9,986)	<b>\$21,225</b> (12,537)
RED - Yitzhaki's index	59.3 (27.9)	<b>54.7</b> (28.9)	<b>53.1</b> (28.9)	47.3 (28.0)	<b>42.2</b> (27.9)	<b>40.5</b> (27.5)						
ROD - % higher Duncan's SEI	122,687	12,995	2,362	139,058	20,373	4,436						
N												

Bolded results indicate difference between migrants and non-migrants statistically significant at  $p < .05$

**Table 2**  
**Results from OLS models predicting nominal and rent adjusted earnings and occupational prestige according to migration status by race**

	Log of earnings		Log of Rent Adjusted Earnings		Duncan's SEI	
	Blacks	Whites	Blacks	Whites	Blacks	Whites
<i>Migration status (Reference: Non-movers from same region of origin)</i>						
North-South	<b>-0.13</b> ** (0.03)	<b>-0.01</b> (0.03)	<b>-0.05</b> ** (0.02)	<b>0.00</b> (0.02)	<b>0.71</b> (0.54)	<b>3.09</b> ** (0.53)
South-North	0.03 (0.03)	-0.01 (0.02)	0.00 (0.02)	-0.01 (0.02)	<b>4.13</b> ** (0.59)	<b>0.80</b> (0.60)
North-North	0.00 (0.01)	0.02 (0.01)	0.02 (0.01)	0.01 (0.01)	2.15** (0.41)	2.31** (0.22)
South-South	-0.03** (0.01)	-0.02** (0.01)	0.00 (0.01)	-0.01* (0.01)	1.85** (0.30)	1.56** (0.25)
Other	-0.06** (0.02)	-0.05** (0.01)	-0.02 (0.02)	-0.05** (0.01)	1.68** (0.48)	1.99** (0.26)
<i>Region of origin in 1995 (Reference: North)</i>						
South	<b>-0.15</b> ** (0.02)	<b>-0.07</b> ** (0.02)	<b>-0.08</b> ** (0.01)	<b>0.00</b> (0.01)	<b>-2.60</b> ** (0.48)	<b>1.53</b> ** (0.48)
Other	-0.10** (0.02)	-0.11** (0.02)	-0.10** (0.02)	-0.08** (0.02)	-0.11 (0.40)	-0.47 (0.55)
<i>Human capital</i>						
Experience	<b>0.02</b> ** (0.00)	<b>0.04</b> ** (0.00)	<b>0.02</b> ** (0.00)	<b>0.03</b> ** (0.00)	<b>-0.26</b> ** (0.04)	<b>0.00</b> (0.07)
Experience Sq.	<b>0.00</b> ** (0.00)	<b>0.00</b> ** (0.00)	<b>0.00</b> ** (0.00)	<b>0.00</b> ** (0.00)	0.00** (0.00)	0.00** (0.00)
< High School	-0.59** (0.03)	-0.64** (0.02)	-0.70** (0.02)	-0.71** (0.01)	<b>-31.99</b> ** (0.68)	<b>-34.97</b> ** (0.46)
HS + some college	<b>-0.40</b> ** (0.01)	<b>-0.45</b> ** (0.02)	<b>-0.43</b> ** (0.01)	<b>-0.48</b> ** (0.01)	-25.11** (0.36)	-25.48** (0.36)
<i>Demographic characteristics</i>						
Foreign born	<b>-0.09</b> ** (0.02)	<b>-0.01</b> (0.03)	<b>-0.09</b> ** (0.02)	<b>-0.05</b> ** (0.02)	<b>-0.43</b> (0.59)	<b>1.13</b> * (0.68)
Married	<b>0.13</b> ** (0.01)	<b>0.21</b> ** (0.01)	<b>0.20</b> ** (0.01)	<b>0.24</b> ** (0.01)	1.05** (0.37)	2.18** (0.18)
Household head	0.18** (0.01)	0.17** (0.01)	0.25** (0.01)	0.21** (0.01)	<b>2.31</b> ** (0.32)	<b>1.47</b> ** (0.20)
Disabled	-0.02** (0.01)	0.01 (0.02)	-0.05** (0.00)	-0.07** (0.01)	<b>-1.07</b> ** (0.17)	<b>-0.28</b> (0.38)
<i>Area controls</i>						
Population size	0.00** (0.00)	0.01** (0.00)	0.00 (0.00)	0.01** (0.00)	0.16** (0.02)	0.25** (0.03)
<i>Sample selection controls</i>						
Lambda migration	0.06** (0.03)	-0.11 (0.07)	0.09** (0.02)	0.11** (0.04)	1.04 (0.93)	0.16 (1.59)
Lambda employ.	-0.56** (0.08)	-0.67** (0.08)	-0.13** (0.06)	-0.29** (0.06)	-6.99** (2.26)	-11.41** (1.72)

	Log of earnings		Log of Rent Adjusted Earnings		Duncan's SEI	
	Blacks	Whites	Blacks	Whites	Blacks	Whites
Constant	10.17 ** (0.04)	10.25 ** (0.06)	9.96 ** (0.03)	9.96 ** (0.04)	58.06 ** (1.13)	58.17 ** (1.38)
R-squared	0.17	0.20	0.16	0.19	0.27	0.32

\* p < .10

\*\* p < .05

**Table 3**  
**Results from OLS models predicting relative earnings and occupational prestige according to migration status by race**

	Proportion with higher earnings (RSD)		Relative earnings deprivation (RED) <sup>d</sup>		Proportion with higher occupational status (ROD)	
	Blacks	Whites	Blacks	Whites	Blacks	Whites
<i>Migration status (Reference: Non-movers from same region of origin)</i>						
North-South	<b>-5.85</b> ** (0.86)	<b>-2.38</b> ** (0.51)	<b>-7.46</b> ** (1.29)	<b>-0.60</b> (0.61)	<b>-7.41</b> ** (1.01)	<b>-2.41</b> ** (0.57)
South-North	3.93** (1.28)	2.93** (0.52)	3.26** (1.39)	0.80 (0.57)	-2.34 (1.33)	-1.93** (0.52)
North-North	<b>-3.60</b> ** (0.60)	<b>-1.68</b> ** (0.25)	<b>-2.99</b> ** (0.62)	<b>-0.88</b> ** (0.32)	<b>-5.78</b> ** (0.56)	<b>-3.51</b> ** (0.29)
South-South	<b>-2.17</b> ** (0.63)	<b>-0.75</b> ** (0.28)	<b>-2.21</b> ** (0.61)	<b>-0.64</b> ** (0.21)	<b>-4.07</b> ** (0.72)	<b>-2.36</b> ** (0.39)
Other	<b>-2.65</b> ** (0.89)	<b>0.73</b> ** (0.30)	<b>-3.88</b> ** (0.86)	<b>-0.08</b> (0.24)	<b>-5.53</b> ** (0.92)	<b>-2.39</b> ** (0.36)
<i>Region of origin in 1995 (Reference: North)</i>						
South	<b>-4.26</b> ** (1.07)	<b>-1.25</b> ** (0.32)	<b>-6.14</b> ** (1.35)	<b>-2.14</b> ** (0.59)	-3.46** (1.09)	-3.10** (0.43)
Other	1.41* (0.77)	0.62* (0.34)	-1.05 (0.75)	-2.16** (0.60)	-0.14 (0.64)	-0.84* (0.49)
<i>Human capital</i>						
Experience	<b>-1.12</b> ** (0.05)	<b>-1.68</b> ** (0.06)	-0.56** (0.05)	-0.27** (0.13)	<b>0.00</b> (0.05)	<b>0.31</b> ** (0.08)
Experience Sq.	<b>0.02</b> ** (0.00)	<b>0.03</b> ** (0.00)	0.02** (0.00)	0.01** (0.00)	<b>0.01</b> ** (0.00)	<b>0.00</b> (0.00)
< High School	<b>33.52</b> ** (1.63)	<b>30.65</b> ** (0.44)	<b>17.25</b> ** (1.69)	<b>13.31</b> ** (0.51)	45.76** (1.72)	43.99** (0.49)
HS + some college	18.32** (0.62)	17.61** (0.32)	7.50** (0.66)	6.82** (0.46)	30.03** (0.70)	29.47** (0.45)
<i>Demographic characteristics</i>						
Foreign born	2.56** (1.15)	2.96** (0.64)	<b>2.22</b> ** (0.93)	<b>4.28</b> ** (0.43)	<b>0.17</b> (0.67)	<b>1.58</b> ** (0.52)
Married	<b>-13.46</b> ** (0.79)	<b>-11.69</b> ** (0.17)	<b>-9.11</b> ** (0.80)	<b>-6.07</b> ** (0.30)	<b>-8.94</b> ** (0.84)	<b>-5.46</b> ** (0.18)
Household head	<b>-14.45</b> ** (0.78)	<b>-10.62</b> ** (0.19)	<b>-9.79</b> ** (0.83)	<b>-6.29</b> ** (0.44)	<b>-9.91</b> ** (0.82)	<b>-5.00</b> ** (0.19)
Disabled	<b>4.60</b> ** (0.40)	<b>8.16</b> ** (0.32)	<b>3.67</b> ** (0.41)	<b>7.27</b> ** (0.70)	4.25** (0.41)	6.14** (0.41)
<i>Area controls</i>						
Population size	-0.05 (0.08)	-0.22** (0.03)	0.24** (0.09)	0.21** (0.08)	0.03 (0.07)	-0.05 (0.06)
<i>Sample selection controls</i>						
Lambda migration	3.89** (1.67)	-0.82 (1.23)	3.76* (2.04)	-9.92** (2.67)	2.07 (1.77)	-11.45** (1.90)



	Proportion with higher earnings (RSD)		Relative earnings deprivation (RED) <sup>a</sup>		Proportion with higher occupational status (ROD)	
	Blacks	Whites	Blacks	Whites	Blacks	Whites
Lambda employ.	-35.54 ** (5.08)	-16.89 ** (1.41)	-38.73 ** (5.24)	-25.89 ** (3.18)	-36.00 ** (5.32)	-14.01 ** (1.83)
Constant	75.30 ** (2.77)	71.94 ** (1.13)	37.01 ** (3.22)	39.43 ** (2.20)	47.11 ** (3.04)	48.34 ** (1.72)
R-squared	0.18	0.21	0.25	0.19	0.20	0.26

<sup>a</sup>In thousands

\* p < .10

\*\* p < .05