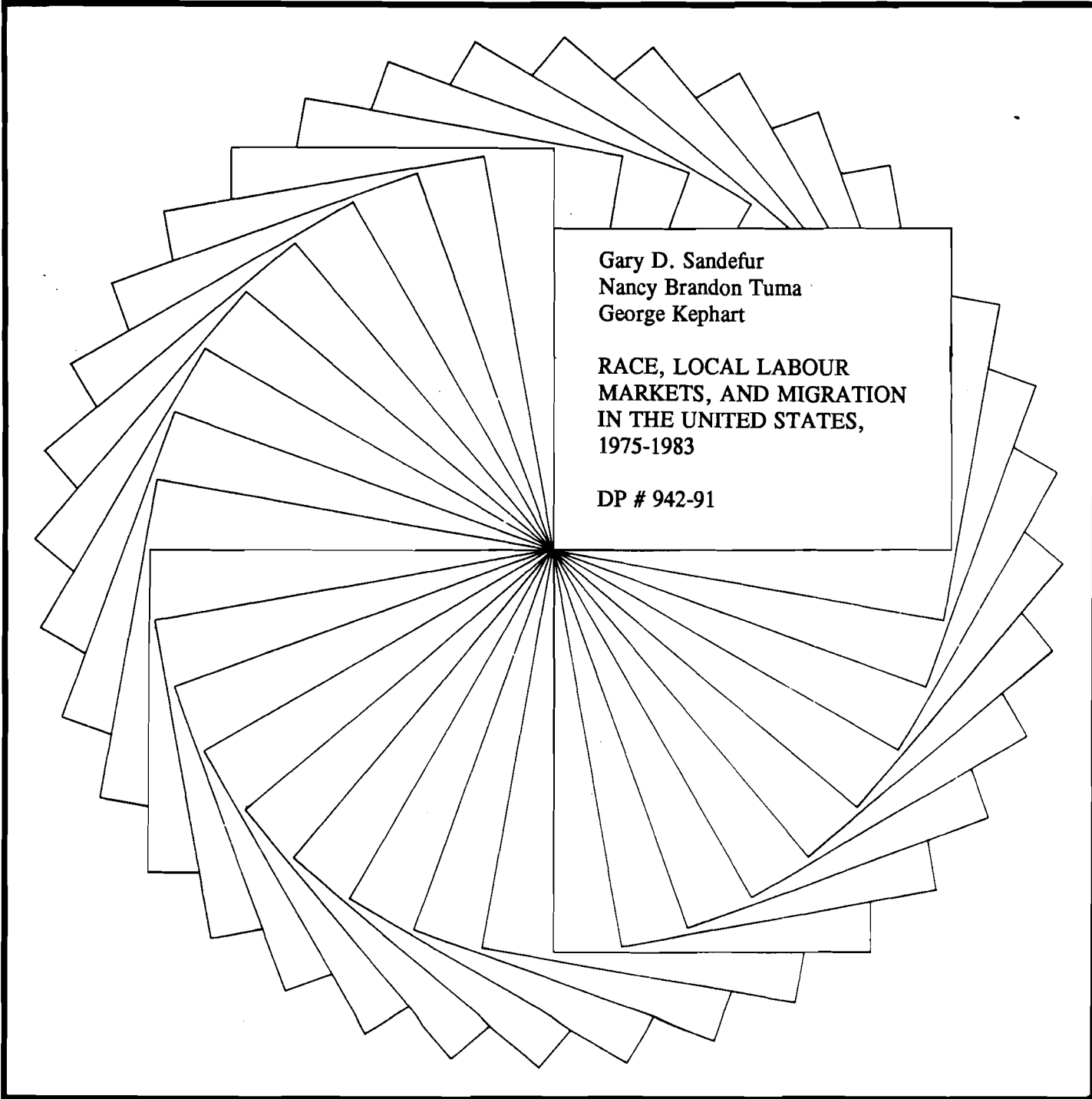University of Wisconsin-Madison

Institute for Research on Poverty

Discussion Papers

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MARKETS, AND MIGRATION
IN THE UNITED STATES,
1975-1983

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RACE, LOCAL LABOUR MARKETS, AND MIGRATION
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ABSTRACT

This paper reports results of analyses of the relationships among race, county unemployment rates, and intercounty migration in the United States for 18 to 64 year-old male household heads during the period 1975–1984. The data come from the 1968–1984 waves of the Panel Study of Income Dynamics, a nationally representative sample of families and individuals who have been interviewed annually since 1968. The results indicate that, on average, blacks more than whites, and individuals who did not complete high school more than those with some college education, resided in counties with relatively high unemployment rates. In addition, as previous research on the United States has shown, blacks and those who did not complete high school were less likely to change counties of residence than whites and those with some college education. Further, among migrants, a higher unemployment rate in the county of origin was associated with a higher unemployment rate in the county of destination. This combination of factors means that poorly educated black men were not easily adapting to changes in local economies during the 1975–1984 period.

RACE, LOCAL LABOUR MARKETS, AND MIGRATION
IN THE UNITED STATES, 1975–1983

There is a growing concern about the problems of poor people living in the central cities of large metropolitan areas in the United States. Some problems seem to have reached epidemic proportions in these areas. Rates of violent crime are very high, and the sale and use of crack and other drugs have created what some commentators view as unmanageable situations for metropolitan police forces (Carpenter et al., 1988). In addition, many of these areas have high rates of out-of-wedlock births and single-parent families (Wilson, 1987). Further, these areas have disproportionate numbers of adults who are unemployed or completely out of the labour force (neither holding nor looking for a job), and very high rates of utilization of public welfare and food stamps (Ricketts and Sawhill, 1986). These problems have racial overtones for both social scientists and the general public because the most depressed areas of large metropolitan areas have very large black populations.

Many observers assert that a lack of adequate employment opportunities is a principal cause of these problems (for example, see Kasarda, 1988; Wilson, 1987). Further, the higher incidence of social problems among blacks than among whites is attributed to differences in job opportunities for the two racial groups. Wilson, for example, argues that the higher incidence of single-parent families among blacks is due to the lack of employment opportunities for black men, which makes them less able to support a family and therefore less desirable marriage partners.

Not everyone agrees that the higher rates of underemployment and unemployment of blacks result from a lack of jobs. In fact, there has been extensive debate about the causes of black/white differences in labour force participation, employment rates, and annual hours of work. Some observers (e.g., Kasarda, 1985) emphasize the lack of jobs that are open to individuals with few skills and education; others (e.g.,

Culp and Dunson, 1986) emphasize the hiring habits and prejudices of predominantly white employers in central cities; and still others (e.g., Viscusi, 1986) emphasize the opportunities in the informal and illegal labour markets of central cities, which are not reported in official labour statistics.

The current focus of social scientists and policymakers on central cities is understandable, given the concentration of poverty, economic disadvantages, and social problems in these areas. Still, understanding the factors that underlie these problems, especially the employment problems of unskilled black men, might be facilitated by expanding our view beyond central cities. There is reason to believe that social and economic changes in central cities are part of a larger phenomenon: the economic restructuring of the United States, which involves rural and smaller urban areas as well as large metropolitan areas and central cities.

Some individuals are in a better position to deal with the consequences of social and economic changes than others. Individuals who can relocate to areas with better employment opportunities are more likely to escape the adverse consequences of economic decline and restructuring. As shown by previous research (Long, 1988), whites are more likely to migrate than blacks, and the probability of migration increases with education. There are a variety of reasons for these differentials. For one, highly educated individuals have a more extensive knowledge of alternative job opportunities. For another, whites and highly educated individuals tend to have higher incomes and can afford to search widely for better employment opportunities. For yet another, whites and more educated individuals are more likely to have professional, technical, and managerial occupations, which operate as national rather than local labour markets. Consequently, in situations of rapid economic change, such as those that occurred in the United States during the 1970s and 1980s, we expect whites and the highly educated to tend to move to areas with more opportunities, leaving blacks and the poorly educated 'trapped' in depressed areas.

If this is the case, then the urban crisis reflects larger economic and social changes, and we should observe the effects of the immobility of the disadvantaged not only in central cities, but throughout the country. In this paper, we examine whether the evidence on the relationship between race, local unemployment rates, and migration is consistent with this view. More specifically, our first main question is: *To what extent were blacks and less educated individuals concentrated in areas with high unemployment rates during the 1970s and 1980s?*

Second, an implicit assumption among those (e.g., Wilson, 1987) who favour the 'mismatch hypothesis' (that jobs have moved to the suburbs and the Sun Belt while blacks have remained in or moved to central cities and the Rust Belt) is that migration provides a way for individuals to improve their opportunities. However, we do not know much about the relationship between migration and the characteristics of the labour markets between which individuals move. What we do know is based mainly on net migration flows between areas rather than on analyses of the migration behaviour of individuals. Thus, our second main questions is: *How is the likelihood of migration related to characteristics of individual decision-makers as well as to employment opportunities in local labour markets?* Does migration depend, for example, on income, employment situation, and family situation, as well as on race and education?

Our third main question concerns the consequences of migration for the characteristics of the local labour market to which an individual moves. *Do migrants indeed tend to move to places with better job opportunities? Does this tendency depend on characteristics of migrants, such as their race and education?*

LOCAL LABOUR MARKETS AND MIGRATION DECISIONS

Any association between attributes of individuals and characteristics of labour markets in the United States results mainly from individuals voluntarily deciding whether to remain in their present location or to move to a new one. (Children and

members of the armed forces are the main groups who can be considered as moving involuntarily.) Our model of the migration decision-making process (cf. DeJong and Fawcett, 1981) has three major components: (1) the decision to search for a better location than the present one; (2) the process of searching for a better location; and (3) the evaluation of the desirability of moving from the present location to one of those considered in the search. Whether individuals are deciding to search or to move, we think that they are basically deciding if the expected gain from the activity is greater than zero, and that they perform the activity if the expected gain exceeds zero. Although gains may involve personal and familial considerations (e.g., opportunities for contact with family members and friends), an individual's employment situation is usually a major factor and is the one we stress below. A formal development of our assumptions is possible but is not needed for present purposes. Instead, we briefly discuss some key implications of these assumptions.

The decision to search is a function of the benefits received from living in the current location, the expected costs of searching for a better location, the expected benefits from living in a new location selected through the search process, and the expected costs of moving to another location. If the expected gains from searching exceed zero, individuals search; otherwise, they do not. Once individuals have decided to search and have evaluated the benefits in various locations that they have selected for serious consideration (as well as the benefits in the current location), the decision to move is based on the expected benefits from living in potential new locations, the benefits of living in the current location, and the expected costs of moving. If their expected gains from moving exceed zero, they move; otherwise, they do not. We assume that the destination is the potential new location in which the expected gain is greatest.

Previous findings on racial and educational differentials in migration in the United States are easily interpreted within this decision-making context. For example, the

high degree of racial segregation in housing and the relatively small percentage of blacks in the population (roughly 12 percent in 1980) increase considerably the costs of searching and decrease the expected gain from moving for blacks as compared with whites. Partly this is simply because fewer localities are realistic destinations for blacks. That is, when blacks contemplate moving, they must rule out many communities that exhibit racial discrimination in the housing market or are inhabited by whites who may make it very costly (socially and/or economically) for them, if they do move there. The model suggests, then, that blacks are less likely to search than whites, ceteris paribus, because the perceived costs and difficulties of searching are much higher for blacks than for whites. Because blacks are less likely to search, we expect them also to be less likely to move.

Similarly, the costs of searching for the highly educated tend to be lower because they tend to be in professional, technical, or managerial occupations, which often have national labour markets in which job opportunities in other areas are widely publicized and relatively easily monitored through widely dispersed personal networks. Moreover, when considering potential employees who are highly educated, many employers are willing to bear part of the search costs (e.g., by inviting a job candidate for an interview) and moving costs. Consequently, we expect the highly educated to search more readily and also to be more likely to move.

If we consider these arguments about race and education together, they clearly imply that less educated blacks are much less likely to move than highly educated whites. For example, white civil engineers in deteriorating local labour markets are likely to know about job opportunities for civil engineers elsewhere in the state, region, and perhaps country. Further, in most areas they are likely to find housing that they can afford and that is open to them. On the other hand, poorly educated black janitors in deteriorating local labour markets are likely to have at best only vague notions about job opportunities elsewhere, and their choices among possible new locations are

constrained by difficulties in finding affordable housing that is open to them.

The benefits of searching depend on individuals' current situations—in particular their employment situation—and also on the economic vigour of the local labour markets in which they reside. Those employed full-time are unlikely to improve upon their current situation unless wage rates in a locality do not adequately reflect human capital inputs adjusted for local costs of living. In contrast, those working part-time or not at all can often improve their current economic situation by migrating. Similarly, we expect higher unemployment rates in potential migration destinations to be associated with lower expected benefits of moving to them; therefore, we expect migrants to be less likely to move to places with relatively high unemployment rates.

During the 1970s and early 1980s, migration decisions took place in a context of increasing unemployment and changes in the distribution of job types—a decline in manufacturing jobs and a rise in service jobs (Kasarda, 1988). Kasarda (1988; 1989) pointed out that the employment problems of blacks living in central cities resulted not only from a decrease in job opportunities, but also from a change in the nature of the jobs that were available. Similarly, throughout the country, some local economies lost jobs and others gained jobs, and the types of jobs changed. Whites more than blacks, and the highly educated more than the uneducated, were able to adapt more readily to these changes in local economies. Uneducated blacks had the best chances if they lived in areas that experienced an economic resurgence involving the creation of new jobs for those with no education and few skills, but such areas were few in number. Otherwise, they were likely to be 'trapped' in areas with declining opportunities. Uneducated, underemployed blacks were the most likely of all to be 'trapped' in such areas.

The combination of 'normal' racial and educational differentials in migration with changing, and often deteriorating, local labour markets leads to three specific predictions. First, we expect those with weak positions in the labour market (i.e., blacks and those with a limited education, a low income, or a nonprofessional occupation)

to be concentrated in areas with relatively poor employment opportunities. Second, after controlling for local labour market characteristics, we expect those with weak positions in the labour market to be less likely to migrate. In other words, we predict that they will be less likely to respond to local labour market conditions through migration. Third, we expect moves to be away from sluggish markets and toward more vigourous labour markets. However, we expect this effect to be greatest for those with strong positions in the labour market (i.e., whites and those with a high education, a high income, or a professional occupation) and smallest for those with weak positions.

DATA

Sample

The 1968–1984 waves of the Panel Study of Income Dynamics (PSID) are the source of the data we analyze (Morgan, 1986). The PSID is a longitudinal study of members of a sample of approximately 5,000 families who were first interviewed in 1968. It collects information on a variety of items pertaining to household structure, income, employment, education, and geographical mobility. The original sample consisted partly of a nationally representative sample and partly of an oversample of low-income families. Reinterviews have been attempted annually since 1968. Although attrition has led to losses of some families and their members, these losses have been offset by the addition of new families, as children set up their own households, and by the addition of new members to many families, primarily because of births, but also because of newly formed marriages.

We focus on black and white male heads of households who were ages 18–64 in 1975–1983. We follow men in this age range through time, beginning in 1975 or the first year in which they were a head of household, until they were no longer interviewed, left the labour force, ceased to be a head of household, or reached age 65. We excluded men in the military from our analyses of migration and its consequences because their

moves may not have been voluntary.

Variables and Measures

We use a variety of explanatory and control variables in the analyses reported below.

Intercounty Migration. We define intercounty migration as having occurred if the county of residence at one interview differs from that at the previous interview. It should be noted that this measure misses some intercounty moves when a person makes two or more intercounty moves between interviews.

Unemployment Rate. We use estimates of the annual unemployment rate in each county each year, which are prepared by the U.S. Bureau of Labor Statistics and distributed by the U.S. Bureau of the Census (1986a). Although these estimates are subject to error, they provide a year-to-year view of unemployment trends for small labour market areas—a considerable advantage over information from the decennial censuses or the annual Current Population Surveys.

U.S. Unemployment Rate. Since we are primarily interested in variation across local labour markets, and since county unemployment rates are highly correlated with the national unemployment rate, it is important to control the overall unemployment rate in the United States. The latter is reported annually in the *Statistical Abstract of the United States* (1986b).

Race. Although the PSID includes a few individuals whose race is other than black or white, there are too few to compare them. Consequently, we exclude individuals other than blacks and whites in the analyses reported below.

Education. The PSID reports years of completed schooling for each individual in 1968, in the first year that they were interviewed (if they entered the sample by marrying one of the original members of the sample), or at the interview at which they reported discontinuing their schooling. In the analyses reported below we code

education into three categories: less than 12 years, 12 years (which usually indicates high school graduation), and more than 12 years (i.e., some college).

Age. It is generally believed that the probability of migrating declines as age increases. Consequently, we include the individual's age in years as a control variable in our analyses.

Length of Residence. Length of residence has long been argued to be an important predictor of the probability of migrating (McGinnis, 1968). Persons who have migrated recently are more likely to migrate again. We measured length of residence as the number of years that the person was continuously observed in the same county. The observation period extended back to the 1968 interview, wherever possible. Moreover, sample members were asked in 1968 how long they had lived at their current address. Their response was added to the years actually observed in the county if they had lived in the same county continuously since 1968.

Employment Situation. As one indicator of a person's employment situation, we used a measure of the hours worked in the previous year. We computed this measure by multiplying the number of weeks worked in the previous year by the reported average hours worked per week when employed. We treated 2080 hours (40 hours per week times 52 weeks) as full-time employment. We then categorized annual hours of work as follows: 0–1040 hours (low hours), 1041–1760 hours (medium), 1761–2160 hours (normal), and 2061–5060 hours (high). This admittedly arbitrary scheme was chosen partly on the basis of the empirical distribution of total annual hours of work and partly on the basis of what most people are likely to consider 'low,' 'moderate,' 'normal,' and 'high' hours of work per year. The distribution across these four categories in the sample we analyzed is 9.8, 15.7, 43.5, and 31.0 percent, respectively.

Occupation is another important aspect of a person's employment situation. In accord with our earlier remarks, we created a dummy (0–1) variable to distinguish persons in professional, technical, managerial, official, and proprietorial occupations

from those in other occupations.

Income. Both searching for better employment opportunities in other locations and actually moving there can be expensive, as we noted earlier. Individuals with high levels of income are better able to afford search and moving costs and therefore may be more likely to move. The PSID data include a measure of family income in each year, which we transformed into relative levels of income within the sample for each year. We computed income quartiles for each year on the basis of total family income for the weighted sample of PSID families. In the analyses reported below, we included a dummy (0–1) indicator for a family income in the *lowest* quartile (low income) and another for an income in the *highest* quartile (high income). Family income in the 26–75 percentile range was the omitted category.

Family Situation. A few aspects of a person's family situation are important to control, even though they are not central to the hypotheses being tested. We included a dummy (0–1) indicator for being married and another for having children in the household. We also included a dummy (0–1) indicator for being a homeowner rather than a renter. We expected those who were married, had children, and owned their home to be less likely to move.

Sample. As we mentioned earlier, the original sample was drawn from two sources. One, known as the Survey of Economic Opportunity (SEO) sample, oversampled low-income families; it has a high proportion of blacks and is also atypical in variety of other ways. So, we created a dummy (0–1) indicator to denote the SEO sample. As we also noted above, some individuals drop out of the study. We also created a dummy (0–1) indicator to denote this so-called 'nonresponse' sample, which may also be atypical. Finally, some individuals were in the original sample, and others joined the survey later, usually by marrying one of the original female members of the sample. We created another dummy (0–1) indicator to distinguish individuals in the original sample from those who joined the survey after 1968.

Year. We analyze data on individuals from 1975 through 1983 because data on the county unemployment rates were unavailable prior to 1975. The 1984 interview was the most recent one available when we began our analyses; consequently, it was necessary to end our analyses with 1983. We intend to extend our analyses into the future as subsequent data become available.

METHODS

We raise three main questions and estimate a different model to address each one.

Our first main question is: *To what extent were blacks and less educated individuals concentrated in areas with high unemployment rates during the 1970s and 1980s?* To address this question, we formulated models of the unemployment rate in individual n's county of origin i at time t, $u_{ni}(t)$, in terms of various characteristics of the individual expressed by the vector of variables $x_n(t)$. Naturally, $u_{ni}(t)$ tends to covary with the overall unemployment rate in the United States at time t, $U(t)$. Since we are interested in the distribution of individuals in terms of *relative* employment opportunities in different local labour markets, it would make sense to examine *either* the deviation of the local unemployment rate from the national rate, $u_{ni}(t) - U(t)$, *or* the relative unemployment rate, $u_{ni}(t)/U(t)$. In preliminary analyses, we examined both. Though overall results were similar, we prefer the latter, which we report below, because it avoids implausible predictions (e.g., $\hat{u}_{ni}(t) < 0$) and because we obtained a better overall fit to the data. Thus, the basic form of the model used to address the first question is:

$$u_{ni}(t)/U(t) = f(x_n(t))$$

where $f(\cdot)$ is some function of the vector of variables $x_n(t)$. For purposes of estimation, we transformed this equation by taking logarithms, adding a random disturbance, and rearranging it as follows:

$$\log u_{ni}(t) - \log U(t) = \beta' x_n(t) + \epsilon_n(t)$$

$$\log u_{ni}(t) = \gamma_1 \log U(t) + \beta' x_n(t) + \epsilon_n(t) \tag{1}$$

where β is a vector of parameters indicating the effect of variables $x_n(t)$ on the relative unemployment rate in individual n's county of origin i, and $\epsilon_n(t)$ is a random disturbance with mean zero and variance σ^2. We estimated equation (1) by ordinary least squares. If the basic model fits well, we expect estimates of γ_1 to be approximately 1.0, which they were (see below).

Our second main question is: *How is the probability of migration related to characteristics of individual decision-makers as well as to local employment opportunities?* To address this question, we estimated models of the probability of individual n making an intercounty move between two annual interviews, $p_n(t)$. Such models are sometimes called discrete-time hazard models. We estimated a logistic regression model, which assumes that the log odds of the probability of migrating is linear in $x_n(t)$, $\log u_{ni}(t)$, and $\log U(t)$:

$$\log \frac{p_n(t)}{1 - p_n(t)} = \gamma_0 \log u_{ni}(t) + \gamma_1 \log U(t) + \beta' x_n(t) \tag{2}$$

where β is a vector of parameters giving the effects of the variables in $x_n(t)$, and γ_0 and γ_1 are parameters giving the effects of the local and national unemployment rates, respectively. We chose a logistic regression model over a linear probability model because it constrains probabilities to lie within the $(0\text{-}1)$ range, and we chose it over a probit model because it is easier to interpret and is known to give qualitatively similar results in most instances. We estimated the logistic regression model by the method of maximum likelihood.

Our third main question concerns the outcome of migration: *Do migrants indeed tend to move to places with better employment opportunities? Which migrants are most likely to move to better places?* To address these questions, we formulated a model similar to that in equation (1), except that we examined the unemployment

rate in j, the county to which person n moved, relative to the unemployment rate in the county from which he or she moved, $u_{nj}(t)/u_{ni}(t)$. If this relative unemployment rate equals one, it means that individuals' employment opportunities in destination j and origin i are the same on average. If it is less (or greater) than one, it means that on average they move to places with better (or worse) opportunites. We want to know if the magnitude of this ratio depends on characteristics of the individual, $x_n(t)$. The basic form of our model is:

$$u_{nj}(t)/u_{ni}(t) = f(x_n(t)).$$

where $f(\cdot)$ is some function of $x_n(t)$. For purposes of estimation, we also transformed this equation by taking logarithms, adding a random disturbance, and rearranging it as follows:

$$\log u_{nj}(t) - \log u_{ni}(t) = \beta' x_n(t) + \epsilon_n(t)$$

$$\log u_{nj}(t) = \gamma_0 \log u_{ni}(t) + \beta' x_n(t) + \epsilon_n(t) \tag{3}$$

where β is a vector of parameters indicating the effect of variables $x_n(t)$ on the unemployment rate in the county of destination j relative to that in the county of origin i, and $\epsilon_n(t)$ is a random disturbance with mean zero and variance σ^2. We estimated equation (3) by ordinary least squares. Naturally, we estimated models addressing the third question only from data on individuals who changed counties of residence.

RESULTS

Black/White Differences in County Unemployment Rates

Figure 1 shows the average county unemployment rate for black and white male household heads ages 18–64 computed from the PSID data for the period 1975–1983 (solid and dotted lines, respectively). We used the sample weights provided in the PSID to calculate these averages; consequently, they should reflect the averages for
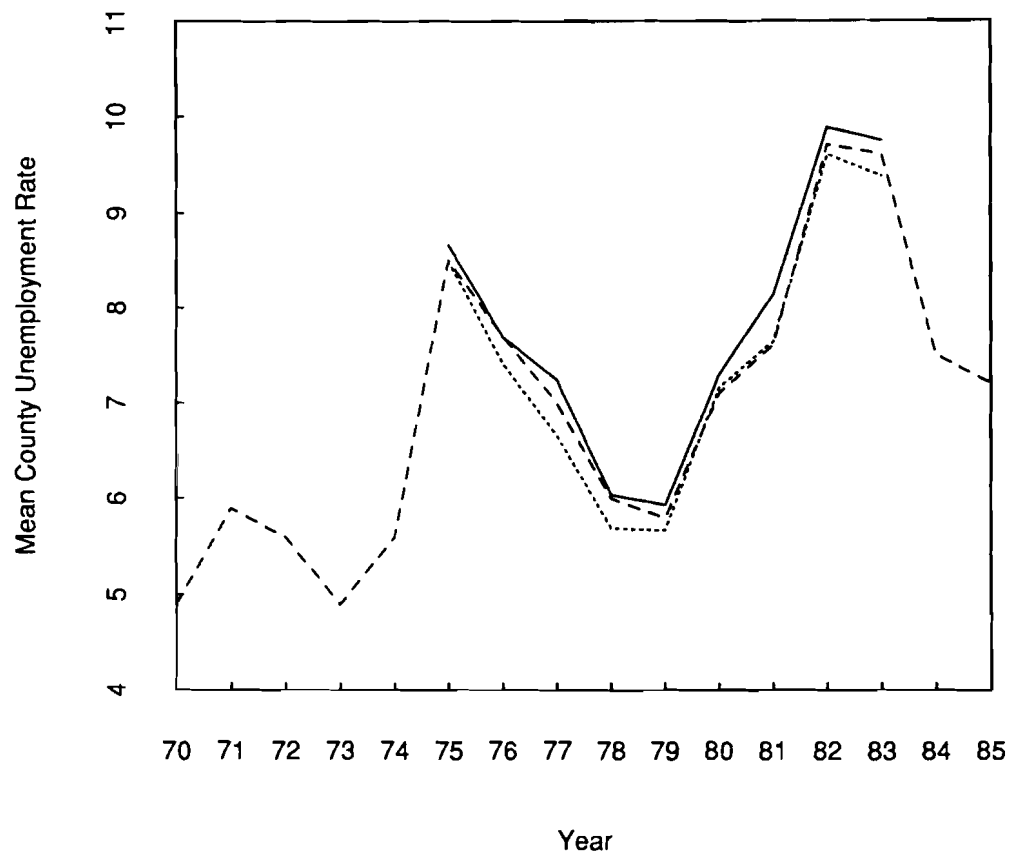
FIGURE 1. Mean county unemployment rate in the United States
by year for black and white male heads of households ages 18-64.
Blacks (solid), whites (dotted), overall in the United States (dashed).

the population of black and white male household heads ages 18–64 in the United States during this period. The figure includes the national unemployment rate for 1970 through 1985 (dashed line) for comparative purposes.

Examining the curves from left to right, one can see how the United States' economy fluctuated between 1970 and 1985. Especially noticeable are the economic recessions in the mid-1970s (peaking in 1975–1976) and in the early 1980s (peaking in 1982–1983), followed by periods of economic recovery. One can also see that the county unemployment rates have been higher on average for black men than for white men, indicating that blacks lived in counties with fewer job opportunities during the 1975–1983 period.

Figure 2 displays the average county unemployment rates for 1975 through 1983 for male household heads with different levels of education. The national unemployment rate for 1970–1985 is again included for reference. This figure shows that, during most of the period from 1975 through 1983, average unemployment rates were highest in counties in which men with less than 12 years of schooling resided and lowest in counties in which men with more than 12 years of schooling resided. Differences among the three educational groups are especially marked from 1978 to 1983; this pattern may indicate the growing difference in employment opportunities for men with different educational levels, which is due to the economic restructuring under way during this period.

The displays in Figures 1 and 2 are informative, but they do not indicate whether the observed racial and educational differentials are statistically significant. One would also like to know if black/white differentials are the same at every level of education. Graphical displays are inadequate for these purposes. A multivariate model lets one relate the county unemployment rate to individual characteristics, which helps in assessing whether the racial and educational differentials observed in these two figures are genuine or due to other characteristics associated with race and education.
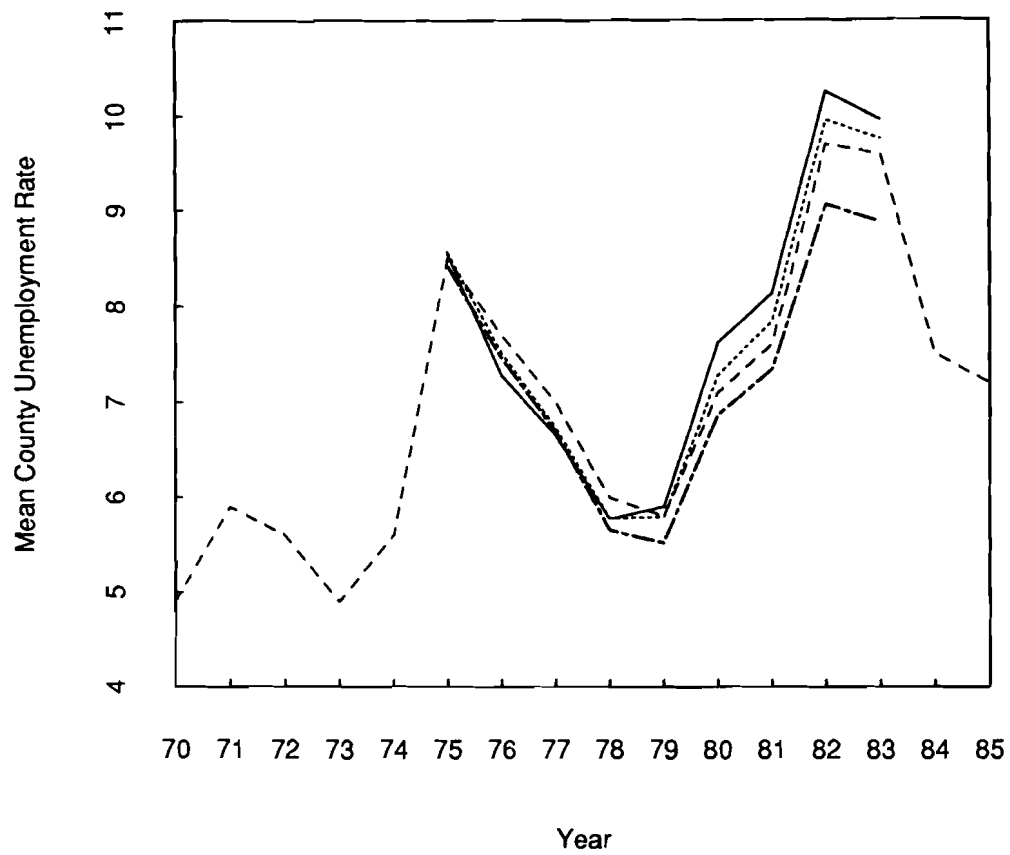
FIGURE 2. Mean county unemployment rate in the United States by year for male heads
of households ages 18-64 with different educational levels. No high school (solid),
high school (dotted), college (dot-dashed), overall in the United States. (dashed).

County Unemployment Rates and Individual Characteristics

Table 1 reports results of a linear regression model of the logarithm of the unemployment rate in the county of origin in year t (see equation (1)) for black and white men combined and separately. In all three models γ_1, the coefficient of the national unemployment rate, is close to 1.0, as expected. In the combined sample, the coefficient of the dummy indicator of Black is about .01; this indicates that the county unemployment rate is about one percent higher where black men live than where otherwise comparable white men live on average.

As indicated by the F statistics reported at the bottom of the table, all three models improve significantly upon the null model, in which coefficients of all variables are zero. However, the F statistic for the test of whether race interacts with the other variables is statistically significant at the .001 level. This implies that the association between the county unemployment rate and individual characteristics differs for black and white male heads of households. We therefore focus our discussion pertaining to the first question on the separate results for black and white men.

Less educated black men are significantly more likely to live in counties with relatively high unemployment rates, whereas more educated white men are significantly more likely to live in counties with relatively low unemployment rates. In sum, men with more (or less) schooling tend to live in counties with better (or worse) employment opportunities.

Not surprisingly, there is also an association between county unemployment rates and individuals' employment situations. Those whose own employment situation is favourable tend to live in counties with relatively low unemployment rates. Thus, Table 1 indicates that white men with a professional, technical, or managerial occupation are significantly more likely to live in counties with relatively low unemployment rates. For both white and black men, there is also a negative association between annual hours worked in the previous year and the county's unemployment rate. That is, those who

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TABLE 1

Effects of Variables on the Log of the Unemployment Rate
in the Individual's County of Residence

Variable	Whole Sample Coef.	p	Black Sample Coef.	p	White Sample Coef.	p
Intercept	−.1143	.1509	.2125	.0891	−.2567	.0107
Black	.0110	.0630				
Log $U(t)$	1.0071	.0000	.9640	.0000	1.0254	.0000
Educ'n < 12 years	.0087	.1045	.0225	.0033	.0003	.9654
Educ'n > 12 years	−.0132	.0136	−.0120	.2385	−.0136	.0341
Occupation	−.0111	.0409	−.0061	.6022	−.0134	.0336
Worked 0–1049 hours	.0692	.0000	.0556	.0000	.0782	.0000
Worked 1041–1760 hours	.0281	.0000	.0098	.2589	.0389	.0000
Worked 2161+ hours	−.0323	.0000	−.0283	.0017	−.0319	.0000
Low income	.0032	.6501	.0147	.0852	−.0198	.0708
High income	.0024	.6395	−.0020	.8352	.0005	.9301
Age (years–18)	.0003	.2640	−.0002	.5043	.0005	.1051
Length of residence	.0013	.0002	.0027	.0000	.0006	.1528
Married	−.0098	.1702	−.0239	.0237	.0002	.9824
Children	−.0040	.4123	−.0047	.5829	−.0025	.6710
Homeowner	−.0163	.0014	−.0386	.0000	−.0049	.4584
SEO sample	.0368	.0000	.0374	.0001	.0369	.0000
Original sample	−.0096	.0630	−.0235	.0033	−.0031	.6422
Nonresponse sample	−.0043	.4965	−.0245	.0032	.0110	.2192
R^2	.213		.250		.199	
F statistic, current vs. null model	443.3		179.0		296.5	
(df)	(18, 29411)		(17, 9140)		(17, 20254)	
Sample size	29430		9158		20272	

Source: Computations based on 18–64 year-old male heads of households in the 1975–1984 Panel Study of Income Dynamics.

Note: "Occupation" indicates a professional, technical, or managerial job.

worked the most hours in the previous year tended to live in counties with relatively low unemployment rates and those who worked the fewest hours tended to live in counties with relatively high unemployment rates.

There is no association between having a family income in the highest quartile and county unemployment rates for either white or black men. However, there is an association between having a family income in the lowest quartile and the county unemployment rate. Low-income black men tend to live in counties where the unemployment rate is relatively high, but, surprisingly, low-income white men tend to live in counties where it is relatively low. We think that not much should be made of the finding for white men unless it can be replicated in other studies.

Age is not associated with county unemployment rates for either black or white men. However, length of residence is associated with a relatively high unemployment rate for black men, but not for white men. This suggests that black men do indeed become 'trapped' in counties with unfavourable labour markets.

Family situation is not associated with county unemployment rates for white men. However, black men who are married or own their home are more likely to live in counties with relatively low unemployment rates. This provides some indirect support for Wilson's (1987) thesis that poor labour market opportunities are at least one reason why so few black men are married.

The three indicators of sample subgroups (SEO, original, and nonresponse subgroups) have some significant associations with county unemployment rates. However, we will not discuss them because these variables were introduced strictly as controls.

In sum, then, the results in Table 1 indicate that male heads of households in the United States are not randomly distributed across local labour markets. Black men with less education, less favourable employment situations, and lower incomes tend to live in counties with relatively high unemployment rates. In contrast, white men with more education, a professional or managerial occupation, and high annual hours

of work tend to live in counties with relatively low unemployment rates.

The Probability of an Intercounty Move

Table 2 reports results of our logistic regression model of the probability of moving to another county. We report results for the combined sample because race interactions were not statistically significant for this model. The likelihood ratio χ^2 statistic for the test of the model reported in Table 2 versus the null hypothesis in which there is a constant probability of migrating is 1379.5 with 19 degrees of freedom, which is statistically significant at the .001 level.

The economic literature suggests that a high unemployment rate encourages people to move in order to find better employment opportunities. The coefficient of the national unemployment rate is positive (.748), which supports this view. On the other hand, the coefficient of the county unemployment rate is negative ($-.181$), which indicates that individuals have a lower probability of moving away from a county with a relatively high unemployment rate than from a county with a relatively low unemployment rate. These findings are consistent with those of Kephart (1989) but not with those of DaVanzo (1978). Whatever the causal explanation of this finding, it indicates that there is some process leading men to become 'trapped' in places with relatively unfavourable labour markets.

In agreement with the previous literature, we find that black men are significantly less likely to migrate than otherwise comparable white men. The estimated coefficient for Black, $-.864$, implies that the probability of migrating for black men is 0.42 (= $e^{-.864}$) times the probability for white men. We included an interaction between race and county unemployment rate in another model (not reported here), but it was not statistically significant. Thus, blacks simply seem to be less likely to migrate than whites, whatever the employment opportunities in the local labour market.

Also in agreement with the previous literature, we find that men with some col-

TABLE 2

Effects of Variables on the Log Odds of Migrating
to a Different County

Variable	Whole Sample	
	Coef.	p
Intercept	−5.3970	.0000
Black	−.8637	.0000
Log $u(t-1)$	−.1807	.0166
Log $U(t-1)$	.7482	.0000
Educ'n < 12 years	−.0025	.9746
Educ'n > 12 years	.1175	.0936
Occupation	.3750	.0000
Worked 0–1040 hours	−.1998	.0729
Worked 1041–1760 hours	.1890	.0199
Worked 2161+ hours	.2557	.0001
Low income	.3394	.0000
High income	.1983	.0080
Age (years−18)	−.0211	.0000
Length of residence	−.1112	.0000
Married	−.1248	.1436
Children	−.0471	.4884
Homeowner	−1.0314	.0000
SEO sample	.0205	.7727
Original sample	.0317	.6141
Nonresponse sample	−.3412	.0002
Likelihood ratio χ^2, current vs. null model (df)	1379.5 (19)	
Number of Person-Years	29320	
Proportion Migrating	.0193	

Source: Computations based on 18–64 year-old male heads of households in the 1975–1984 Panel Study of Income Dynamics.

Note: "Occupation" indicates a professional, technical, or managerial job.

lege education are more likely to migrate. But an even more important predictor is occupation: men with a professional, technical, or managerial occupation have a relative risk of migrating that is 1.45 ($= e^{.375}$) times as great as that of men in other occupations.

Hours worked in the previous year also have significant effects on the probability of an intercounty move, but the nature of these effects is not what economic theory might lead one to expect. The men with the highest probability of migrating are those who worked an unusally large number of hours—more than 2160 hours in the previous year. This variable may be an indicator of high skills and other unobserved characteristics associated with employability, and these men may choose to move to another location where their skills and abilities are valued and where they can work a normal number of hours. In contrast, men who are employed less than half-time (0–1040 hours) in the previous year are significantly *less* likely to migrate than men who are employed essentially full-time (1761–2160 hours). Thus, underemployed men, whom economic arguments predict will be most likely to migrate to find better employment opportunities, are actually *less* likely to move than those fully employed. Those who were employed somewhat less than full-time (1041–1760 hours) are significantly more likely to migrate than those employed full-time. It appears that these men do have valuable work skills but cannot find full employment in their county of origin, and they do tend to move to find better job opportunities. In short, only those who are appreciably underemployed (i.e., employed less than half-time) exhibit migration patterns that differ from what economic arguments would lead one to expect. Of course, if these men are the core of the 'hard to employ,' then it may be rational for them not to move to other areas with more favourable labour markets.

Most of the control variables in the model have significant effects in the expected direction. Thus, the probability of migrating declines significantly with age and with length of residence. It is worth noting that the magnitude of the effect of age is

appreciably less than that of length of residence. And, not surprisingly, homeowners are significantly less likely to migrate than renters. The effects of being married and of having children are negative, as expected, but are not statistically significant. Finally, only the indicator of the nonresponse subgroup has a significant, negative effect. By definition the nonresponse subgroup eventually drops out of the panel survey; perhaps some of these departures are due to migration to other places where these individuals cannot be located. Thus, the significant, negative effect of this variable may indicate that migration is underreported for this subgroup.

Consequences of Migration

The third question we wish to address concerns the consequences of migration, in particular, the nature of employment opportunities in the places to which individuals move. To examine this issue, we regressed the logarithm of the unemployment rate in the county of destination on the logarithm of the unemployment rate in the county of origin, plus various individual characteristics, for migrants. Table 3 reports the results for black and white migrants separately and combined.

First, all three models improve significantly upon the null model, which contains no variables, only constants. But we again found significant interactions between race and the other variables in the model ($F = 29.57$ with 18 df). Therefore, we concentrate on the results for the separate black and white samples. We include the results for the combined sample for purposes of comparison.

In contrast to Table 1, where the estimate of γ_1 (the coefficient of the national unemployment rate) was close to 1.0, the estimate of γ_0 (the coefficient of the unemployment rate in the county of origin) is appreciably less than 1.0 in Table 3. The implication of the estimated intercept and estimated coefficient of the log unemployment rate in the county of origin is that the log unemployment rate in the county of destination tends to be higher for blacks than for whites and also less dependent on

TABLE 3

Effects of Variables on the Log of the Unemployment Rate

in the County of Destination of Migrants

Variable	Whole Sample		Black Sample		White Sample	
	Coef.	p	Coef.	p	Coef.	p
Intercept	3.2984	.0000	4.5133	.0000	3.0940	.0000
Black	.0115	.6945	--		--	
Origin log $u(t)$	.4861	.0000	.3065	.0000	.5172	.0000
Educ'n < 12 years	−.0351	.1855	−.0545	.3303	−.0247	.4223
Educ'n > 12 years	−.0247	.2859	−.0283	.6606	−.0233	.3523
Occupation	.0302	.1867	.0341	.6372	.0331	.1693
Worked 0–1040 hours	.0791	.0333	.0067	.9230	.1068	.0179
Worked 1041–1760 hours	−.0053	.8460	−.1030	.0718	.0258	.4139
Worked 2161+ hours	−.0381	.0909	−.0632	.3461	−.0316	.1867
Low income	.0119	.6616	.1467	.0144	−.0262	.4034
High income	.0103	.6889	−.0822	.3631	.0182	.4956
Age (years−18)	.0012	.3428	.0015	.6357	.0010	.5110
Length of residence	−.0009	.7116	−.0065	.2083	.0019	.4974
Married	.0253	.3796	.0779	.3260	.0150	.6319
Children	−.0255	.2713	−.0494	.4859	−.0214	.3831
Homeowner	−.0190	.4204	.0826	.2870	−.0325	.1917
SEO sample	.0106	.6477	.0231	.7195	.0023	.9283
Original sample	.0276	.2425	−.0037	.9575	.0265	.2936
Nonresponse sample	−.0207	.5053	−.1018	.0995	.0045	.9024
R^2	.244		.146		.280	
F statistic, current vs. null model	25.42		2.56		26.18	
(df)	(18, 1416)		(17, 254)		(17, 1145)	
Sample size	1435		272		1163	

Source: Computations based on 18–64 year-old male heads of households in the 1975–1984 Panel Study of Income Dynamics.

Note: "Occupation" indicates a professional, technical, or managerial job.

the log unemployment rate in the county of origin for blacks than for whites.

The other notable finding is that individual characteristics (at least those we measured) have very little impact on employment opportunities in the labour markets to which these male heads of households moved. In particular, neither educational level nor having a professional occupation has a significant effect in any of the three samples. There is some tendency for white men who worked less than half-time in the previous year to move to destinations where the county unemployment rate is higher. In contrast, there is a tendency for black men who worked 1041–1760 hours in the previous year to move to destinations where the county unemployment rate is lower. Low-income blacks are significantly more likely than middle- and upper-income blacks to move to counties with higher unemployment rates. Thus, there is little evidence that migration is an important mechanism by which black men manage to escape labour markets with few opportunities.

SUMMARY AND CONCLUSIONS

Our research has demonstrated several important features of the spatial distribution and internal migration of black and white men in the United States. First, black men, especially those with less than a high school degree, resided in counties with relatively high unemployment rates during the 1975–1983 period. In contrast, white men, especially those with more than a high school degree, resided in counties with relatively low unemployment rates during this period. Since we do not have data prior to 1975, we cannot tell whether this is a continuation of a fairly consistent historical pattern or a recent phenomenon. Given the concentration of blacks in rural southern areas in the early part of this century and their more contemporary concentration in either rural southern areas or declining central cities in the Midwest and the Northeast, it is likely that the 1975–1983 pattern reflects a situation that has existed for some time.

Second, we found that during the 1975–1983 period, black and less educated men were less likely to move than white and more educated men. This was found to be true, even after controlling the national unemployment rate and the relative county unemployment rate. This finding means that blacks are less likely to migrate in order to improve the quality of the local labour market in which they reside. Coupled with the previous finding that labour market conditions are less favourable in the localities where blacks reside, this finding suggests that blacks and less educated men are prone to becoming 'trapped' in local labour markets with relatively poor employment opportunities. This pattern is especially important during periods of rapid economic deterioration and change in local labour markets, such as occurred in the United States during the 1970s and 1980s.

Third, we found that when black men do change counties of residence, they tend to relocate to counties with higher unemployment rates than those to which white migrants move. This may partly be because most intercounty migrants move to nearby counties, which are likely to have similar unemployment rates. Since blacks reside in counties with higher unemployment rates than whites, one would expect more blacks to move to (nearby) counties with higher unemployment rates. However, the results show that the unemployment rate of the county of destination is less dependent on the unemployment rate of the county of origin for blacks than for whites. The quality of the labour market in counties of destinaton may also, then, be limited by the more restricted relocation options open to blacks as compared with whites.

These findings lead us to two principal conclusions. It is clear that blacks have geographical disadvantages in addition to the other disadvantages they experience in contemporary American society. A complex set of historical circumstances has led to a situation in which blacks are more likely than whites to reside in local labour markets with relatively few employment opportunities. The geographical disadvantages of blacks are factors that have largely been ignored, or about which claims have been

made without supporting evidence. Our results show that the geographical disadvantages of blacks involve not only their being concentrated in central cities of large metropolitan areas, but also their being concentrated in local labour markets with relatively high unemployment rates.

Second, migration works less effectively for blacks than for whites as a means of improving available job opportunities. The results regarding this issue are consistent with the implications of our theoretical model: blacks are unable to use migration as successfully as whites because they have fewer alternative locations available to them. Less educated blacks are doubly disadvantaged because they also have less information about alternative opportunities elsewhere and are more likely to have nonprofessional occupations, which are less mobile. These findings clearly suggest that black/white differences in migration in response to local employment conditions act to exacerbate rather than to reduce existing geographic disparities.

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