THE PECULIAR IMMOBILITY: Regional affinity and the Postbellum Black Migrant

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Philip E. Graves, Robert Sexton and Richard Vedder

Abstract

Why did newly freed slaves and their descendants wait a half a century before migrating in large numbers to the superior economic opportunities in the North? Census lifetime migration data on both movers and stayers are examined intertemporally for both whites and blacks. Regression analysis reveals that before 1920 Southern blacks had a very strong affinity for the "Southern way of life."

I. INTRODUCTION

The Emancipation of four million black slaves was not followed by any marked redistribution of America's black population for half a century. Why did freed blacks not flee the poverty and exploitation that characterized Southern postbellum society? Why did they wait 50 years to emigrate?

The immobility of labor resources in the South, particularly given the substantial differential economic advantage prevailing in the North, seems somewhat puzzling. The persistence of immobility may be an important determinant of the observed interregional patterns in economic progress in the postbellum period.

II. IMMOBILITY OF SOUTHERN BLACKS

There is considerable evidence that quite a bit of short-distance migration occurred in the immediate aftermath of effective emancipation. In the words of Ransom and Sutch, the newly freed blacks "demonstrated their freedom." Yet, after they had initially exercised their newly established constitutional rights, the black population became a peculiarly immobile class by the standards of the nineteenth century American society. The proportion of blacks migrating in the course of a lifetime across state boundaries was more than 27 percent lower than was the case for whites at the beginning of twentieth century. Moreover, blacks that migrated were much more likely to go short distances. More than 55 percent of black interstate migrants as of 1900 were born in a state contiguous to the one they were living in, compared with 46 percent for whites. Even those blacks that ventured into northern states did not come primarily from the Deep South. An early-twentieth-century Census Bureau official observed that “even as recently as 1910, 48 percent of the southern-born Negroes living in the northern states came from two states, Virginia and Kentucky.”

Such migration that did occur in the half century between the Civil War and World War I occurred mainly within the South, a region that contained at least 84 percent of the nation's black population as late as 1900. To be sure, there was net migration from Southern to Northern states after 1890. From 1890 to 1910, net migration from the South to the North is estimated at 379,000; while this is not an inconsequential figure, in neither the 1890s nor in the first decade of the twentieth century was net migration as much as 3 percent of the black Southern population at the beginning of the decade.

Summarizing, the most striking characteristics of black population movement in the United States from 1865 to 1915 were its small size and the lack of a strong unidirectional (northward or westward) character. We would agree completely with Robert Higgs: "In 1910 the blacks lived, by and large, in the same areas they had inhabited in 1860."

The increase in net out-migration from the South after 1910 was substantial. Net out-migration from 12 Southern states comprising the three Southern Census regions more than doubled in the 1910-1920 decade, to some 550,000, and continued at a high level thereafter. Moreover, within the decade including World War I, the migration is believed to have been substantially greater after 1915 than before, so the major shift in migration patterns to the North can be dated from the years of World War I. Not only did migration increase after 1915, but a much larger proportion of migrants came from the Deep South. According to William Vickery, net out-migration from five Deep South states increased
from only a bit more than 40,000 in the 1900-1910 decade to 227,000 from 1910-1920 and to 444,000 in the 1920s.10

III. EXPLANATIONS OF LOW LEVELS OF UNIDIRECTIONAL BLACK MIGRATION

Scholars of postbellum black migration have suggested a number of "push" and "pull" factors to explain the relatively tepid net migration prior to 1915.

A fairly common view is that very high information and transportation costs prevented newly emancipated blacks from taking advantage of the northern economic opportunities. Gunnar Myrdal takes that position in his important study of black American life: "before 1915 an existing and widening difference in living conditions between South and North . . . did not express itself in a mass migration simply because the latter did not get a start and become a pattern."11 He implies that once a sizable contingent of migrants had moved North, they would convey information to their friends and relatives in the South, lowering the high costs of moving and searching for a job.

We are skeptical, however, that this factor alone can explain the paucity of migration out of the South in the first half century after Emancipation or that those costs suddenly or dramatically fell to start the exodus of blacks from the South. Literally millions of non-English speaking peasant immigrants traversed some 4000 or 5000 miles from eastern and southern Europe. These immigrants were subjected to far greater movement and search costs than southern blacks faced two decades later. In addition, they faced major cultural barriers easily rivaling those existing between the rural South and the urbanized North.12

The suggested interpretation in the literature is that the migrants were "pulled" North but that the pull forces were not operative to a major extent until information costs fell. The size of the pull factor also grew larger after 1915 according to nearly every account. Employment opportunities for unskilled blue-collar workers soared. Manufacturing employment increased by 30 percent between 1915 and 1919.13 Employment in the manufacturing and transportation sector rose 3.1 million in those four years; some 75 percent of the increase in total nonagricultural civilian employment was in those sectors requiring primarily relatively unskilled workers. These sectors were concentrated geographically in the Northeastern and East Central states. It is worth noting that this growth in civilian employment occurred at a time when the size of the armed forces increased from slightly over 150,000 (1910-1914) to nearly 3 million (1918).

Moreover, a major traditional source of new workers, immigration almost dried up. The number of immigrants reporting an occupation declined by more than 80 percent in the 1915-1919 period from the 1910-1914 level. The number of such migrants was less than 750,000 in the last half of the decade, less than one-fourth the increase in manufacturing and transportation employment.

The impact of all these labor market changes was to raise the relative wage of comparatively unskilled labor working in industry and transportation and to lower the unemployment rate. In 1910, the weekly wage of "lower skilled" workers was 75 percent of the average weekly wage of all industrial workers. By 1919, 44 percent of the gap between the lower skilled workers and all workers had been eliminated, as lower skilled wages rose by 124 percent compared with the 95 percent for all industrial workers.

Moreover, the median unemployment rate from 1915-1919 was 4.6 percent, well below the 5.9 percent rate prevailing in the 1910-1914 years and also below the typical rate of unemployment in the generation before World War I.14 The 1919 rate of 1.8 percent is the second lowest ever, exceeded only in 1944.

Research by William Collins shows that blacks moved at times and places where foreign born immigrants were less prevalent and that the Great Migration might have started even earlier had there been more stringent immigration controls.15 In addition, Robert Margo demonstrates that better educated blacks were more likely to move northward.16 In 1870, roughly 20 percent of Blacks were literate but by 1920 it had risen to 70 percent.

According to Graves, Sexton and Vedder southern black migration before the Civil War was dictated by money rates of return to slave owners leaving slaves in a situation where they were not in
spatial equilibrium (where real incomes would be similar throughout the southern slave states). The emerging importance of amenities reduces the ratio of net migration to gross migration, causing migration to be less unidirectional. In short, the existence of regional amenities increased movement costs reducing the incentive to move for many blacks in the immediate postbellum period. The amenity effect appears to have trumped the income effect from 1865-1910.17

IV. A MODEL OF SOUTHERN BLACK MIGRATION

What may be missing from the explanation of black migration patterns is consideration of another hypothesis: Southern blacks in the postbellum period genuinely preferred the Southern environment to any alternatives, even abstracting from the admittedly not inconsiderable costs of migration. While they had their grievances, Southern blacks were not (or at least did not feel) sufficiently exploited, ostracized, or oppressed to view Southern life as being unbearable or undesirable. Rather, the variety of so-called noneconomic factors that collectively made up the "Southern way of life" was, on balance, appealing.

In the context of economic theory, we are suggesting that utility-maximizing individuals respond not only to direct economic stimuli in the form of pecuniary incomes and costs but also to amenities and disamenities that are non-pecuniary in nature; people derive utility from non-traded as well as traded goods. The quality of the air we breathe, the beauty of the landscape and architecture, the general level of cultural and social ambience of a locality are all things of importance for migrants considering a locational choice.

One of these non-traded goods is climate. There is a growing literature that suggests that physical climate is an important determinant of locational choice.18 Moreover, the physical climate may in turn be related to other elements entering into the lifestyle prevailing in a given area. Hence we hypothesize, ceteris paribus, that Southern blacks preferred the relatively warm region of their birth to other regions.

In positing a migration model explaining the number of persons deciding to stay in an area (not migrate), we would expect that the number of stayers, ceteris paribus, would be greater the greater the per capita income level prevailing in a state. Southern blacks tendency to want to remain in the region of their birth to a greater degree than other Americans in the late nineteenth century came to be dominated by the growing economic incentives to move Northward beginning about 1920 or so.

The number of persons wanting to stay in an area, such as a state, will vary positively with the population born in that state. To control for the substantial population variations between the states, we therefore can introduce as a variable in our migration model the number of persons born in a state. The decennial censuses after 1850 provide lifetime migration data, indicating the residence of native-born Americans classified according to the state of their birth. While these data have several deficiencies (e.g., they exclude intrastate moves, ignore intermediate interstate moves, and are imprecise on the timing of the moves), they are a remarkably detailed compilation of the migration habits of Americans. Moreover, the data after 1870 are disaggregated by race, enabling a comparison of the behavior of blacks and whites.

Accordingly, we gathered migration data from the 1880, 1900, 1920, and 1960 censuses. As the interracial behavioral comparisons were of interest, we obtained information for each state for each of the four years on the number of whites and the number of blacks living in a state who had been born in that state. We limited our analysis to the 48 contiguous states; the discussion above suggests the following specific migration model:

\[ S_i = a + bY_i + cP_i + dB_i + eT_{1900} + fT_{1920} + gT_{1960} + u, \]

where \( S_i \) indicates the number of black or white persons born and living in the \( i^{th} \) state in one of the years under examination (a measure of "stayers"); \( Y \) represents the per capita income level prevailing in the \( i^{th} \) state in the relevant year; \( P_i \) denotes the population (black or white) born in the \( i^{th} \) state; \( B_i \) is a dummy variable that takes the value of 1 if the observation refers to black migrants born and living in one of 12 Southern states; \( T_{1900}, T_{1920}, \) and \( T_{1960} \) are dummy variables denoting migration for those respective years (for example, \( T_{1900} \)
has a value of 1 for 1900 observations and 0 for other years); and \( u \) is a random error term. Note that \( B_s \) is designed to capture whether Southern blacks in fact were less likely to move (more likely to stay), ceteris paribus, than whites. The three time dummy variables are designed to capture whether after 1880 there was a tendency for migration to increase or decrease relative to that year. Falling transportation and communication costs should have led to some decline in movement costs over time, leading us to hypothesize, ceteris paribus, that the number of stayers should fall over time. Ordinary least squares (OLS) regression procedures were used. The results are:

\[
S_i = -30,486 + 126.70 Y_i + .77 P_i + 52,857 B_s + 10,457 T_{1900} - 48,029 T_{1920} - 326,266 T_{1960}
\]

\[(2.172) \quad (5.170) \quad (196.638) \quad (2.694) \quad (0.601) \quad (2.398) \quad (6.813)\]

\((R^2 = .9911; F \text{ ratio } = 6943.18),\)

where numbers in parentheses are t values.

The model does an effective job in explaining variations in the number of non-migrants over time and space. The results support the major hypotheses. Ceteris paribus, persons are more likely to stay in a state the higher that state's income. The number of stayers was estimated to vary positively with the population born in a state. Each one additional person born in a state is estimated to have added 0.77 more stayers. Put differently, 77 percent of the incremental population is estimated to have been stayers and 23 percent movers. The time drift dummy variables behave (with the exception of 1900) as expected, with the tendency to be a stayer, ceteris paribus, diminishing progressively over time (meaning that the tendency to migrate increased).

The important variable in terms of earlier hypotheses is \( B_s \), the dummy variable denoting Southern blacks. Southern blacks, ceteris paribus, had a statistically significant (at the 1 percent level) greater tendency to remain in their state of birth than others (both whites and non-Southern blacks). This is highly consistent with our hypothesis.

The Southern black tendency to avoid migration relative to other groups dissipated over time. To look at this, we disaggregated our model, looking at the basic model given above minus the time drift dummy variable for each of the four Census years. Table 1 reports the results as to the statistical significance of the findings for the relevant variable, \( B_s \), for each year.

The findings for 1880 and 1900 show a statistically significant tendency for Southern blacks to want to remain in their state of birth more than other Americans. By 1920 that relationship is no longer significant in a statistical sense even at the 10 percent level, and the decline in the t value continues after that date. Moreover, the actual decline between 1900 and 1920 in the tendency to be stayers may be greater than indicated owing to the fact that the migration data record lifetime movement patterns and thus include migration decisions made in some cases well before 1900.

The findings again add support for the view that, holding income and population constant, Southern blacks in the late nineteenth century had a greater tendency to want to remain in their region of birth than did other Americans but that this differential behavior largely disappeared after 1900 as Southern black willingness to move became more pronounced. The notion that newly emancipated blacks fled the hated South in response to oppression and injustice does not get support from these results. An alternative interpretation, however, is consistent with the findings. An unusually positive attitude toward the region contributed to Southern black immobility in the late nineteenth century, but this favorable attitude was offset by economic incentives, and later reduced movement costs, after 1900, contributing to the great exodus later observed.
Table 1. Statistical Significance of Dummy Variable Measuring Southern Blacks’ Tendency to Remain in Region of Their Birth, 1880-1960

<table>
<thead>
<tr>
<th>Year</th>
<th>t Value</th>
<th>Significance Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>1880</td>
<td>2.887</td>
<td>1%</td>
</tr>
<tr>
<td>1900</td>
<td>2.074</td>
<td>5%</td>
</tr>
<tr>
<td>1920</td>
<td>1.652</td>
<td>NS</td>
</tr>
<tr>
<td>1960</td>
<td>0.741</td>
<td>NS</td>
</tr>
</tbody>
</table>

NS = not significant

Source: See text.

V. SETTLEMENT PATTERNS OF MIGRANTS

The analysis to this point is consistent with the view that Southern blacks had, on balance, a strong preference for non-pecuniary aspects of Southern living before 1920. Additionally, we can analyze the settlement patterns of those who decided to migrate. While the analysis of stayers to this point has evaluated behavior only in terms of factors present in the state of origin (the push factors), a settlement pattern model of movers can incorporate attributes of the areas receiving migrants—in other words, the pull factors.

Recall that an affinity for the South was not the only factor guiding migration patterns of postbellum blacks, as seen by the fact that increasing numbers left the South in the more recent data periods. A fuller model of migrant behavior would incorporate several of the other factors mentioned in the literature and in economic theory. For example, the notion that the increased Northern migration after 1915 resulted from rising relative wages and employment opportunities suggests two hypotheses. Other things equal, the number of Southern black migrants locating in a state would be greater the greater the per capita income level of the state (since higher wages are associated with higher incomes) and the greater the number of jobs in the state.

Was occupation and/or wage discrimination greater in the South than in the North? If Northern blacks generally had access to better-paying jobs than Southern blacks, for example, the per capita income data used actually understates the differential income potential of moving North. The evidence strongly suggests that that is the case. A larger percentage of Southern black migrants were employed in relatively low-paying jobs in agriculture and domestic and personal service than were Northern ones. The proportion of blacks that were professional workers was also higher in the North than in the South in 1900.23 If anything, the differential in economic opportunities for blacks between North and South was greater than the aggregate data used suggest.

The considerable emphasis in the literature on the obstacles posed by high movement costs resulting from ignorance, fear of the unknown, and high transportation costs implies that distance was an obstacle to migration, since presumably ignorance and transportation costs are directly related to the distance between the state of migrant origin and the state of destination. Hence, we hypothesize that the greater the distance between the state of migrant origin (birth) and the state of destination, the smaller the migration flow.

Finally, the era in question was one of great urbanization. Perhaps even more than for native-born whites, the long-distance postbellum (and particularly post-1900) black migration had a pronounced farm-to-city character, as blacks left highly rural settings for cities, increasingly in the North. To what extent were migrants sensitive to population congestion, as measured by population density? Did blacks have the same desire for land that stimulated the westward movement of both
Northern and Southern whites? If so, we might expect that, ceteris paribus, the number of Southern black migrants into a state would be greater the lower the population density of that state. If, however, the blacks viewed urbanization as a chance to attain cultural and educational opportunities and to avoid racial discrimination so pervasive in Southern rural areas, one would expect immigration to be positively related to a state's population density.

The migration model resulting from the hypotheses discussed above is identical to one used to examine the migration patterns of all native-born Americans, thereby permitting the interested reader to make some comparisons. The same basic state of birth and state of residence Census data and per capita income data are used as before. Our job opportunity measure is the number of jobs occupied in a state as reported in population Censuses. Distance is measured by the straight-line method from the center of a state of origin to the center of the destination state, except where an obvious population center existed, in which case that city was used. Population density is simply a state's total population divided by the land area of the state in square miles, again derived from Census sources.

To measure the preference of Southern black migrants for the South as opposed to other regions, holding other factors in the model constant, we used a dummy variable technique, where a move from a Southern state to a state in another region (e.g., the North) was given a value of 1, while an intra-Southern move was given the value of 10. As before, this dummy variable captures the influence of climate, as the South is a relatively homogeneous, hot, humid region compared with other states, some of which have relatively colder climates, or, in the case of the states of the Southwest, hot and arid climatic environments. However, if in fact a distinct regional (in this case Southern) identity existed among postbellum blacks, this would be captured in our climate-regional affinity variable.

OLS regression analysis was used to examine the model for migration data from 1880, 1900, 1920, and 1960 Censuses. Again, the 1880 data reflect the immediate post-Emancipation and Reconstruction Era migration; the 1900 results include the behavior of post-Reconstruction migrants; the 1920 results incorporate the initial movement patterns of the World War I exodus; and the 1960 results include the complete, long-run patterns of locational choice brought about by the outflow beginning around 1915.

The model was estimated in logarithmic form, as experimentation indicated that a log-linear functional relationship provided a better fit than a straight-linear one. Moreover, the logarithmic model provides direct estimates of the elasticity of migration with respect to all but the regional affinity variable. Symbolically, the precise model formulation is

\[ M_{ij} = a Y_j D_{ij} P_j C_{ij} u, \]

where \( M_{ij} \) denotes the number of lifetime migrants from some Southern state \( i \) to some other state (Southern or non-Southern) \( j \); \( Y_j \) is income per capita in state \( j \) (state of in-migration); \( J_j \) is the number of persons employed in state \( j \); \( D_{ij} \) is the distance from state \( i \) to state \( j \); \( P_j \) is the density of population in state \( j \); \( C_{ij} \) indicates the regional and climatic similarity of state \( i \) to state \( j \); \( a \) is the constant term; and \( u \) is a random error term. The model was estimated for 45 observations for 1880, and for the 48 contiguous states for 1900, 1920, and 1960.

The model was estimated for black migrants from each Southern state for each date. For comparison purposes, it was estimated for white native-born migrants as well. All told, this involved statistical estimation of five independent variables in nearly 100 regression equations. In order to reduce the mass of detail, the results that follow give only the mean estimated value for each variable (calculated from the individual state regressions) for all the Southern states, rather than reporting individual state results.

**VI. FINDINGS**

The major findings are presented in Table 2. Black migrants born in the South performed in a manner generally consistent with our hypotheses, and also in a manner reasonably similar to that of Southern white interstate migrants. The model as a whole performs well, explaining more than three-fourths of the variation in the number of black migrants to each state in each year examined. While not indicated in the
Because of its composite nature, most of the results of the individual state regressions were statistically significant at the 5 percent level or beyond.28

Table 2. Mean Estimated Elasticity of Migration with Respect to Five Variables, Southerners Classified by Race, 1880-1960

<table>
<thead>
<tr>
<th>Variable</th>
<th>1880</th>
<th>1900</th>
<th>1920</th>
<th>1960</th>
</tr>
</thead>
<tbody>
<tr>
<td>Per capita income</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td>0.77</td>
<td>1.61</td>
<td>2.32</td>
<td>4.34</td>
</tr>
<tr>
<td>White</td>
<td>0.56</td>
<td>1.02</td>
<td>1.09</td>
<td>2.29</td>
</tr>
<tr>
<td>Job opportunity</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td>1.25</td>
<td>1.20</td>
<td>1.51</td>
<td>1.37</td>
</tr>
<tr>
<td>White</td>
<td>1.34</td>
<td>1.28</td>
<td>1.30</td>
<td>1.02</td>
</tr>
<tr>
<td>Distance</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td>-2.23</td>
<td>-2.29</td>
<td>-2.26</td>
<td>-1.73</td>
</tr>
<tr>
<td>White</td>
<td>-1.34</td>
<td>-1.38</td>
<td>-1.38</td>
<td>-0.92</td>
</tr>
<tr>
<td>Population density</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td>-0.32</td>
<td>-0.37</td>
<td>-0.53</td>
<td>-0.21</td>
</tr>
<tr>
<td>White</td>
<td>-0.72</td>
<td>-0.62</td>
<td>-0.75</td>
<td>-0.35</td>
</tr>
<tr>
<td>Climate-regional affinitya</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td>11.69</td>
<td>11.81</td>
<td>4.41</td>
<td>2.01</td>
</tr>
<tr>
<td>White</td>
<td>6.15</td>
<td>6.19</td>
<td>3.64</td>
<td>3.96</td>
</tr>
<tr>
<td>R²</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td>.84</td>
<td>.80</td>
<td>.77</td>
<td>.83</td>
</tr>
<tr>
<td>White</td>
<td>.76</td>
<td>.75</td>
<td>.74</td>
<td>.78</td>
</tr>
</tbody>
</table>

Note:
*Expressed as a multiple by which migration is increased when it is between two states considered to be "Southern"

Southern black migrants were more sensitive to income differentials than were Southern whites, and black sensitivity to those differentials grew over time. This finding is particularly note-worthy since some comparisons of black-white migration patterns for more recent periods have found whites more responsive to income differentials.29 Moreover, estimation of our model for white and black migrants from outside the South reveals that whites were more sensitive to income differentials than were non-Southern blacks throughout the period under examination, evidence for regional affinity.30

The elasticity of migration of Southern blacks increased considerably over time. By 1920, a 1 percent increase in a state's per capita income level, other things equal, was on the average associated with a 2.32 percent increase in the number of Southern black migrants into a state. The increase in the elasticities of both the income and job opportunity variables after 1900 suggests that the exodus to the North reflected both new economic opportunities in the North and also heightened sensitivity to those opportunities.

The existence of high information and other movement costs are confirmed by the results, with blacks born in the South being far more sensitive to distance than whites. An increase in the distance between two states of 10 percent, ceteris paribus, was associated with a more than 22 percent decline in the number of migrants for three of the dates examined. The sensitivity to this factor shows no decline from 1880 to 1920, and the factor remains relatively powerful even in 1960. These findings cast doubt on the idea that a dramatic decline in information costs following the first migrant flow northward was a major determinant of the post-1915 migration toward the North.

Southern blacks moved to the relatively highly densely populated states of the North in spite of a mild preference, other things equal, for less densely populated areas, and the post-1915 change in migration patterns cannot be explained by any change in attitudes toward this factor. While Southern
whites were more influenced by this factor than Southern blacks, the similarities in results are perhaps more striking than the differences.

Again, the results for the regional affinity variable suggest that black migrants had a strong preference for living in Southern states, holding income, job opportunity, moving costs (distance), and population density constant across all states. It appears that the move to the North came out of a sense of frustration over Southern life and social conditions but because economic opportunities in the North were so powerful that they overcame a preference for Southern living.

The results are converted into multiples for reader convenience. In 1900, other things equal, 11.81 times as many Southern black migrants were likely to migrate to a state if that state were Southern rather than non-Southern. That affinity for the region existed throughout the period, although the magnitude of the factor declined considerably after 1900. While improved rates of black literacy and better national communications no doubt played a role, it is possible also that a lessening of regional antagonisms engendered by the Civil War and Reconstruction contributed to the change in the size of the multiple.

Confidence in the major findings is enhanced by Chow tests to see if the observed differences in behavior between black and white migrants were statistically significant. The results confirm the hypothesis that black migrant behavior differed significantly from that for white migrants. For example, for the 1900 results the lowest F value obtained on Chow tests of black and white migration from the 12 Southern states was 3.042, a value which is statistically significant at the 5 percent level; 11 of the results were significant at the 1 percent level.

VII. THE ROLE OF CLIMATE IN REGIONAL AFFINITY

One might dismiss the findings that Southern born blacks, ceteris paribus, preferred to live in the South as a trivial and expected outcome. After all, people tend to like the area in which they grow up. We would first point out that our results follow both for data including stayers and for the model that is confined to persons who made an interstate move in their lifetime—persons who by their own actions demonstrated a preference to move from the immediate locale of their birth.

We would also emphasize again that the strong affinity for the region of birth among movers is not observed for either blacks or whites born in other regions: it is a finding unique to the South. The fact that for much of the period under examination the regional preference factor is as strong or stronger for blacks as for whites suggests that Southern blacks of the Reconstruction Era or later did not feel as oppressed as some writers would lead us to believe. Evidence that Southern black movers were highly responsive to economic stimuli, leads to skepticism that black immobility reflected ignorance or indifference to alternative economic opportunities vis-a-vis the regional affinity emphasized here.

The rather simple dummy variable approach utilized here does not allow insight into whether the "preference for the South" reflected primarily a preference for the Southern physical climate or other location specific dimensions of being "Southern," including attributes of Southern society and culture that made up the "Southern way of life." To examine this issue further, we modified our model to examine the 1900 behavior of Southern black and white movers. We introduced two variables that objectively measure important aspects of physical climate, namely, the presence of warmth and sunshine. Using historical meteorological data, we introduced the average number of days that the sun shines in the in-migration state as an explanatory variable. To measure a state's relative coldness or warmth, we used the number of heating degree days: the more the heating degree days in a state, the colder is that state. Assuming, other things equal, that people prefer relatively warm climates, we would expect persons to migrate in greater numbers to states with a smaller the average number of heating degree days.

Including the variables measuring physical climate in the model suggests that the original regional dummy variable captures both the climatic and non-climatic dimensions of Southern life. The results with the additional climate variables are interesting. In 11 of 12 states, black migrants responded in a statistically significant fashion to the warmth variable going, other things equal, to states with fewer heating degree days. The preference for sunshine, ceteris paribus, was much weaker, and in only one instance was statistically significant at the 5 percent level. The inclusion of the climate variables had only minor effects on the other variables, except for the regional affinity factor. The magnitude of the
"fondness for the region" factor became considerably smaller, but in a majority of cases was still positive and statistically significant, suggesting that the love for the South was partly related to climate but partly to other factors as well.

To more precisely show the impact of the inclusion of the climate variables, we ran a pooled cross-section regression for 1900, where we included the outmigration from all 12 states as observations, giving 564 observations; see Table 3 for the results. Because the 12 states in question varied significantly in size and in the number of movers, we controlled for variation in the scale of migration by state by including as an additional variable the total number of out-migrants from the state. Inclusion of the scaling variable does not materially alter the results with respect to the other variables. The findings again generally confirm the initial hypotheses, with both groups responsive to the income, job opportunity, and distance variables, with black migrants somewhat more responsive than whites. Both groups, other factors held equal, preferred less densely populated states (whites more so than blacks). Both groups significantly preferred warm states, with blacks more sensitive to this factor than whites. The sunshine variable worked less strongly but was significantly positive at the 10 percent level for both groups. A Chow test indicates a statistically significant (at the 1 percent level) difference in behavior between the two groups.

Comparison of the original and expanded model reveals that the inclusion of the climate variable substantially reduces the size of the regional affinity factor. For example, without the climate variables included, we observe that blacks, ceteris paribus, would tend to settle in about eight times as large a number in Southern states as in non-Southern ones. Much of that, however, apparently reflected a preference for relatively warm and sunny locales, which were present to a relatively large extent in the South. Including climate variables, we observe that Southern blacks, holding other variables (including temperature and sunshine) constant for all states, tended to settle slightly less than twice as much in Southern states as in non-Southern ones. Thus most of the affinity for the South originally observed (about 88 percent of it by one means of calculation) reflects a strong preference on the part of blacks for a warm climate. Still, the residual affinity for the South is rather sizable; by one way of calculation, the results suggest that more than 46 percent of the pre-1900 migration into the Southern states is explainable in terms of an affinity for that region (independent of temperature, sunshine, and other economic considerations associated with the region that are included in the model). A similar but significantly less pronounced conclusion is observed with respect to whites. Preference for the region was stronger for blacks than whites, but for both groups the expanded model strengthens our conviction that the "Southern way of life" was, on balance, appealing, at least in the era under consideration.

The results in Table 3 relate only to persons who moved from a state to some other state. We have excluded non-movers and intrastate movers. We re-estimated the pooled cross-section regressions reported in Table 3 adding observations representing persons living in the state of their birth (for each of the 12 Southern states). Thus movers and stayers are both included. The results are generally similar to those reported in Table 3, with all variables retaining their expected signs and being significant at the 5 percent level (including the sunshine variable, which was previously not significant at that level). The elasticity of migration with respect to the key economic variables declines somewhat when non-movers are included (e.g., 0.71 for blacks with respect to per capita income instead of 1.07), which is not unexpected when one is adding the behavior of persons who are, by definition, nonresponsive to the economic stimuli of other locations. Again, the regional affinity variable is positive and statistically significant even when climatic variables are included. The view that, until 1920 at least, Southern blacks were both sophisticated in responding to economic and other stimuli and at the same time strongly loyal to the region of their birth is supported by statistical analysis of three forms—one stressing non-movers, the second confined to movers, and the third including both groups.
Table 3. Black-White Southern Migration in 1900: Pooled Cross-Section Results*

<table>
<thead>
<tr>
<th>Variable or Statistic</th>
<th>Elasticiy Estimates</th>
<th>(Blacks)</th>
<th>(Whites)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. <em>Model with climate variables</em></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Income per capita</td>
<td>1.07</td>
<td>0.67</td>
<td></td>
</tr>
<tr>
<td>Jobs opportunity</td>
<td>1.40</td>
<td>1.37</td>
<td></td>
</tr>
<tr>
<td>Distance</td>
<td>-1.75</td>
<td>-1.04</td>
<td></td>
</tr>
<tr>
<td>Population density</td>
<td>-0.46</td>
<td>-0.69</td>
<td></td>
</tr>
<tr>
<td>Regional affinity**</td>
<td>1.87</td>
<td>1.64</td>
<td></td>
</tr>
<tr>
<td>Days of sunshine**</td>
<td>0.87</td>
<td>0.76</td>
<td></td>
</tr>
<tr>
<td>Heating degree days</td>
<td>-1.52</td>
<td>-1.01</td>
<td></td>
</tr>
<tr>
<td>Number of migrants (scaling)</td>
<td>0.82</td>
<td>0.69</td>
<td></td>
</tr>
<tr>
<td>$R^2$</td>
<td>.79</td>
<td>.69</td>
<td></td>
</tr>
<tr>
<td>F ratio</td>
<td>264.3</td>
<td>152.0</td>
<td></td>
</tr>
<tr>
<td>II. <em>Model without climate variables</em></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Income per capita</td>
<td>1.25</td>
<td>0.83</td>
<td></td>
</tr>
<tr>
<td>Jobs opportunity</td>
<td>1.40</td>
<td>1.37</td>
<td></td>
</tr>
<tr>
<td>Distance</td>
<td>-1.75</td>
<td>-1.05</td>
<td></td>
</tr>
<tr>
<td>Population density</td>
<td>-0.55</td>
<td>-0.77</td>
<td></td>
</tr>
<tr>
<td>Regional affinity**</td>
<td>8.23</td>
<td>4.57</td>
<td></td>
</tr>
<tr>
<td>Number of migrants (scaling)</td>
<td>0.83</td>
<td>0.70</td>
<td></td>
</tr>
<tr>
<td>$R^2$</td>
<td>.74</td>
<td>.65</td>
<td></td>
</tr>
<tr>
<td>F ratio</td>
<td>259.6</td>
<td>171.0</td>
<td></td>
</tr>
</tbody>
</table>

Notes:
*Unless otherwise indicated, statistically significant at the 5% level or beyond.
**Statistically significant at the 10% level.
*Expressed as a multiple by which migration is increased when it is between two states considered "Southern."

VIII. CONCLUSIONS

Our results suggest that the tendency of Southern black migrants to remain in the South before 1910 reflected the fact that blacks were not only sensitive to high information costs but also did not have as adverse a reaction to manifestations of Southern racial prejudice as other writers have alleged. Indeed, the results suggest that they rather preferred things associated with the Southern location, including the warmth and sunshine of the region and other factors associated with the Southern way of life. While their regional loyalty could have to some extent reflected ignorance of the unknown, it very well may have been an intelligent manifestation of the non-pecuniary advantages of Southern life. In any case, this regional loyalty was very strong and pervasive well into the twentieth century. The results suggest that the post-1915 migration reflected a combination of increased economic opportunities in the North and heightened sensitivity to those economic opportunities. Any declines in information costs or in the magnitude of loyalty to the region and its physical and cultural climate likely played smaller roles.
NOTES

1. Wright (1979, p. 106).


3. As noted by Graves, Sexton, and Vedder (1983) one would expect considerable short distance moves upon emancipation since the initial spatial distribution of slaves would be that preferred by the slave-owners and not the slaves themselves.


5. The 84 percent figure uses a rather narrow definition or "South." Using a broader definition of South used by the Census, the figure is 89 percent. See U.S. Bureau of the Census (1975, pp. 14 and 22).


8. See Lee et al. (1957, pp. 107-231) for migration statistics.

9. Virtually every commentator has noted an upsurge in migration beginning during World War I, some stating that it began in 1917. If migration in the 1910-1915 period were at the same annual level as from 1900 to 1910, annual net migration rates of blacks out of the South increased from around 20,000-25,000 from 1910-1915 to 75,000-100,000 from 1915-1920, the exact figure depending on the definition of "south" used.

10. Vickery (1977, p. 169). Out-migration from the whole South was much greater; in the single year September I, 1922, to August 31, 1923, out-migration approximated 500,000 from 13 Southern states (U.S. Department of Labor, 1923).


12. See e.g., Gallaway et al. (1974), Vedder and Gallaway (1977), and Dunlevy and Gemery (1978).

13. This and subsequent labor market data are derived from U.S. Bureau of the Census (1975).

14. For the 25 years from 1890 to 1914, the median annual unemployment rate was 5.4 percent of the labor force.


17. See Graves, Sexton and Vedder (1983)


19. North and South Dakota and Oklahoma are not included.

20. This migration model was used in our much longer research paper that was published in Research in Economic History (1986).
21. The Easterlin estimates are found in two places: the numbers used here were derived from Lee et al. (1964, pp. 753-755); the post-1920 data are found in U.S. Bureau of the Census, (1975, pp. 243-245).

22. The South was defined as including the states of Virginia, South Carolina, North Carolina, Georgia, Florida, Kentucky, Tennessee, Alabama, Mississippi, Arkansas, Louisiana, and Texas.

23. One might assume that the reason for this is that the North was more urbanized than the South, the proportion of professionals being greater in cities. This is not the case, however. Within urban areas, the proportion of workers that were professionals was greater in the North than in the South. As of 1900, for example, the proportion of black workers considered "professional" in five large Northern cities (New York, Chicago, Philadelphia, Boston, and Pittsburgh) was more than twice as high as in five large Southern cities (Charleston, Memphis, New Orleans, Richmond, and Savannah). See U.S. Department of Commerce and Labor. (1904, pp. 48-763; also pp. 154-167 for statewide occupational data).


25. The number of jobs in a state is less preferable as a measure of employment opportunities than a variable that relates job openings to the size of the labor force (e.g., the unemployment rate or job vacancy rate). Unfortunately, such data are not completely available for the time period under consideration. The job opportunity variable used is highly correlated with population size, a not altogether unattractive circumstance, as it gives the model a "gravity flow" flavor consistent with most migration modeling found in the regional science literature.


27. The use of a 1-10 dummy is the logarithmic equivalent of a 0-1 dummy.

28. Virtually all the coefficients of the job opportunity and distance variables were significant in every year, and most income coefficients as well. Some 31 of the 48 regional affinity coefficients were statistically significant, with most of the nonsignificant ones coming in 1960. A number of the population density coefficients were not significant in every year.

29. See Bowles (1970) or Cebula et al. (1973). Several other studies, however, observe greater sensitivity to income differentials among black migrants. Graves (1979) is one such study, although he points out that black-white differentials vary with age.

30. The elasticity of non-Southern black migration with respect to income was more than 60 percent less than for Southern black migrants in every year, with the elasticities ranging from 0.29 (1880) to 1.67 (1960).

31. See Chow (1960, pp. 591-6(5)) for a description of the test used.

32. As reported in U.S. Bureau of the Census, (1978, p. 217). Where several statistics of sunshine existed for a state (for different weather stations), the arithmetic mean was taken unless one of the stations represented a predominant population center. Data are based on historical experience, typically over a 20-30 year period. The analysis assumes that there have been no significant changes over time in the relative magnitude of sunshine (or heating degree days) in the various states.

33. Based on data for 30 years (1941-1970) for all states. The formal definition of a heating degree day is as follows: "For any one day, when the mean temperature is less than 65 degrees Fahrenheit, there exists as many degree days as there are Fahrenheit degree differences in the temperature between the average temperature for the day and 65 degrees Fahrenheit" (U.S. Bureau of the Census, 1978, p. 217).
34. Since the climate variables are correlated with the regional dummy variable, in the model without explicit climate variables the regional dummy variable is serving both as a climate and as a regional affinity variable; adding climate variables makes the dummy variable a more purely regional affinity variable except to the extent explicit climatic influences are not captured in the two climate variables used. The simple correlation between heating degree days and the regional dummy was -.693. There is, fortuitously, no evidence of any substantial multicollinearity when the climate and regional dummy variables are included in the same model.

35. The coefficient for the regional affinity variable, for example, changes less than 1 percent in the black migration model when the scaling variable is included. Inclusion of the scaling variable lowers the estimated elasticity of migration with respect to distance from -2.10 to -1.75 and with respect to income per capita from 1.34 to 1.07, with the other variables generally changing by smaller magnitudes.

36. The differences between the actual regional affinity multiple (1.87) and 1.00 (no regional affinity) divided by the actual multiple equals the proportion of migration attributed to regional affinity:

\[
\frac{1.87 - 1.00}{1.87} = .4652.
\]

REFERENCES


Wright, Gavin, (1979), "Freedom and the Southern Economy." *Explorations in Economic History*, 16(1).