DETERMINANTS OF INTERSTATE MIGRATION, BY RACE, 1965-1970

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Introduction

Over the years, numerous studies have been concerned with the determinants of both interregional and international migration. These studies have been concerned with a variety of variables, including income differentials, unemployment rate differentials, distance, degree of urbanization and population density.[2] The purpose of this paper is to investigate the determinants of interstate migration, by race, in the United States for the 1965-1970 period. The analysis is couched within a framework where migration is treated as an investment and where the impact of variables such as welfare benefits and climate as well as other factors is examined.

The Model

Following Sjaastad [7], this paper treats the migration decision as an investment decision so that the individual chooses to migrate from one area to another only if the discounted present value of the net benefits associated with the migration are positive. Assuming that all of the benefits and costs associated with migration can be expressed in pecuniary term,[3] it is thus argued that

$$(1) \quad M_{ij} > 0 \text{ only if } \frac{B_1 - C_1}{(1 + R)} + \frac{B_2 - C_2}{(1 + R)^2} + \ldots + \frac{B_n - C_n}{(1 + R)^n} > 0,$$

where M_{ij} is migration from area i to area j, R is the appropriate rate of discount, B_e, $e = 1 \ldots n$, represents the value of all the benefits associated with migration from i to j for year e, and C_e, $e = 1 \ldots n$, represents the value of all the costs associated with migration from i to j for year e.

To investigate within this framework the interstate migration of whites and blacks for the 1965-1970 period, the following gross migration model is postulated:

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[2]See, for example, Cebula and Vedder [1], Gallaway, Gilbert and Smith [2], Greenwood [4] and [5], Sahota [6], Vanderkamp [14] and [15], Vedder and Cebula [16], and Vedder, Chapin and Gallaway [17].

[3]See Gatons and Cebula [3].

(2) $M_{ij} = M_{ij} (D_{ij}, Y_j, \Delta Y_j, W_j, C_j, U_j)$,

where M_{ij} represents the number of individuals resident in state j in 1970 re-
siding in state in in 1965, D_{ij} is the distance in statute miles from the geo-
graphic center of state i to the geographic center of state j, Y_j is the 1970 per
capita income level, for whites or blacks, as the case may be, in state j, ΔY_j
is the percentage change in per capita income, for whites or blacks, as the
case may be, in state j between 1960 and 1970, W_j is the average monthly aid-
to-dependent-children payment per family in state j in 1967, C_j is the average
number of days per year when the temperature in state j falls below 32° Faren-
heit, and U_j is the average unemployment rate, for whites or blacks, as the
case may be, for the years 1960 and 1970. The variable ΔY_j is treated as a
proxy for expected <u>future</u> income increases resulting from migration. This
simple formulation has proven successful elsewhere (see Cebula and Vedder
[1] and Vedder and Cebula [16]). The variable W_j is treated as a proxy for
the level of welfare benefits in state j. Finally, C_j is the proxy for climatic
conditions in state j.
     A priori, the following signs on the partial derivatives for (2) would be
expected:

(3)
$$\frac{\partial M_{ij}}{\partial D_{ij}}, \frac{\partial M_{ij}}{\partial C_j}, \frac{\partial M_{ij}}{\partial U_j} < 0$$

$$\frac{\partial M_{ij}}{\partial Y_j}, \frac{\partial M_{ij}}{\partial (\Delta Y_j)}, \frac{\partial M_{ij}}{\partial W_j} > 0.$$

The sign of $\partial M_{ij}/\partial D_{ji}$ follows from the fact that greater geographic distances
impose greater moving costs on migrants. The sign of $\partial M_{ij}/\partial C_j$ follows from
the notion that on average, people presumably prefer warmer or more moder-
ate climates to colder climates. The sign of $\partial M_{ij}/\partial U_j$ follows from the fact
that higher unemployment rates impose costs on migrants in the form of de-
creased probabilities of finding gainful employment. The signs of $\partial M_{ij}/\partial Y_j$
and $\partial M_{ij}/\partial (\Delta Y_j)$ follow from orthodox economic theory. Finally, the sign of
$\partial M_{ij}/ W_j$ follows from the fact that W_j is in effect for those who qualify for
such benefits, a form of income, so that higher levels of W_j imply higher ef-
fective incomes for these people.
     Conceptually, what is proposed is the estimation of log-linear regression
equations of the following form:

(4) $\log M_{ij} = \log a + b \log D_{ij} + c \log Y_j + d \log \Delta Y_j$
            $+ e \log W_j + f \log C_j + g \log U_j + u,$

where us is an error term with zero mean and variance greater than zero.
Estimations of (4) were made for white migration in 48 states (Alaska and
Hawaii were excluded from consideration) and for black migration in 34 states.

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Consideration of just 34 states for black migration was determined by data availability.[3]

The Data

The data on white migration and on black migration were obtained from the 1970 Census of the Population [12, Tables 4 and 5] . The data on white and black incomes were obtained from the 1970 Census of the Population [11, Table 57]. The data on changes in per capita income between 1960 and 1970 were obtained by reference to both the 1960 Census of Population [10, Table 67] and 1970 Census of Population [11, Table 57] . In particular, the change in income between 1960 and 1970 was divided by the 1970 income for each state to yield its percentage change in income. The data on welfare payments were obtained from the Statistical Abstract of the United States, 1968 [13, Table 436] ; the climate data were obtained from the same source [13, Table 263]. Finally, the unemployment data were obtained from the 1960 Census of Population [8, Vols. 1-50, Table 115] and from the 1970 Census of Population [9, Vols. 1-50, Table 115].

The Empirical Results

The empirical results are presented in Tables I and II and are summarized in Table III. The model worked reasonably well in explaining variations in both white and black migration patterns with the coefficients of determination (R^2) averaging approximately .66 in the regressions on white migration and approximately .58 in the regressions on black migration.[4]

Turning first to white migratory patterns, the results for the most part seem to support our hypotheses. In particular, the distance, per capita income and climate variables worked extremely well; not only was the expected sign obtained for each of these variables in all 48 regression equations but the results were significant at the one percent level (using a one-tailed test) in 96 percent or more cases for all of these variables. Moreover, the estimated elasticities were also rather high, especially for the per capita income variable. In only one instance was the estimated elasticity of migration with respect to changes in per capita income less than 2. 0 while the weighted mean of this elasticity for the 48 states was 3.60.

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[3] No migration information on blacks was available for those 16 states where the black population in 1970 was below 25,000.

[4] Had a population scalar been included in the migration model, the R^2 values would probably have been perceptibly higher. The omission of such a scalar was intentional since it was felt that its presence would have produced a model that was somewhat tautological in nature.

The remaining variables performed less satisfactorily. The proxy for expected future income, ΔYj, worked moderately well with the expected sign observed in 40 of 48 cases. However, the results were significant at the 10 percent level or better in less than half of these cases. While a positive relationship between migration and welfare benefits was observed in every instance, in only 21 percent of these cases were these results significant at the ten percent level or better. Moreover, the estimated elasticities were low, the weighted mean being only 0.28. Although the unemployment rate had the hypothesized sign in 67 percent of the cases considered, it was statistically significant at the 10 percent level or better in only one case (Wyoming).

Consider now the results for black migrants. Again, the results strongly support our hypotheses regarding distance and climate as factors in the migration decision. In addition, the statistical evidence largely supports out hypotheses concerning the relationship between Mij and Yj and Mij and ΔYj. Even more striking, perhaps, are the strong results obtained for the unemployment variable. The results are significant in nearly two-thirds of the cases at the five percent level. Moreover, the weighted mean of the elasticities for the 34 states was -1.80, suggesting blacks are highly sensitive to unemployment rates in making migration decisions. Finally, the results do suggest that black migrants have been significantly responsive to the size of welfare benefits in making their locational choices. In 30 of 34 instances, a positive relationship between Mij and Wj was obtained and this relationship was significant at the 10 percent level or better in a majority of these cases. While this result might be expected within the analytical framework of this paper, it is at variance with previous studies. [5]

How different is white migrant behavior from black? This may be observed in Table III. With respect to the distance and climate variables, the differences are minor with black migrants appearing slightly more responsive to both factors. In regard to the other factors, however, the differences are more striking. While both groups seem responsive to income differentials, white migrants seem much more so (compare a weighted mean elasticity of 3.60 for whites with one of 1.09 for blacks). The same applies to ΔYj, the variable measuring expected future income. The weighted elasticity for white migrants (1.36) is nearly twice that for blacks (0.70) although the results for the black migrants are statistically significant in a larger proportion of the cases considered. On the other hand, black migrants appear to be much more responsive to differentials in welfare payments and unemployment rates in making the decision to move.

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[5] See, for example, Gallaway, Gilbert and Smith [2].

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TABLE I

Regression Results for Interstate Migration of Whites, 1965-1970[a]

State[b]	Constant	Distance	White Income	Change in Income	Welfare Benefits	Climate	Unemployment Rate	R^2
Alabama	-6.03786	-1.64080*** (0.31660)	+4.30426*** (0.91148)	+1.71213* (1.14226)	+0.52391** (0.30968)	-0.84284*** (0.17244)	-0.23545 (0.58357)	.74
Arizona	-4.03547	-1.61962*** (0.32677)	+3.83909*** (0.89656)	+3.36737*** (1.33183)	+0.21441 (0.28539)	-0.52333*** (0.15019)	+0.07970 (0.51444)	.60
Arkansas	-3.14586	-1.89075*** (0.30061)	+3.59595*** (1.05297)	+0.72615 (2.42387)	+0.16393 (0.34351)	-0.72023*** (0.17264)	+0.10877 (0.64629)	.68
California	-2.68807	-0.89805*** (0.38908)	+2.96067*** (1.13367)	+1.53429 (1.54115)	+0.20107 (0.40572)	-0.36890** (0.21136)	-0.24522 (0.70990)	.29
Colorado	-5.36142	-1.68099*** (0.33909)	+4.11447*** (1.03263)	+2.93620** (1.44188)	+0.41796* (0.29202)	-0.43226*** (0.14691)	-0.17414 (0.55095)	.56
Connecticut	-7.98908	-0.60998*** (0.19659)	+4.04208*** (1.18210)	+2.57387** (1.40272)	+0.31222 (0.37208)	-0.60327*** (0.19459)	-0.44569 (0.67618)	.56
Delaware	-1.67429	-0.83219*** (0.17806)	+2.27750*** (0.91532)	+0.49774 (1.10300)	+0.24542 (0.28045)	-0.74030*** (0.14523)	-0.45773 (0.52784)	.66
Florida	-7.20536	-1.31714*** (0.48673)	+4.51528*** (1.03838)	+3.69113*** (1.35760)	+0.33226 (0.36904)	-0.67553*** (0.22172)	+0.61818 (0.71544)	.58
Georgia	-2.23665	-1.30421*** (0.28519)	+3.03604*** (0.81440)	+1.23527 (1.08276)	+0.45025* (0.28766)	-0.79300*** (0.15513)	-0.53375 (0.54801)	.74
Idaho	+0.63487	-1.96523*** (0.31023)	+2.62081*** (0.95823)	+1.60923 (1.31846)	+0.26919 (0.32542)	-0.54731*** (0.16344)	-0.32111 (0.61286)	.67
Illinois	-3.92246	-1.59999*** (0.27065)	+3.62547*** (0.86958)	+1.00167 (1.03298)	+0.45345* (0.29860)	-0.62559*** (0.15644)	+0.09140 (0.55703)	.61
Indiana	-1.03169	-1.49997*** (0.26390)	+2.77761*** (0.90539)	-0.09916 (1.16734)	+0.23441 (0.32406)	-0.81139*** (0.15966)	+0.00359 (0.56718)	.63

TABLE I continued

Regression Results for Interstate Migration of Whites, 1965-1970[a]

State[b]	Constant	Distance	White Income	Change in Income	Welfare Benefits	Climate	Unemployment Rate	R^2
Iowa	+0.31351	-1.90674*** (0.29738)	+2.66315*** (0.92554)	-0.40008 (1.07324)	+0.31906 (0.32865)	-0.71787*** (0.17497)	-0.50057 (0.62542)	.60
Kansas	-5.07316	-1.90988*** (0.28944)	+4.29235*** (0.99211)	+2.06680** (1.11152)	+0.19504 (0.30838)	-0.69266*** (0.15188)	+0.16763 (0.60614)	.64
Kentucky	-1.44021	-1.85067*** (0.26697)	+3.01212*** (0.90832)	-0.19803 (1.19190)	+0.34221 (0.31713)	-0.78697*** (0.15847)	+0.10146 (0.59268)	.71
Louisiana	-6.23539	-1.81136*** (0.30221)	+4.50741*** (0.89953)	+2.16350** (0.91941)	+0.47285* (0.26827)	-0.89379*** (0.15910)	+0.25192 (0.53641)	.74
Maine	-3.11872	-1.06099*** (0.20398)	+3.02259*** (0.80595)	+0.89605 (0.98930)	+0.22014 (0.25408)	-0.73199*** (0.13843)	-0.52902 (0.46936)	.71
Maryland	-4.15989	-0.78445*** (0.17366)	+3.20583*** (0.94482)	+1.62775* (1.11133)	+0.19267 (0.29141)	-0.78423*** (0.15086)	-0.13056 (0.54417)	.67
Massachusetts	-5.51496	-0.83483*** (0.17535)	+3.57375*** (1.02382)	+1.49654 (1.24474)	+0.33108 (0.33518)	-0.62334*** (0.17465)	-0.58533 (0.59917)	.65
Michigan	-1.11278	-1.21556*** (0.37753)	+2.77822*** (1.04807)	-0.00341 (1.35766)	+0.03033 (0.33962)	-0.88538*** (0.19352)	-0.15127 (0.65816)	.50
Minnesota	-0.48672	-2.02135*** (0.37554)	+3.08862*** (1.04430)	+0.07884 (1.13860)	+0.25083 (0.34026)	-0.78402*** (0.19574)	-0.24824 (0.64116)	.52
Mississippi	-4.74277	-1.09703*** (0.25628)	+3.55608*** (0.97763)	+3.50468*** (1.06859)	+0.40853 (0.32117)	-0.79336*** (0.17071)	+0.04345 (0.60576)	.66
Missouri	-1.82765	-1.72619*** (0.28393)	+3.10837*** (0.89608)	-0.15632 (0.99561)	+0.39140 (0.30512)	-0.67841*** (0.15374)	-0.35645 (0.57934)	.62
Montana	+1.44776	-1.89997*** (0.31106)	+2.26420*** (0.92800)	+1.12712 (1.19513)	+0.18410 (0.30622)	-0.54107*** (0.15975)	+0.30962 (0.57088)	.62

TABLE I continued

Regression Results for Interstate Migration of Whites, 1965-1970[a]

State[b]	Constant	Distance	White Income	Changes in Income	Welfare Benefits	Climate	Unemployment Rate	R²
Nebraska	-3.41189	-2.12682*** (0.30098)	+4.06224*** (0.98304)	+1.28661 (1.12842)	+0.02697 (0.29955)	-0.69439*** (0.15693)	-0.34473 (0.59134)	.65
Nevada	-1.18893	-1.53706*** (0.31493)	+2.78685*** (0.97603)	+1.86673* (1.38500)	+0.21243 (0.32156)	-0.53845*** (0.16399)	-0.12612 (0.59620)	.63
New Hampshire	-3.07626	-0.93587*** (0.19425)	+2.75984*** (1.02278)	+1.65295* (1.27290)	+0.42292 (0.34237)	-0.76086*** (0.17888)	-0.24261 (0.60562)	.64
New Jersey	-9.24976	-0.61522*** (0.19181)	+4.52247*** (1.04597)	+2.18069** (1.23119)	+0.35650 (0.32257)	-0.67929*** (0.16836)	-0.60102 (0.59007)	.65
New Mexico	-3.58681	-1.97085*** (0.32544)	+3.86894*** (1.03499)	+2.44820** (1.39024)	+0.21347 (0.29884)	-0.50907*** (0.15132)	+0.13310 (0.57718)	.66
New York	-9.39935	-0.76346*** (0.21908)	+4.81528*** (1.06232)	+1.43847 (1.35058)	+0.29940 (0.34796)	-0.76861*** (0.17545)	-0.73193 (0.60361)	.67
North Carolina	-2.76024	-1.08468*** (0.21547)	+5.04322*** (0.78655)	+1.13255 (1.03682)	+0.33382 (0.27083)	-0.80362*** (0.13358)	-0.53297 (0.50737)	.74
North Dakota	-4.33039	-2.02389*** (0.32028)	+3.89439*** (1.13223)	+0.43725 (1.25042)	+0.11536 (0.35399)	-0.75703*** (0.19571)	+0.95887 (0.67731)	.59
Ohio	-3.78370	-1.131659*** (0.29483)	+3.33597*** (1.08514)	-0.64852 (1.40867)	+0.33908 (0.36402)	-0.69389*** (0.18614)	+0.14794 (0.66308)	.55
Oklahoma	-2.95477	-1.81700*** (0.25367)	+3.58936*** (0.92014)	+1.06108 (0.97161)	+0.17947 (0.30139)	-0.69725*** (0.14012)	+0.00488 (0.54611)	.70
Oregon	+1.14233	-1.80064*** (0.23224)	+2.46842*** (0.71798)	+2.34105*** (0.93691)	+0.43956** (0.25187)	-0.55486*** (0.12698)	-0.48703 (0.49430)	.73
Pennsylvania	-5.71063	-0.90359*** (0.19347)	+3.81138*** (0.90825)	+0.8471 (1.10550)	+0.21888 (0.27430)	-0.77124*** (0.14502)	-0.54700 (0.51671)	.73
Rhode Island	-7.56262	-0.77497*** (0.18428)	+4.05099*** (1.04491)	+2.74207** (1.25862)	+0.50126* (0.33076)	-0.84947*** (0.17204)	-0.72610 (0.59517)	.71

TABLE I continued

Regression Results for Interstate Migration of Whites, 1965-1970[a]

State[b]	Constant	Distance	White Income	Changes in Income	Welfare Benefits	Climate	Unemployment Rate	R^2
South Carolina	-3.58799	-1.28905*** (0.25246)	+3.21491*** (0.79694)	+0.94670 (1.08047)	+0.41731* (0.28713)	-0.71574*** (0.14374)	-0.14188 (0.53919)	.72
South Dakota	-3.01182	-2.56532*** (0.27386)	+4.19994*** (0.92218)	+2.24265*** (1.05567)	+0.12775 (0.27999)	-0.77427*** (0.15618)	+0.23838 (0.53148)	.73
Tennessee	-3.34597	-1.62335*** (0.26261)	+3.70559*** (0.85976)	+1.99733*** (1.11598)	+0.35255 (0.29913)	-0.96435*** (0.15181)	-0.38279 (0.56207)	.78
Texas	-3.68869	-1.49667*** (0.28040)	+3.68220*** (0.84156)	+2.05023*** (0.89298)	+0.33284 (0.25649)	-0.60271*** (0.12892)	-0.06474 (0.47751)	.68
Utah	-6.84989	-1.92149*** (0.28049)	+4.76242*** (0.85468)	+2.89205** (1.28367)	+0.15358 (0.27001)	-0.44802*** (0.13748)	-0.29314 (0.49516)	.75
Vermont	+0.67740	-.98321*** (0.18831)	+1.54133* (1.04215)	-0.09573 (1.27222)	+0.20271 (0.33400)	-0.41963* (0.17968)	-0.64085 (0.61253)	.58
Virginia	-2.11634	-1.01936*** (0.18054)	+2.77977*** (0.77224)	+1.23092 (0.99458)	+0.47065** (0.27311)	-0.80732*** (0.13138)	-0.30264 (0.47814)	.74
Washington	+0.53296	-1.55987*** (0.29933)	+2.53130*** (0.84465)	+1.68539* (1.13779)	+0.39079* (0.28198)	-0.55794*** (0.14041)	-0.72336 (0.56084)	.59
West Virginia	-0.77411	-1.82464*** (0.25834)	+2.83653*** (0.96712)	-0.81415 (1.25898)	+0.05193 (0.30383)	-0.94500*** (0.15312)	+0.50859 (0.61573)	.77
Wisconsin	-2.11258	-1.62874*** (0.34729)	+3.21861*** (0.93255)	+0.28850 (1.12257)	+0.21217 (0.32395)	-0.80315*** (0.18458)	-0.15350 (0.59689)	.54
Wyoming	2.12023	-2.50263*** (0.27511)	+2.77985 (0.82615)	+1.37428 (1.16405)	+0.23221 (0.24889)	-0.70355*** (0.13028)	-0.90523** (0.45405)	.80

[a]Terms in parentheses beneath coefficients are standard errors.

[b]Alaska and Hawaii are excluded from consideration.

*Statistically significant at .10 level.
**Statistically significant at .05 level.
***Statistically significant at .01 level.

TABLE II

Regression Results for Interstate Migration of Blacks, 1965-1970[a]

State	Constant	Distance	Black Income	Change in Income	Welfare Benefits	Climate	Unemployment Rate	R^2
Alabama	-1.54761	-2.09013*** (0.4222)	+2.46957*** (0.56070)	+0.46110* (0.33911)	+0.51012 (0.42125)	-0.98544*** (0.24119)	-0.66132 (0.68575)	.72
Arizona	+7.53146	-2.26221*** (0.55404)	+1.04975* (0.69040)	+1.14913** (0.52177)	+0.44589 (0.55312)	-0.58079*** (0.32528)	-2.21415*** (0.75674)	.47
Arkansas	+1.70636	-2.18199*** (0.46311)	+2.15851*** (0.73939)	+0.99518*** (0.40770)	+0.02362 (0.55989)	-0.90028*** (0.30151)	+0.85715 (0.76555)	.55
California	+3.72174	-0.83813** (0.40309)	+1.23294** (0.55092)	+0.90706** (0.38773)	+0.91576** (0.44037)	-0.92735*** (0.27203)	-1.72339*** (0.60440)	.51
Colorado	+3.94727	-2.69147*** (0.56626)	+2.62957*** (0.74263)	+1.83400*** (0.51291)	+1.17053** (0.55582)	-0.89077*** (0.30876)	-3.12214*** (0.79002)	.58
Connecticut	+7.83092	-1.04070*** (0.24873)	+0.30663 (0.62429)	+1.08270*** (0.59275)	-0.06997 (0.48413)	-0.92297*** (0.28784)	-2.21056*** (0.68895)	.70
Delaware	+6.54306	-1.29441*** (0.35786)	+0.56612 (0.75314)	-0.01135 (0.49538)	-0.51586 (0.57914)	-1.05238*** (0.34106)	-0.67132 (0.85710)	.48
Florida	+6.65903	-1.96192*** (0.62565)	+0.835553* (0.61049)	+0.52668* (0.36865)	+0.67637* (0.47433)	-0.72736*** (0.29713)	-0.76004 (0.81912)	.57
Georgia	-3.73162	-1.90930*** (0.55320)	+1.55516** (0.69359)	+0.32402 (0.45511)	+0.93152** (0.54600)	-0.91689*** (0.30160)	-0.91591 (0.93879)	.60
Illinois	+6.93388	-1.95224*** (0.32925)	+0.84972** (0.49209)	+0.69845** (0.30758)	+1.03112*** (0.39107)	-0.94170*** (0.22617)	-1.61376*** (0.53307)	.71
Indiana	+9.67301	-2.26250*** (0.47132)	+0.01018 (0.75252)	+0.02349 (0.48575)	+1.11631** (0.62091)	-1.17763*** (0.33863)	-1.15803* (0.81742)	.58
Kansas	+6.11296	-2.20107** (0.50296)	+1.24190* (0.78540)	+0.41260 (0.44959)	+0.61062 (0.59267)	-1.16950*** (0.32868)	-1.30895* (0.78640)	.50
Kentucky	+3.78217	-1.68084*** (0.43090)	+1.21397** (0.64426)	+0.70317* (0.43497)	+0.78317* (0.53174)	-0.62207** (0.29518)	-1.81665** (0.77141)	.62

Regression Results for Interstate Migration of Blacks, 1965-1970[a]

State	Constant	Distance	Black Income	Change in Income	Welfare Benefits	Climate	Unemployment Rate	R^2
Louisiana	+3.58215	-2.15930*** (0.49917)	+1.65620*** (0.66324)	+0.47223* (0.35494)	+0.78751* (0.48405)	-0.81213*** (0.28098)	-0.26699 (0.70082)	.57
Maryland	-3.56751	-0.63275** (0.33510)	+0.97121* (0.73367)	+0.72164* (0.48093)	+0.60016 (0.56369)	-0.57318** (0.33040)	-2.69053*** (0.81266)	.52
Massachusetts	+5.13286	-0.83368*** (0.25429)	+0.78264 (0.63489)	+1.43755*** (0.40573)	+0.45427 (0.50560)	-1.06947*** (0.29780)	-2.17083*** (0.70281)	.69
Michigan	+14.04107	-2.72263*** (0.57846)	-0.05415 (0.74227)	-0.06277 (0.47549)	+1.35237*** (0.54972)	-1.66869*** (0.34070)	-2.69424*** (0.77341)	.68
Minnesota	+11.10944	-3.23797*** (0.63325)	+1.24161** (0.70814)	+0.88538** (0.43124)	+0.55595 (0.57559)	-1.28716*** (0.34776)	-2.89362*** (0.80162)	.55
Mississippi	+0.29229	-1.63596*** (0.48759)	+2.66914*** (0.82438)	+0.72653* (0.44246)	-0.06310 (0.58798)	-1.19585*** (0.32713)	-0.19598 (0.85761)	.52
Missouri	+8.50760	-2.52360*** (0.49454)	+ .51793 (0.71831)	+0.13630 (0.43574)	+1.19392** (0.57510)	-0.96426*** (0.32529)	-1.15816* (0.78891)	.56
Nebraska	+3.73935	-1.81668*** (0.46689)	+1.45197** (0.63722)	+1.47461*** (0.38601)	+1.02643** (0.49632)	-0.43466* (0.28231)	-2.45424*** (0.68391)	.52
New Jersey	-3.45188	-0.52417* (0.32885)	+1.38592** (0.74981)	+1.09480** (0.47788)	+0.42879 (0.57546)	-0.83399*** (0.34075)	-3.37083*** (0.81514)	.61
New York	+5.57566	-0.54135** (0.29736)	+0.70830 (0.62309)	+1.39149*** (0.40080)	+0.31513 (0.51016)	-0.77058*** (0.28723)	-2.78935*** (0.69160)	.67
North Carolina	-2.79993	-1.54086*** (0.31743)	+1.72910*** (0.46756)	+0.59128*** (0.33059)	+1.03625*** (0.38479)	-0.74721*** (0.21398)	-2.08047*** (0.61512)	.79
Ohio	+7.18336	-1.41667*** (0.36114)	+0.43206 (0.57026)	+0.18224 (0.38321)	+0.82172** (0.44940)	-1.03472*** (0.25994)	-1.54606** (0.64895)	.63
Oklahoma	-2.69560	-1.42074*** (0.43159)	+1.62667** (0.67741)	+0.56597* (0.38556)	+0.64424 (0.55007)	-1.00130*** (0.28522)	-1.68415* (0.69645)	.54

TABLE II continued

Regression Results for Interstate Migration of Blacks, 1965-1970[a]

State	Constant	Distance	Black Income	Change in Income	Welfare Benefits	Climate	Unemployment Rate	R^2
Pennsylvania	+3.36085	-1.07117*** (0.34165)	+1.71117*** (0.67332)	+1.38352*** (0.44323)	+0.08491 (0.50677)	-1.13420*** (0.30571)	-1.77827** (0.74829)	.69
South Carolina	-1.02133	-1.45413*** (0.47470)	+1.94241*** (0.63067)	+1.11732*** (0.44110)	+1.37274*** (0.52213)	-0.84761*** (0.28250)	-1.82293** (0.87497)	.70
Tennessee	+4.72259	-1.95779* (0.39159)	+1.40388*** (0.58057)	+0.23747 (0.37636)	+0.77387* (0.46268)	-0.87038*** (0.26037)	-1.52332** (0.70995)	.70
Texas	+5.59287	-1.89026*** (0.48420)	+1.34984** (0.63224)	+0.82822** (0.35356)	+0.63536* (0.47623)	-1.06189*** (0.25671)	-0.91040* (0.62332)	.62
Virginia	-4.12013	-1.04230*** (0.30632)	+0.75672* (0.53105)	+0.62582** (0.36830)	+0.94179** (0.45086)	-0.60314*** (0.24713)	-1.65871*** (0.64691)	.63
Washington	+4.32301	-1.76623*** (0.44536)	+1.56654*** (0.58032)	+1.45276*** (0.39532)	+0.74752* (0.46560)	-0.79413*** (0.26145)	-1.90599*** (0.70642)	.53
West Virginia	-1.04365	-0.98363*** (0.39202)	+1.70982*** (0.63285)	+0.37710 (0.44368)	-0.30108** (0.50476)	-0.49409** (0.28888)	+0.22754 (0.75803)	.38
Wisconsin	+14.54313	-3.03443*** (0.59957)	-0.14625 (0.73885)	-0.40884 (0.45930)	+0.79414* (0.58051)	-1.56583*** (0.35322)	-2.29887*** (0.78422)	.56

[a]Terms in parentheses beneath coefficients are standard errors.

*Statistically significant at .10 level.

** Statistically significant at .05 level.

*** Statistically significant at .01 level.

TABLE III

SUMMARY, INTERSTATE MIGRATION RESULTS, 1965-1970[a]

Variable	Expected Sign	"t" value > 1.0	Significant 10% Level	Significant 5% Level	Significant 1% Level	Mean Coefficient[b]
WHITE MIGRATION (48 States):						
Distance	100%	100%	100%	100%	98%	-1.33859
Income per Capita	100%	100%	100%	98%	98%	+3.59674
% Change, Inc./Cap.	83%	60%	42%	31%	8%	+1.35924
Welfare (ADC) per capita	100%	38%	21%	6%	0%	+0.28457
Climate (days 32° F.)	100%	100%	100%	100%	96%	-0.68580
Unemployment Rate	67%	19%	2%	2%	0%	-0.20435
median R^2 = .66						
BLACK MIGRATION (34 States):						
Distance	100%	100%	100%	97%	88%	-1.42479
Income per Capita	94%	82%	74%	59%	29%	+1.08538
% Change, Inc./Cap.	91%	74%	74%	50%	26%	+0.70164
Welfare (ADC) per capita	88%	68%	56%	35%	12%	+0.75284
Climate (days 32° F.)	100%	97%	97%	94%	85%	-0.95087
Unemployment Rate	94%	76%	76%	65%	47%	-1.79507
median R^2 = .58						

[a] All figures are derived from Tables I and II. One-tailed tests are used.

[b] An arithmetic mean of regression coefficients, weighted by the number of migrants leaving the state in question.