EQUALIZING REGIONAL DIFFERENCES IN WAGES: A STUDY OF WAGES AND MIGRATION IN THE SOUTH AND OTHER REGIONS

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Economic theory predicts that real wage differentials across geographical areas will not persist so long as there is free trade or free factor mobility among the areas. Persistent real wage differentials among regions of a country such as the United States would therefore be puzzling because, in addition to free trade, there is free movement of capital and labor. It is, however, part of the nation's folklore that real wages are persistently lower in the South despite a rather substantial migration into the Southern region. As Sahling and Smith (SAS) pointed out in a 1983 study of regional wage differentials [3],

> Since the beginning of this century, wages in the South had remained not only lower than in the North but also substantially lower than in every other region of the country. Early studies attributed the regional differentials in money wage to variations in the quality of the labor force, in the industrial or occupational mix, severity of discrimination by race or sex, etc. After controlling for these factors, wages were still observed to be lower in the South. [3, p. 131]

Mancur Olson's 1983 presidential address to the Southern Economics Association, entitled provocatively, "The South Will Fall Again: The South as Leader and Laggard in Economic Growth," restates this economic folklore. Interpreting the results of a study by Charles Hulten and Robert Schwab [1], Olson noted,

> Their estimates are full of paradoxes that are utterly inconsistent with any standard neoclassical story. . . . The labor moves away from the high wage regions to the relatively low-wage South and other growing regions in large quantities; a large part of the growth of these regions is due to increases in employment. Labor, in other words, moves to the regions where its marginal product is lower. [2, p. 922]

Olson explains the apparent, deviation from standard economic theory by union growth and a subsequent cartelization of labor markets.

> Why would workers go through the costs and upheaval of migration to move from where wages were high to where they were low? If there had

been no cartelization and free entry in the labor markets of the Northeast and the older Middle West the workers could in general have enjoyed higher wages by staying at home. But if, as has been argued here, there were cartelized supra-competitive wage levels in the older and long-stable regions of the country, employers would not want to take on many of the workers who would have liked employment with them, so these workers had no choice but to move to the South or other growing regions to take lower-paying jobs. [2, p. 922]

Suppose, however, that real wages in actuality were not lower in the South than in other areas. Sahling and Smith's 1983 study, noted briefly earlier, also bore a provocative title, "Regional Wage Differentials : Has the South Risen Again?" Their analysis concluded that

> . . . real wages for both male and female workers are sharply lower throughout the Northeast than for comparable urban workers in the South. Moreover, these real differentials widen between 1973 and 1978. . . . In 1978, money wages for males were lower throughout the Northeast than for comparable workers in the South. For females, money wages remained slightly higher in the New York area than for comparable workers in the South but were lower in the rest of the Northeast than in the South. [2, p. 134]

If Sahling and Smith are correct, the migration patterns noted by Olson are quite consistent with "any standard n&classical [economic] story."

This article is devoted to an examination of regional wage differentials, with particular emphasis on the South. It builds upon the work of Sahling and Smith by testing the robustness of their results using an alternative methodology and a less controversial definition of the South.[1] It also extends their analysis

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[1] Sahling and Smith included the Washington, D.C.-Maryland-Virginia and the Baltimore SMSAs in the South region. Although there were legitimate reasons for placing those two SMSAs in the Southern region, the inclusion led some critics to dismiss their conclusions on the grounds that their study was biased toward higher wages in the South. The empirical work for this study does not place Baltimore and Washington in the Southern region.

to 1981. The article confirms their results and concludes that, contrary to folklore and Mancur Olson, the South is not a low wage area any longer, if it ever was.

The article is divided into five sections. The first describes methods of analysis. The second examines real and nominal wages in standard metropolitan statistical areas. The third presents empirical findings from a broader sample of workers that includes those who live in rural and small urban areas. The final two sections summarize the findings and present the major conclusions of the study.

Methods of Analyzing Wage Differentials

This section includes a discussion of the statistical techniques used in this study and the Sahling and Smith study. It can be skipped by readers interested solely in statistical results rather than statistical methods.

The Sahling and **Smith (SAS)** Technique Sahling and Smith's study was designed to compare wage differentials of similar workers in similar jobs. Their article thus addresses the question of whether an individual worker in one region would be likely to earn higher wages in a similar job in another region. They do not attempt to explain regional differences in the overall average wage, which can be quite different. The overall average wage differential is affected, for example, by regional differences in occupational and industrial mix, while the average regional wage differential of like workers in like jobs is not.

To determine wage differentials of similar workers in similar jobs, Sahling and Smith (SAS) used a wage regression. They hypothesized that wages were a function of age, education[2] martial status, race, veteran status, ethnicity (Spanish), occupation,[3] industry,[4] number of jobs held, union membership, sex, and region. Instead of including variables to represent region and sex, however, separate regressions were run for workers of each sex who lived in each of five regions of the country. One set of regressions used actual dollar wages earned as the dependent variable, another used wages adjusted for differences

in regional costs of living.[5] Since the method used to derive estimates of regional wage differentials from the regressions mentioned above is complicated, the following example of the technique may be useful.

Suppose that one is comparing the New York City area to the South. After estimating regression equations for wages in the New York City area and the South based upon the labor force and occupational characteristics mentioned above, SAS computed arithmetic means of each such characteristic for the two areas. They then plugged each set of arithmetic means into the regression equation for the other area and computed a predicted wage.

Taking a particular instance, suppose the set of means described the New York City area. When average values of the independent variables describing workers who reside in the New York City area are plugged into the South regression, the resulting figure estimates the average wage that the New York City area work force would have earned if it had moved to the South. This estimate-is compared to the actual average wage of workers in the New York City area.

Similarly, the arithmetic means of the independent variables that describe the South are also plugged into the New York City area regression. The resulting figure predicts the average wage of the Southern workers if they had moved to the New York City area. This predicted wage is then compared to the actual average wage of the Southern workers.

As a result, the Sahling and Smith analysis yields two different wage differentials for each region, thereby raising the question of which differential is more nearly correct. Sahling and Smith discuss this dual differential dilemma and outline an ideal (but complicated) technique for resolving it. Arguing that each differential represents an extreme case, however, they opt for simplicity and average the two differentials for each region.

While the exact meaning of the averaged differential is unclear, the gains from simplification presumably justify their approach. The conclusions of their study, however, were so contrary to conventional wisdom that it seemed desirable to test the robustness of their approach.

The Peer Group Technique This study uses an alternative technique to adjust for regional differences in workers and jobs. This method, labelled the

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[2] The age groups are 14-19, 20-35., 35-64, and 65-75. The educational groups are, no education, l-5 years, 6-9 years, 10-13 years, 14-16 years, and 17 or more years.

[3] Professional, manager, sales, clerk, craftsman, operative, laborer, or service worker.

[4] Agricultural, mining and construction; manufacturing, durables or nondurables ; transportation, communications or public utilities; wholesale trade; retail trade; finance, insurance and real estate; business services;. personal services; professional services; or public administration.

[5] The cost-of-living adjustments are from the BLS's release on average budgets for intermediate income families of four for selected urban areas.

peer group technique, apportions individuals into small groups made up of their exact peers classified by all of the criteria (except region of residence) used by Sahling and Smith for their analysis of wage differentials. After each peer group is determined, the average wage of those group members who live in the South is calculated and the wage of each non-Southern individual is recorded as a ratio of the Southern average wage. The procedure thus yields a set of wage ratios for each peer group-the number corresponding to the number of individuals in the group who do not reside in the South. After determining the set of relative wages in every peer group, the ratios are summed across peer groups by region, averaged, and tested to see whether the resulting average regional wage differentials were statistically significantly different from one.[6]

This technique has an advantage over the SAS method because the researcher knows how many workers in any given sample are strictly comparable. It also yields a standard error that enables the researcher to estimate the odds that a wage differential for like workers in like jobs actually exists, i.e., is not a result of random sampling error. It also adjusts for all possible interaction between the regional and the individual characteristics, something that is very difficult to do with the SAS method.

So much for the advantages of the peer group method. The disadvantage of the method is that it requires a very large sample. This requirement makes the method's results somewhat suspect for the studies of wage differentials in 1981 and 1983. For that reason, this study also calculates wage differentials by the SAS method for those years.

The Data Set Data were taken from the May 1978, May 1981, and April 1983 Current Population Surveys (CPS). These monthly census surveys provide the household data on employment status from which the Department of Labor calculates the unemployment rate. Although the CPS surveys are quite large, only a quarter of those surveyed are currently asked to reveal their earnings (in 1978 all workers were asked the wage question). Sahling and Smith restricted their study to workers living in the 29 largest SMSAs in order to adjust their data for regional differences in costs of living. As a result, the subsamples that they eventually analyzed included only 13,502 workers in 1973 and 13,147 in 1978.

For 1978, wage data (average hourly earnings to be exact) were available for 45,900 workers, 16,800 of whom resided in SMSAs. The analysis of nominal wage differentials from statewide data, discussed subsequently, is based upon this 45,900 worker sample, whereas the analysis of nominal wage differentials from SMSA data utilizes the 16,800 worker sample. The sample size for the study of real wage differentials was a smaller 13,853, because the cost-of-living data[7] were available only for the 29 largest SMSAs.

The usable subsample was reduced drastically in 1981 as a result of economy measures taken by the Government. Only 15,200 workers were asked to reveal their wages in that year. Of these, 5,600 lived in SMSAs, and only 4,600 lived in large SMSAs. The usable subsample in 1983 included 14,565 workers, of whom 5,407 lived in SMSAs.

Empirical Result-Workers Who Reside in SMSAs

Chart 1 shows nominal regional wage differentials of workers who resided in SMSAs in 1978, 1981, and 1983, and real wage differentials of workers who resided in one of the 29 largest SMSAs in 1978 and 1981. The lines on the charts show the wage differentials as percentages of wages in the South area. Each chart shows wage differentials calculated both by the SAS and peer group methods, mentioned earlier, and (for comparison) the regional differences in overall average wages. This last-mentioned comparison is derived simply by averaging everyone's wages in a region and comparing that average to the average wage in the South. The chart, of course, only summarizes the detailed findings, which are presented in tabular form in the Appendix.

The chart shows clearly that in 1978, regardless of the method used, real wages in the South were substantially higher than in all other regions except the West. This result is consistent with the SAS study. In 1981, the last year for which a regional cost-of-living index was published, Southern real wage rates

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[6] In actuality, the wage data were transformed into logarithms, so the test was translated into a test to see whether the log of the wage differential was significantly different from zero. The standard error calculated was the standard error of the difference between sample means, paired observations,

$$S_{\bar{d}} = \sqrt{\frac{\Sigma_j \ D_j{}^2 - (\Sigma_j \ D_j)^2/n}{n(n-1)}},$$

when D is the difference in the paired observation. A description of the test is provided in Steel and Torrie [4, p. 78-79].

[7] This study used the same type of cost-of-living data as that mentioned in footnote 5. The sources were News, Bureau of Labor Statistics, USDL 79-305 and USDL 82-139.

Chart 1

REGIONAL WAGE DIFFERENTIALS OF
WORKERS WHO RESIDE IN SMSAs
(Percent of South)

NOMINAL   WEST   REAL

NEW YORK

REST OF NORTHEAST

NORTH CENTRAL

SAS: M   Peer Group: M   Mean: M
SAS: F   Peer Group: F   Mean: F
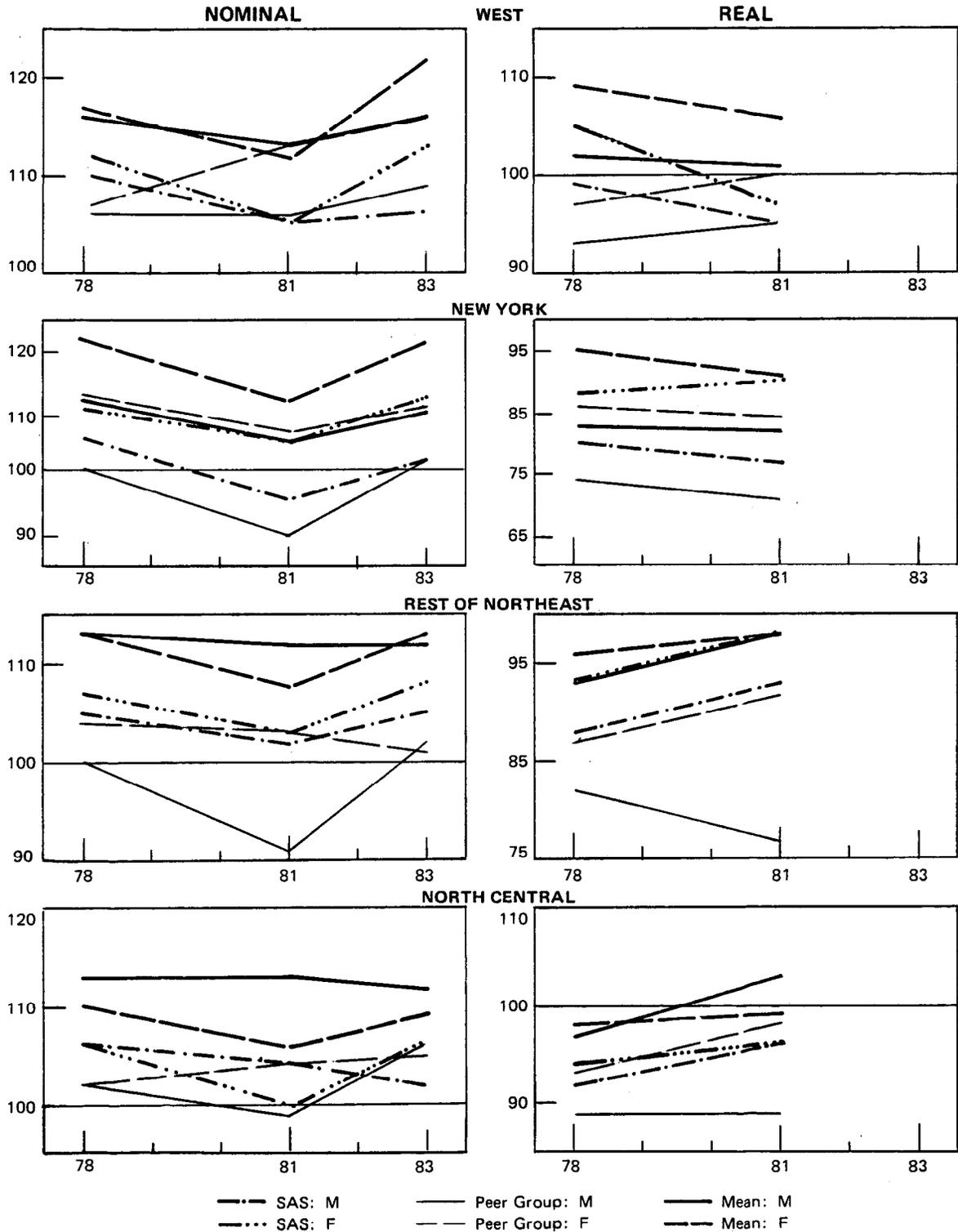
remained above those in the North East regions regardless of the measurement method. According to the peer group method, real wages in the South were higher than wages in any other region in 1978 and 1981. Chart 1 also shows nominal wages plotted for the three years. This chart shows, surprisingly, that *nominal* wages were higher in the South in 1981 than for comparable males in the New York City, the' rest of the North East, and North Central areas.

These last results are similar to those found by Sahling and Smith for 1978 reported in the quote at the beginning of this article, although the wage differentials shown in the chart are not strictly comparable to those found by Sahling and Smith. First, SAS defined the South to include the Washington, D.C.-Maryland-Virginia and the Baltimore SMSAs. Secondly, the *nominal* wage data include wages of workers from all SMSAs in a given region, not just the 29 largest SMSAs.

Table I shows the actual wage differentials estimated in the SAS study compared to the wage differentials estimated by the peer group method for 1978. For this table Washington and Baltimore were included in the South. As the table shows, the implications of the two methods for North-South regional wage differentials are approximately the same. The peer group method shows a larger Southern advantage in relative real wage payments than the SAS results, however. Chart 1 also illustrates that relatively high nominal wages continued in the South in 1981.

The results of the peer group analysis for 1981 and 1983 should be viewed with some skepticism, however, because of the smaller, sample sizes included. As is shown in the Appendix, for example, only 89

New York City area workers sampled in 1981 and 132 in 1983 had counterparts in like jobs in the South. The smaller sample sizes may explain a very puzzling result, namely the New York-South nominal wage differential for males in 1981. The finding that nominal wages for males were 10 percent higher in the South than in the New York City area in that year is implausible (the SAS method shows South wages to be only 4 percent higher). The time profile of the differential, from 101 percent in 1978 to 90 percent in 1981 to 102 percent in 1983, heightens that implausibility. The result is indicated by the data, however (and it is statistically significant at the 2 percent level), so it is reported here.

More Empirical Results-Workers Classified Into Regions From Statewide Data

This section's analysis will be limited to nominal wages, since cost-of-living data are not available by state. For this analysis the data set was larger, and workers were grouped into eight regions; the South, the Mid-Atlantic, New England, East North Central, West North Central, West South Central, Mountain, and Pacific.

All of these divisions except the South and the Mid-Atlantic regions follow Standard Census Division Codes. The South includes Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, and West Virginia. The Mid-Atlantic division includes Delaware, the District of Columbia, Maryland, New Jersey, New York, and Pennsylvania.

Chart 2 shows nominal wages in 1978, 1981, and 1983 in each of these regions. As in Chart 1, the lines represent percentage wage differentials esti-

Table I

SAHLING AND SMITH DATA COMPARED TO DATA DERIVED FROM THE PEER GROUP METHOD, 1978

(Percent of South)

| | Nominal Wages | | | | | Real Wages | | | |
| | Males | | Females | | | Males | | Females | |
Region*	SAS	Peer Group	SAS	Peer Group		SAS	Peer Group	SAS	Peer Group
New York City	98	100	102	108		85	80	88	87
Rest of North East	95	95	93	98		88	83	86	86
North Central	101	100	98	99		97	91	94	92
West	103	102	102	105		98	96	97	100

* Washington and Baltimore are in the South.

Sources: Sahling and Smith [3, p. 134]; derived from May 1978 Current Population Survey, USDL 79-305 and USDL 82-139.

Chart 2

REGIONAL WAGE DIFFERENTIALS FROM STATEWIDE DATA
RELATIVE WAGES BY REGION
(Percent of South)

MID-ATLANTIC

WEST NORTH CENTRAL

NEW ENGLAND

WEST SOUTH CENTRAL

EAST NORTH CENTRAL

MOUNTAIN

PACIFIC

Mean: M
Mean: F
Peer Group: M
Peer Group: F
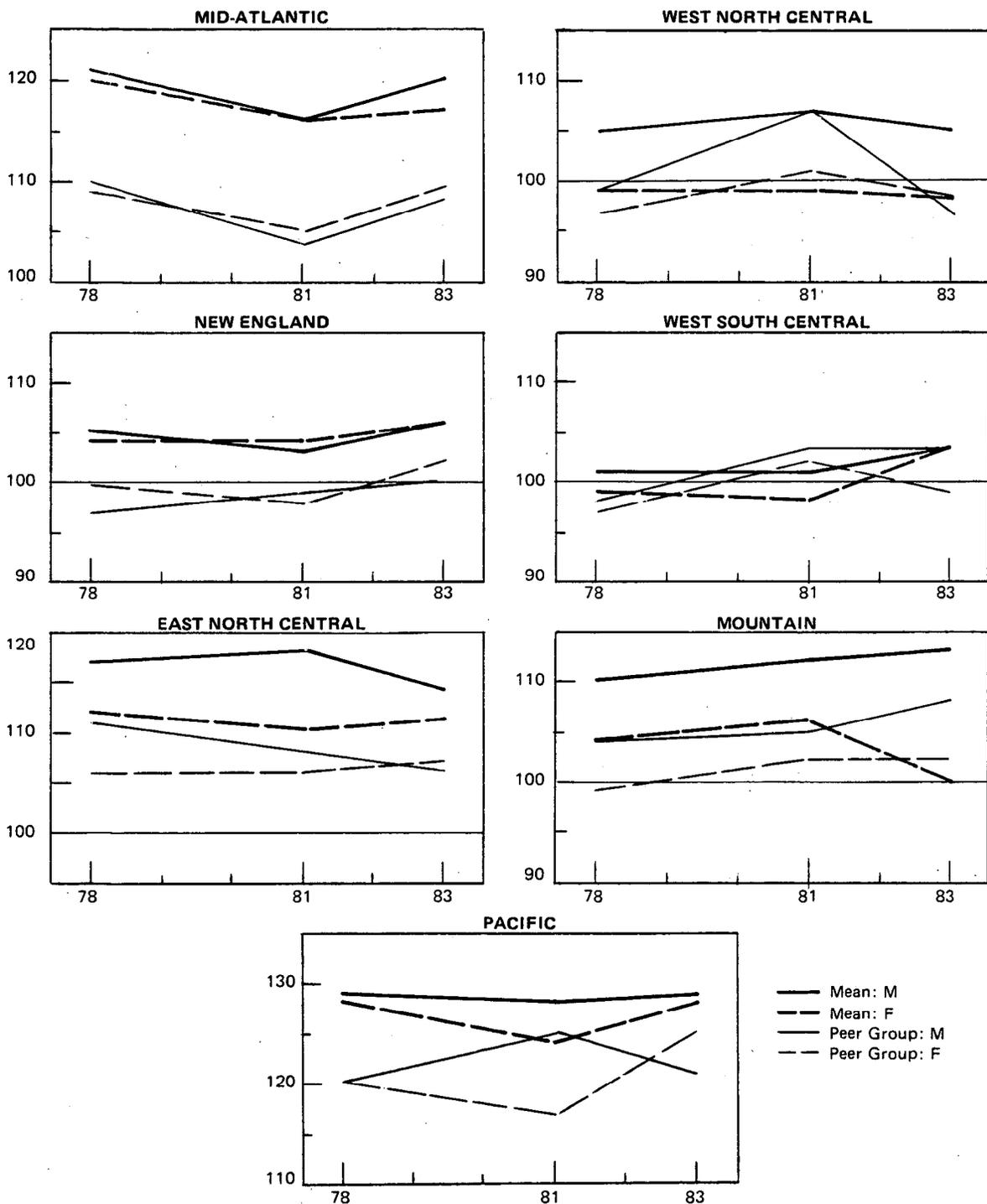
mated by the SAS and the peer group methods compared to the overall average wage differential. As the chart shows, overall average nominal wages in the South are consistently lower than wages. in other regions of the country. When the data are adjusted to compare like workers in like jobs, however, the wage differentials narrow, and wages in the South become relatively higher in a few regions.

In 1978, for example, wages were higher in the South than in the West South Central, West North Central, and New England areas, according to the peer group comparisons. In 1981, Southern workers earned lower nominal wages than their counterparts in every region other than New England. In 1983, the position of Southern wage-earners slipped relative to their counterparts in New England but improved relative to the West North Central area.

Wage differentials for comparable workers were highest in the Pacific region in each of the three years. The Pacific area includes California, Washington, Oregon, Alaska, and Hawaii.

The peer groups plotted on Chart 2 are not classified by union membership status, since (1) the statewide data include rural areas that are particularly unlikely to be heavily unionized in the South and (2) union membership status was not available on the April 1983 CPS tape. The results of the peer group method both with and without the union membership criterion, however, are shown in the Appendix.

Overview of Empirical Results

As Table A-1 shows, average real wages of SMSA dwellers in the South in 1978, even with no adjustment to compare like workers in like jobs, were higher than wages in every other region of the country except the West. When the peer group technique was used to compare like workers in like jobs (see Table A-2), real wages of SMSA dwellers in the South were found to be higher than every other region.

By 1981 the situation had changed slightly. As Table A-1 also shows, average real wages of SMSA dwellers for North Central males had moved higher than the Southern average, although the West retained its advantage. After adjustments to compare similar workers in similar jobs (see Table A-3); real wages for males were higher in the South, as they were in 1978. Real wages for Southern female SMSA dwellers, on the other hand, were found to be higher than wages of peers in the entire North

East, but only about equal to real wages of peers in the North Central and West regions.

With respect to nominal wages, wages of males living in Southern SMSAs in 1978 appeared to be about equal to nominal wages for like. workers in New York, the Rest of the North East, and the North Central regions. Nominal wages of urban Southern males in 1981 were higher than those of their counterparts in every region except the West, according to the peer group results. By 1983, nominal wages of Southern males had moved lower than those of their counterparts in any other region, although the differentials for the New York City and Rest of the North East areas were not statistically significant.

Nominal wages for Southern females were significantly lower in 1978 than wages of like workers in all regions except the North Central. In 1983, their wages were significantly lower than their counterparts in all other regions except the Rest of the North East.

When wages of residents of rural and small urban areas were included in the analysis, nominal wages of Southern male workers were not significantly different from wages of their peers in the New England, West North Central, and West South Central regions, although they were low relative to the other regions, particularly the Pacific and Mountain areas. Relative wages of Southern females followed approximately the same pattern except that their wages were not significantly lower than their peers in Mountain states.

Wages for males who live in the Pacific area were found to be 20-25 percent higher than wages of comparable males in the South. Without cost-of-living data, however, it is difficult to evaluate these relative wage differentials meaningfully. The relative cost of living in parts of the Pacific area, particularly in Alaska and Hawaii, is substantially higher than in the South, but it is difficult to speculate about the overall difference in costs of living. One must use other evidence to infer information about relative real wages.

Implications of the Empirical Results

As noted at the outset, neoclassical economic theory predicts that individuals, jobs, or commodities will move in a way designed to equalize real wages. This article has shown that, whether measured by the peer group method, by the SAS method, or by a simple averaging process, real wages for workers residing in SMSAs in 1978 and 1981 were higher in the South

than in all areas except the West. Table II shows, as theory would have predicted, that the 1970-1980 population gains were highest in the South and West, where real wages were highest, and the population decline was largest in the New York City area, where real wages were lowest.

Economic theory also would predict that the Southern real wage advantage should not persist. Consistent with this prediction, the regional real wage differentials narrowed between 1978 and 1981 in all categories except New York and West males. The statewide nominal wage differentials also imply that whatever real wage advantage that the South may have had in 1978 was narrowed somewhat by 1983.

As noted previously, the conclusions of the analysis are not so clear-cut when one examines statewide cost-of-living differences. However, since (1) Table II shows that total -population increased substantially in the South, West, and West South Central regions

between 1970 and 1980, (2) Table II also shows that population changes corresponded roughly to real wage differentials (according to the SMSA data) for 1978 and 1981, and (3) economic theory predicts that workers migrate to take advantage of wage differentials (as well as for other reasons, such as job availability); it seems reasonable to infer that the migration of non-SMSA dwellers is also induced by relatively high real wage levels.

Thus, contrary to the Mancur Olson statement quoted at the outset of this paper, this article finds no evidence that workers have moved away from *high-wage* regions to the relatively low-wage South, and therefore no evidence of paradoxes for neoclassical economic theory. In fact, in the case of workers who reside in SMSAs, the article found that real wages in the South were relatively higher than in most other regions of the country, with or without adjustments to make jobs and workers comparable.

Table II

COMPARISON OF WAGE DIFFERENTIALS OF SIMILAR WORKERS IN SIMILAR JOBS AND POPULATION CHANGES BY REGION

SMSA Data	Percentage Change in Population 1970-1980	Percent of South					
		Real Wages, 1978				Real Wages, 1981	
		Peer Group		SAS Method		SAS Method	
		Males	Females	Males	Females	Males	Females
New York	- 6.04	74	86	80	88	77	90
Rest of North East	- 1.33	82	87	88	93	93	98
North Central	2.2	89	93	92	94	96	102
West	15.4	93	97	99	105	95	103
South*	27.4	100	100	100	100	100	100

Statewide Data	Percentage Change in Population 1970-1980	Percent of South			
		1978 Nominal Wages Peer Group		1981 Nominal Wages Peer Group	
		Males	Females	Moles	Females
Mid-Atlantic	- 0.48	105	105	101	106
New England	4.2	97	99	95	99
East North Central	3.5	106	104	107	103
West North Central	5.2	98	96	98	99
West South Central	22.9	100	97	106	95
Mountain	37.2	104	98	102	103
Pacific	19.8	116	116	130	117
South	20.7	100	100	100	100

* Washington and Baltimore are in "Rest of North East."

Sources: U. S. Department of Commerce. Census of Population and derived from May Current Population Surveys, USDL 79-305 and USDL 82-139.

In a sense, it would have been more satisfying, and made better prose, if real wages had been lower in the South. One could then have attributed the wage differential, particularly in the face of population inflows, to nonpecuniary factors. Nonmonetary amenities, composed of such diverse elements as climate, the culture, southern hospitality, the literary tradition, environmental purity, etc., have been used to explain the "Southern Condition" in the past.[8] The finding that workers may have had to be compensated by higher wages to move to the South will doubtless be unsettling to many Southerners.

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[8]Proving that nonmonetary amenities give a relative advantage to the South is difficult if not impossible, but if such were proved, it would also refute Mancur Olson and resolve his so-called "paradox" for neoclassical economics.

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APPENDIX

Table A-I

AVERAGE WAGES FOR MALES AND FEMALES
1978, 1981, AND 1983

Region†	1978				1981				1983	
	Nominal Wages		Real Wages		Nominal Wages		Real Wages		Nominal Wages	
	Average Wage $	Number	Average Wage $	Number	Average Wage $	Number	Average Wage $	Number	Average Wage $	Number
MALES										
New York City	6.96	1306	5.95	1306	8.45	361	7.28	361	10.13	386
Rest of North East	7.02	1733	6.66	1593	9.02	793	8.77	702	10.29	594
North Central	6.98	2894	6.91	2721	9.13	653	9.16	615	10.31	772
West	7.19	2018	7.31	1312	9.12	779	9.01	540	10.69	617
South	6.19	1420	7.16	794	8.05	405	8.92	219	9.17	438
FEMALES										
New York City	5.08	1003	4.33	1003	6.26	344	5.39	344	7.42	341
Rest of North East	4.69	1454	4.40	1347	6.03	685	5.81	629	6.96	592
North Central	4.57	2285	4.49	2139	5.90	569	5.87	538	6.70	737
West	4.88	1609	5.00	1032	6.28	652	6.29	445	7.50	566
South	4.16	1083	4.57	606	5.59	375	5.92	188	6.13	364

† By SMSA, South includes Atlanta°, Birmingham, Dallas°, Fort Worth°, Greensboro-Winston-Salem-High Point, Houston°, Miami, New Orleans, Norfolk-Portsmouth, Tampa-St. Petersburg. New York City area includes New York City SMSA°, Nassau-Suffolk°, Newark°, Paterson-Clifton-Possaic°. Rest of North East includes Albany-Schenectady-Troy. Baltimore°, Boston°, Buffalo°, Philadelphia°, Pittsburgh°. Rochester, Washington, D. C.-Maryland-Virginia°. North Central includes Akron, Chicago°; Cincinnati°, Clevelnd°, Columbus, Denver, Detroit°, Gary-Hammond-East Chicago°, Indianapolis°, Kansas City°, Milwaukee°, Minneapolis-St. Paul°, St. Louis°. West area includes Anaheim-Santa Anna-Garden Grove, Los Angeles-Long Beach°, Portland, Sacramento, San Bernardino-Riverside, San Diego°, San Francisco- Oakland°, San Jose, Seattle-Everett. (°denotes real and nominal wages.)

Sources: Derived from May 1978, May 1981, and April 1983 Current Population Surveys, USDL 79-305 and USDL 82-139.

PERCENTAGES OF AVERAGE WAGE RATES IN SOUTHERN SMSAs RELATIVE TO WAGE RATES OF COMPARABLE WORKERS IN OTHER REGIONS OF THE COUNTRY IN 1978 UNDER TWO DIFFERENT DEFINITIONS OF THE SOUTH AND COMPARED TO PREVIOUS FINDINGS*

	Nominal Wages						Real Wages					
	Sahling & Smith Method		Peer Group Method				Sahling & Smith Method		Peer Group Method			
	Males	Females	Males		Females		Males	Females	Males		Females	
Region†	Wages (% of South)	Wages (% of South)	Wages (% of South)	Number of People	Wages (% of South)	Number of People	Wages (% of South)	Wages (% of South)	Wages (% of South)	Number of People	Wages (% of South)	Number of People
New York City	106	111	101 (0.55)	499	113 (6.26)	487	80	88	74 (11.01)	376	86 (6.71)	408
Rest of North East	105	107	100 (0.04)	839	104 (2.67)	764	88	93	82 (11.70)	607	87 (7.83)	613
North Central	106	106	102 (1.61)	1527	102 (1.61)	1341	92	94	89 (9.12)	1142	93 (2.92)	391
West	110	112	106 (3.60)	816	107 (4.97)	774	99	105	93 (2.92)	391	97 (1.40)	408
Baltimore and Washington in Southern Region	Sahling & Smith Actual‡		Peer Group Method				Sahling & Smith Actual‡		Peer Group Method			
New York City	98	102	100 (0.02)	585	108 (4.45)	549	85	88	80 (10.16)	509	87 (7.39)	495
Rest of North East	95	93	95 (3.82)	703	98 (1.43)	603	88	86	83 (11.20)	561	86 (7.96)	505
North Central	101	98	100 (0.30)	1690	99 (1.31)	1460	97	94	91 (8.03)	1395	92 (7.30)	1259
West	103	102	102 (1.56)	916	105 (3.40)	861	98	97	96 (1.91)	484	100 (0.14)	473

* Figures in parentheses are "t" statistics calculated according to definition in footnote 6. If t < 1.96, there is assumed to be no significant wage differential.

† By SMSA, South includes Atlanta$^\omega$, Birmingham, Dallas$^\omega$, Fort Worth$^\omega$, Greensboro-Winston-Salem–High Point, Houston$^\omega$, Miami, New Orleans, Norfolk-Portsmouth, Tampa-St. Petersburg. New York City area includes New York City SMSA$^\omega$, Nassau-Suffolk$^\omega$, Newark$^\omega$, Paterson-Clifton-Passaic$^\omega$. Rest of North East includes Albany-Schenectady-Troy, Baltimore$^\omega$, Boston$^\omega$, Buffalo$^\omega$, Philadelphia$^\omega$, Pittsburgh$^\omega$, Rochester, Washington, D. C.-Maryland-Virginia$^\omega$. North Central includes Akron, Chicago$^\omega$, Cincinnati$^\omega$, Cleveland$^\omega$, Columbus, Denver, Detroit$^\omega$, Gary-Hammond-East Chicago$^\omega$, Indianapolis$^\omega$, Kansas City$^\omega$, Milwaukee$^\omega$, Minneapolis-St. Paul$^\omega$, St. Louis$^\omega$. West area includes Anaheim-Santa Anna-Garden Grove, Los Angeles-Long Beach$^\omega$, Portland, Sacramento, San Bernardino-Riverside, San Diego$^\omega$, San Francisco-Oakland$^\omega$, San Jose, Seattle-Everett. ($^\omega$ denotes real and nominal wages.)

‡ Figures derived from SAS [2, p. 137].

Sources: Sahling and Smith [2, p. 137]; derived from May 1978 Current Population Survey and USDL 79-305.

PERCENTAGES OF AVERAGE WAGE RATES IN SOUTHERN SMSAs RELATIVE TO WAGE RATES OF COMPARABLE WORKERS IN OTHER REGIONS OF THE COUNTRY IN 1981*

Region	Nominal Wages				Real Wages			
	Males		Females		Males		Females	
	Wages (% of South)	Number of People	Wages (% of South)	Number of People	Wages (% of South)	Number of People	Wages (% of South)	Number of People
PEER GROUP METHOD								
New York City	90 (2.52)	89	107 (1.69)	117	71 (6.09)	51	84 (4.21)	98
Rest of North East	91 (2.96)	187	103 (1.00)	274	77 (6.65)	106	92 (2.70)	177
North Central	99 (0.40)	182	104 (1.69)	253	89 (3.27)	114	98 (0.79)	186
West	106 (1.89)	193	113 (4.11)	230	95 (1.22)	93	100 (0.22)	106
SAS METHOD								
New York City	96		105		77		90	
Rest of North East	102		103		93		98	
North Central	104		100		96		96	
West	105		105		95		97	

* Figures in parentheses ore "t" statistics calculated according to definition in footnote 6. If t < 1.96, there is assumed to be no significant wage differential.

Sources: Derived from May 1981 Current Population Survey and USDL 82-139.

PERCENTAGES OF AVERAGE NOMINAL WAGE RATES IN SOUTHERN SMSAs RELATIVE TO WAGE RATES OF COMPARABLE WORKERS IN OTHER REGIONS OF THE COUNTRY IN 1983*

Region	Peer Group Method				SAS Method	
	Males		Females		Males	Females
	Wages (% of South)	Number of People	Wages (% of South)	Number of People	Wages (% of South)	Wages (% of South)
New York City	102 (0.40)	132	111 (3.24)	163	102	112
Rest of North East	102 (0.60)	265	101 (0.31)	282	105	108
North Central	106 (2.25)	327	105 (2.07)	327	102	106
West	109 (2.63)	235	116 (5.36)	216	106	113

* Figures in parentheses ore "t" statistics calculated according to definition in footnote 6. If t < 1.96, there is assumed to be no significant wage differential.

Source: Derived from April 1983 Current Population Survey.

Table A-5

AVERAGE WAGES

(Regions from Statewide Data)

Region†	1978		1981		1983	
	Wage ($)	Number	Wage ($)	Number	Wage ($)	Number
MALES						
South	5.60	4962	7.20	1340	8.19	1289
Middle Atlantic	6.77	4079	8.35	1338	9.81	1285
New England	5.88	1783	7.39	679	8.67	637
East North Central	6.57	4308	8.47	1314	9.37	1069
West North Central	5.89	2454	7.67	809	8.59	765
West South Central	5.68	1917	7.30	720	8.43	777
Mountain	6.18	2563	8.03	849	9.22	740
Pacific	7.25	3439	9.24	1191	10.54	1119
FEMALES						
South	3.83	3898	5.06	1150	5.75	1090
Middle Atlantic	4.60	3215	5.85	1162	6.72	1191
New England	3.98	1542	5.25	568	6.12	578
East North Central	4.30	3339	5.57	1064	6.39	946
West North Central	3.81	2270	5.00	707	5.63	744
West South Central	3.80	1419	4.97	558	5.94	637
Mountain	3.97	1928	5.34	674	5.77	658
Pacific	4.92	2764	6.26	987	7.35	1040

† Southern region includes Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, and West Virginia. Mid-Atlantic includes Delaware, District of Columbia, Maryland, New Jersey, New York, and Pennsylvania. Remaining regions follow standard census division codes.

Sources: Derived from May 1978, May 1981, and April 1983 Current Population Surveys.

PERCENTAGE OF WAGES PAID IN SOUTH BY REGIONS DETERMINED BY STATEWIDE DATA, PEER, GROUP METHOD, 1978, 1981, AND 1983*

(Workers Not Classified by Union Membership Status)

Region†	1978		1981		1983	
	Percent of South	Number	Percent of South	Number	Percent of South	Number
MALES						
Mid-Atlantic	110 (11.98)	2917	104 (2.54)	813	108 (4.34)	758
New England	97 (2.37)	1383	99 (2.37)	436	100 (0.12)	434
East North Central	111 (14.45)	3406	108 (5.34)	846	106 (3.55)	712
West North Central	99 (1.15)	1892	107 (1.96)	531	97 (1.34)	485
West South Central	98 (1.73)	1287	103 (1.34)	351	103 (1.24)	420
Mountain	104 (3.82)	1781	105 (2.10)	467	108 (3.20)	417
Pacific	120 (17.98)	2039	125 (11.16)	603	121 (9.12)	563
FEMALES						
Mid-Atlantic	109 (10.26)	2489	105 (4.38)	186	109 (5.78)	803
New England	100 (0.01)	1283	98 (1.15)	420	102 (1.10)	436
East North Central	106 (7.58)	2733	106 (3.77)	752	107 (4.17)	680
West North Central	97 (3.82)	1857	101 (0.47)	213	98 (1.31)	507
West South Central	97 (2.68)	1064	102 (3.19)	331	99 (0.39)	412
Mountain	99 (1.35)	1449	102 (0.79)	434	102 (1.08)	376
Pacific	120 (18.08)	1817	117 (8.71)	545	125 (12.11)	573

* Figures in parentheses represent "t" statistics.

† Southern region includes Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, and West Virginia. Mid-Atlantic includes Delaware, District of Columbia, Maryland, New Jersey, New York, and Pennsylvania. Remaining regions follow standard census division codes.

Sources: Derived from May 1978, May 1981, and April 1983 Current Population Surveys.

PERCENTAGE OF WAGES PAID IN SOUTH BY REGIONS DETERMINED BY STATEWIDE DATA, PEER GROUP METHOD, 1978 AND 1981*

(Workers Classified by Union Membership Status)

Region†	1978				1981			
	Males		Females		Males		Females	
	Percent of South	Number	Percent of South	Number	Percent of South	Number	Percent of South	Number
Mid-Atlantic	105 (6.26)	2618	105 (5.76)	2243	101 (0.58)	674	106 (3.40)	682
New England	97 (2.61)	1280	99 (1.06)	1234	95 (2.52)	367	99 (0.76)	376
East North Central	106 (7.91)	3151	104 (4.56)	2595	107 (4.17)	728	103 (2.13)	675
West North Central	98 (1.58)	1772	96 (4.94)	1798	98 (1.16)	469	99 (0.32)	459
West South Central	100 (0.01)	1229	97 (2.69)	1043	106 (2.05)	319	95 (2.45)	314
Mountain	104 (3.08)	1646	98 (2.22)	1399	102 (0.83)	400	103 (1.53)	396
Pacific	116 (14.14)	1796	116 (14.67)	1671	130 (9.33)	507	117 (8.17)	474

* Figures in parentheses represent "t" statistics.

† Southern region includes Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, and West Virginia. Mid-Atlantic includes Delaware, District of Columbia, Maryland, New Jersey, New York, and Pennsylvania. Remaining regions follow standard census division codes.

Sources: Derived from May 1978 and May 1981 Current Population Surveys.