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INTRODUCTION

Urban growth or rural farm atrophy is a product of fundamental socio-economic changes and technological developments. The major process of urbanization in Mississippi has begun since 1940 and is still occuring today. The size of urban population in 1970 (987, 312 or 44.5 percent) is more than twice that for 1940 (432,882 or 19.8percent). On the other hand, there has been a sizable population concentration in rural non-farm areas. The rural non-farm population has roughly tripled its share to the total population, increasing from 16.6 percent (351,030) in 1940 to 46.0 percent (1,019,277) in 1970. The rural farm areas are the only residential types which continue to incur population losses, decreasing from 64.1 percent (1,399,884) in 1940 to 9.5 percent (210,323) in 1970 (El Attar, 1974:6). In the light of this spatial population redistribution, it is of sociological interest to examine and compare the rural-urban differentials in peoples and jobs in the state. Mississippi has traditionally been viewed as a rural state whose urban areas do not differ from the rural localities with regard to either the occupational or industrial structure of its employed residents.

Rural-urban differentials in the occupational and industrial structures of employed residents are phenomena which have relatively received rather limited attention during this redistribution period. Quite understandably, sociological and demographic research in Mississippi has focused on rural areas. As a consequence, we know comparatively little about the occupational and industrial struc tures of urban residents in comparison to those of their rural counterparts. It is in this type of differentiation that the goals of the present paper are identified.

DATA, DEFINITIONS, AND SCOPE

The data used in this paper were obtained from the 1950, 1960, and 1970 population censuses of the United States (U. S. Bureau of the Census, 1952, 1961, 1972). Except for minor adjustments in the figures from the three censuses,¹ these sources provide comparable data on occupational and industrial employment. The analyses are confined to data on the first-digit level of occupational and industrial changes in the employment of white and nonwhite residents in urban, rural nonfarm, and rural farm areas of Mississippi between 1950 and 1970.

Definitions or explanations of basic concepts or certain categories adopted in this study are those developed by the U. S. Bureau of the Census. These definitions are "substantially the same" in the three censuses, especially with respect to Mississippi, as indicated below.

Urban Residence

"The urban population consists of all persons living in (a) places of 2,500 inhabitants or more incorporated as cities, villages, boroughs (except Alaska), and towns (except in the New England States, New York, and Wisconsin), but excluding those persons living in the rural portions of extended cities; (b) unincorporated places of 2,500 inhabitants or more; and (c) other territory, incorporated or unincorporated, included in urbanized areas" (U. S. Bureau of the Census, 1972: App. 1-2).

Rural-Farm Residence

Rural-farm residence "comprises all rural residents living on farms of 10 or more acres from which sales of farm products amounted to \$50 or more in the preceding calendar years or on places of less than 10 acres from which sales of farm products amounted to \$250 or more in the preceding year." (U.S. Bureau of the Census, 1972: App.2).

Rural-Nonfarm Residence

Rural-nonfarm residents include all "persons in rural territory who did not meet the definition for the rural-farm population" (U. S. Bureau of the Census, 1972: App. 2).

Occupational Structure

Occupational structure refers to the allocation of manpower to various functions within a society contained in strata called occupational groups. As noted by Blau and Duncan (1967: 67), "the occupational structure in modern industrial society" shows "the allocation of manpower to various institutional spheres, and it is the flow of movements among occupational groups that reflects the adjustment of the demand for diverse services and supply of qualified manpower." Expressed as data, occupational structure is the number of persons employed according to the occupational classification system adopted by the U.S. Bureau of the Census. (El Attar and Saunders, 1974: 320. This paper treated the occupational classification system as composed of 11 occupational categories (Table 1).

Industrial Structure

Industrial structure refers to the distribution of a society's manpower among industries. Expressed as data, it is the number of persons employed according to industry (El Attar and Saunders, 1974: 32). The industrial classification system as used in this paper consisted of 15 major industry groups (Tables 2 and 3). The major industry group "professional services" included hospitals, health services, welfare, and religious and miscellaneous professional services.

Scope of the Analysis

It may be pointed out that the scope of the present analysis extended to only the civilian employed residents. It covered neither the armed forces nor the experienced unemployed residents.

THE ANALYSIS

The basic purpose of this paper is to investigate the extent to which occupational differentials in residential employment were the consequence of industrial differentiation. Specifically, the basic hypothesis is that in the process of social transformation and economic development, residential types tend to be differentiated with respect to the changes in the occupational structure of their employed residents. Underlying this hypothesis is the assumption that the occupational differences observed among the areas, are a product of differences in the changes in the industrial structure of each of these residential types.

Occupational Differentials

Table 1 shows that especially for the period between 1960 and 1970, urban and rural-nonfarm residential areas were attractive to employed residents of all occupations except farmers, private household workers, and nonwhite farm laborers and laborers. On the contrary, rural-farm areas were attractive to nonwhite residents employed in professional, managerial, and clerical occupations and to both white and nonwhite service workers in 1960 to 1970.

The pattern of change for 1950 to 1960 was entirely different from that for 1960 to 1970, except for rural-farm areas and, to some extent, for nonwhite residents. While the urban and ruralnonfarm residential areas showed gains in white and non-white employed dwellers, rural-farm areas incurred losses. Differentiation within and between white and nonwhite employed residents in this regard was very apparent during the period under study. The gain for whites and nonwhites in urban and rural-nonfarm areas occurred at a decreasing rate; rural farm losses occurred at a constant rate for whites and at an increasing rate for nonwhites (see Table 1). In order to ascertain whether the numerical differentials in occupational change of white and nonwhite employment observed during the period under study among the three residential types were statistically significant or not, a three-way classification of analysis of variance was applied to the data in Table 1. This model was used to test the main effects of occupation (eleven levels), type of residence (three levels), and color (two levels). The data consisted of two observations (percent of occupational change between 1950 to 1960 and 1960 to 1970) on each of 66 different treatment combinations (occupation, type of residence, and color). The design was assumed to fit the following statistical model:

$$K_{ijkl} = \mu + \alpha_i + \beta_j + \gamma_k + (\alpha\beta)_{ij} + (\alpha\gamma)_{ik} + (\beta\gamma)_{jk} + (\alpha\beta\gamma)_{ijk} + \varepsilon_{ijk} ,$$

where

i = occupational group levels = 1, 2, . ., 11; j = type of residence levels = 1, 2, 3; k = color levels = 1, 2; and 1 = time levels = 1, 2 (Dunn and Clark, 1974: 145-154).

Table 4 summarizes analysis of variance for the data on occupational change in Table 1, namely the F tests of seven null hypotheses $(H_n 's)$. These hypotheses were stated as follows: For main effects, three H_n 's were tested: H_n 1: effects due occupation change = 0 ($\Sigma \alpha_i = 0$); $H_n = 2$ effects due residence = $0 (\Sigma \beta_1 = 0)$; effects due color = 0 ($\Sigma\gamma_k$ = 0); H_n 4, H_n 5 and H_n6 which refer to effects due two-factor interaction = 0 each; and H_n 7 effects due three-factor interaction = 0. Based on the calculated variance ratios shown in the last column of Table 4, H_n 1, H_n 2 and H_n 6 were rejected; the first two at the .01 level and the last at .005 level. Accordingly, one might conclude that the observed differences among the three residential type areas with regard to occupational changes were statistically significant. On the other hand, the differences between white and nonwhite residents with respect to occupational employment changes were not significant. However, type of residence and color were not independent. Finally, one might conclude that the effect of occupation, type of residence, and color (three-factor interaction) were independent.

Industrial Differentials

Tables 2 and 3 provide data on the number of and percent changes in the white and nonwhite industrial employment of Mississippi residents 14 years old and over in 1950, 1960, and 1970 by types of residence. The total percent changes in the number of employed persons in 1950-60 and in 1960-70 were -4.8 and 6.3, respectively. The loss which occurred in 1950-60 was caused solely by negative change in the nonwhite employment which amounted to -20.3 percent in comparison with an increase of 7.4 percent in the size of white employment. On the contrary, employment growth in 1960-70 was mainly due to an increase in the white employment by 20.2 percent as compared to -17.3 percent for the nonwhites. Of all three residential types, only the rural - farm areas showed negative change in the size of employment amounting to -48.1 and -47.7 for the whites and -59.7 and -74.6 for the nonwhites in 1950-60 and 1960-70, respectively. In the 15 major industry groups, especially in 1960-70, rural farm areas had negative employment changes for whites and nonwhites (Table 3), with exception of finance, entertainment (whites), educational services (nonwhites), professional services, and public adminstration (nonwhites).

In order to assess the extent to which occupational differentials in residential employment were promoted by industrial differentiation, a threeway variable model of analysis of variance, similar to the one used above, was applied to the data on changes in industrial employment in Table 3. Table 5 provides a summary for the F tests of seven H_n 's. Only three H_n 's (variations due industries, residence, and residence and color) were significant at .001 level. It is of interest to indicate that in the two analyses of variance (occupation and industry) residence and color were significantly dependent. However, this dependence disappeared once the effect of industry was included in the analysis, implying the tendency of industrial differentiation to promote racial integration.

CONCLUSION

This paper fulfilled three objectives: First, it examined and compared residential differentials in occupational changes of white and nonwhite employment; second, it assessed the statistical significance of these differentials; and third it asserted the assumption that the differentiations in the occupational structure of the employed residents of the three residential types were a product of the differences in the industrial structure of each residential type. Put differently, the residential pattern of employed Mississippians was a function of the changes in the occupational structure which followed the changes in the pattern of industrial differentiation. On the other hand, one should not neglect the effect of commuting, annexation, and migration on the process of differentiation in people and jobs in the state.

Finally, the analysis suggests that Mississippi should not be viewed as a rural state whose urban environment does not differ from the rural aggregates in terms of the occupational composition of its employed residents. Such a view is spurious and does not represent the existing reality.

FOOTNOTES

*The research on which this paper was based was part of Mississippi Agricultural and Forestry Experiment Station Population Project No. 4004. The author gratefully acknowledges the assistance of Mr. David L. Steinman.

¹ The comparability of the 1970 data on employed persons classified by occupations and industries is affected by three types of changes in the 1970 census procedures, namely: (1) the age coverage of employed persons is limited to persons 16 years old and over, (2) title and content of certain occupa tions/industries, and (3) allocation of the "not reported" cases. The 1970 data were adjusted with regard to the first two items, for example, the 14 and 15 years old employed persons were proportionately distributed among the occupations/ industries by sex and color, and the occupation category "transport equipment operatives" was included in "operatives." Another adjustment was related to discrepancies effected in the 1970 "rural-nonfarm" and "rural-farm" categories as corrected by the U.S. Bureau of the Census. The correction resulted in making some occupational group for each color did not compare with the total as originally given in the census. The Population Division of the U.S. Bureau of the Census (Mr. Speaker) advised the author to adjust for such discrepancies by relating all adjustments to the "rural-nonfarm" category. The "not reported" cases in 1950 and 1960 data were proportionately distributed among the occupations/ industries. This category numbered, 1950 followed by 1960 figures, 5,792 and 10,968 for white occupational employment; 4,028 and 6,119 for nonwhite occupational employment; 6,323 and 8,259 for white industrial employment; and 4,472 and 5,198 for nonwhite industrial employment. According to type of residence, the figures were as follows:

Occupation

	Ur	ban	Rural	Nonfarn	n Rura	Rural Farm			
		Non		Non		Non			
Year	White	White	White	White	White	White			
1950	1,551	873	1,736	833	2,505	2,322			
1960	5,627	3,182	3,608	1,727	1,733	1,210			

Industry

1950	1,691	950	1,882	989	2,750	2,533
1960	4,167	2,564	2,611	1,542	1,481	1,092

The size of employed persons 14 and 15 years old in 1970 amounted to 4,043 for the whites and 1,706 for the nonwhites. Distribution by type of residence (taken in the followin order: urban, rural nonfarm, and rural farm) was: 2,104, 1,649, and 290 for white persons; and 777, 764, and 165 for nonwhite persons.

Occupation				Nu	mber of 1	Employed						Percent	nt Change in Employment				
and Color		Urban			Ru	iral Nonfa	rm ·	Rural Farm		Urban		Rural Nonfarm		Rural Farm			
•••••		1950	1960	1970	1950	1960	1970	1950	1960	1970	50-60	60-70	50-60	60-70	50-60	60-70	
Professional, etc.	(W	18.746	27.862	45.591	10 968	14 138	21 589	4 307	3 666	3 265	48 63	63 63	28 00	52 70	-16 61	-10.04	
	(NW	3,864	6,236	10,422	2,048	2,955	6,490	1,988	1,239	1,342	61.39	67.13	44.29	119.63	-37.68	8.31	
Farmers, etc.	(W	1,117	1,186	1,004	3,816	7,241	4,412	91,853	31,798	10,780	6.18	-15.35	89.75	-39.07	65.38	-66.10	
	(NW	782	489	162	2,905	7,481	1,516	108,684	25,449	3,058	-37.47	-66.87	157.52	-79.74	-76.58	-87.98	
Managers, etc.	(W	22,980	30,711	32,820	13,239	15,526	18,438	4,442	3,378	2,667	- 3.64	6.87	17.27	18.76	-23.95	-21.05	
	(NW	2,149	1,823	2,307	967	983	1,339	243	159	201	-15.17	26.55	1.66	36.22	-34.57	26.42	
Clerical wkrs.	(W	24,540	36,234	51,269	8,986	15,485	26,928	3,824	4,418	4,192	47.65	41.49	72.32	73.90	15.53	-5.12	
	(NW	1,219	1,687	5,551	382	599	2,625	144	133	307	38.39	229.05	56.81	338.23	-7.64	130.83	
Sales wkrs.	(W	18,224	21,563	25,628	9,375	11,185	12,595	3,945	3,252	1,849	18.32	18.85	19.31	12.61	17.57	-43.14	
	(NW	1,173	1,148	1,687	604	543	678	209	160	139	-2.13	46.95	-10.10	24.86	-23.44	-13.12	
Craftsmen	(W	20,245	26,484	34,632	16,139	26,333	41,523	7,849	7,375	5,526	30.82	30.77	63.16	57.68	-6.04	-25.07	
	(NW	6,438	6,973	9,039	2,501	3,844	7,525	1,127	1,387	1,027	8.31	29.63	53.70	95.76	23.07	-25.96	
Operatives	(W	20,869	29,431	34,665	19,315	41,925	61,669	14,273	17,338	10,142	41.03	17.78	117.06	47.09	21.47	-41.50	
	(NW	17,582	19,313	23,672	8,730	11,546	23,005	5,615	3,801	3,447	9.84	22.57	32.26	99.25	-32.31	- 9.31	
Pvt. hsehld.	(W	490	1,399	1,079	436	1,462	1,114	236	576	154	185.51	-22.87	235.32	-28.80	144.07	-73.26	
wkrs.	(NW	20,214	25,833	15,231	8,779	14,719	10,928	3,510	5,253	1,434	27.80	-41.04	67.66	-25.76	49.66	-72.70	
Serv. wkrs.	(W	9,355	12,822	20,538	4,954	8,319	15,052	1,892	1,857	2,318	37.06	60.18	67.92	80.94	- 1.85	24.82	
	(NW	14,747	18,685	20,448	4,436	6,289	11,516	1,194	1,350	1,476	26.70	9.44	41.77	83.11	13.07	9.33	
Farm laborers	(W	349	354	733	3,094	4,545	5,071	24,601	7,789	2,150	1.43	107.06	46.90	11.57	-68.34	-72.40	
	(NW	1,518	1,691	1,340	8,162	21,317	12,087	52,603	30,267	4,530	11.40	-20.76	161.17	-43.30	-42.46	-85.03	
Laborers	(W	3,953	4,340	6,800	7,015	7,477	9,966	5,071	2,805	1,430	9.79	56.68	6.59	33.29	-44.69	-49.02	
	(NW	16,090	14,014	10,665	10,645	11,201	11,697	5,011	3,498	1,512	-12.90	-23.90	5.22	4.43	-30.19	-56.78	
Total	(W	140,868	192,386	254,759	97,337	153,636	218,357	162,383	84,252	44,073	36.57	32.42	57.84	42.13	-48.12	-47.69	
	(NW	85,776	97,892	100,524	50,159	81,477	89,406	180,328	72,696	18,473	14.13	2.69	62.44	9.73	-59.69	-74.59	

TABLE 1. EMPLOYED POPULATION 14 YEARS OLD AND OVER BY MAJOR OCCUPATION GROUP, TYPE OF RESIDENCE AND COLOR IN MISSISSIPPI: 1950, 1960, AND 1970.

Source: 1950 figures are from U. S. Bureau of the Census, <u>U. S. Census of Population: 1950, General Characteristics, Mississippi</u> (Washington, D. C.: Government Printing Office, 1952), Table 28A, p. 34; 1960 figures are from <u>U. S. Census of Population: 1960, General Social and Economic Characteristics, Mississippi</u> (1961), Table 58, P. 126; 1970 figures adjusted to 1960 age coverage and for discrepancies in the figures for "rural farm" are from <u>U. S. Census of Population: 1970, General Social and Economic Characteristics, Mississippi</u> (1972), Table 54, pp. 160-161 and the corresponding tables on "rural nonfarm" and "rural farm" data as corrected by the U.S. Bureau of the Census. Mr. Robert C. Speaker, Population Division, U.S. Bureau of the Census has advised the author to relate any discrepancies in the data published in these tables to the "rural nonfarm" category. The 1950 and 1960 figures were adjusted for "not reported."

	Urban							Rural	Nonfarr	n		Rural Farm						
		White			Nonwhi	te		White			Nonwhite			White		Nonwhite		e
Industry	1950	1960	1970	1950	1960	1970	1950	1960	1970	1950	1960	1970	1950	1960	1970	1950	1960	1970
Agric.	2,909	3,053	3,542	3,166	3,227	2,232	8,763	14,603	12,154	12,296	30,247	14,861	118,523	41,075	13,648	164,190	56,615	7,88(
Mining	1,564	2,539	2,585	131	177	217	1,330	2,660	3,969	119	121	322	489	523	407	41	66	61
Constr.	11,090	12,948	16,471	6,521	6,778	6,875	9,731	15,234	21,181	2,172	3,621	5,615	6,462	5,675	3,395	1,039	1,502	814
Manuf.	23,351	39,560	50,902	14,546	14,600	21,870	21,474	45,468	74,370	11,358	12,744	25,450	15,007	17,283	11,353	6,020	3,763	3,543
Transp.	13,792	15,734	17,983	5,123	4,626	5,025	6,029	8,836	13,424	2,459	2,755	4,283	2,876	2,915	1,863	936	1,120	748
Trade	42,160	50,171	61,448	15,385	16,859	14,271	24,019	30,319	40,342	5,236	7,000	7,862	8,884	7,456	5,173	1,320	1,455	948
Fin.	6,018	10,987	15,756	799	963	1,241	1,653	2,834	5,139	179	195	342	573	631	788	32	28	32
Bus. serv.	1,265	1,749	3,172	98	194	443	276	572	1,195	11	38	145	87	119	99	5	16	14
Repr. serv.	2,985	3,271	3,866	1,219	1,049	1,071	3,173	3,203	4,014	661	608	745	1,259	709	367	266	141	95
Pvt. hsld.	868	1,757	1,158	22,853	27,782	14,558	717	1,771	1,247	9,842	15,772	10,925	351	676	181	3,710	5,522	1,418
Pers. serv.	6,310	7,712	8,687	7,321	7,527	7,513	2,962	3,771	5,033	1,719	1,800	2,634	856	744	592	365	407	245
Entrmnt.	1,788	1,396	1,401	712	760	578	865	689	660	156	173	171	154	74	. 83	27	45	24
Ed. serv.	7,187	11,756	23,555	4,043	7,540	14,035	7,464	8,895	12,926	2,488	4,258	10,390	3,442	2,753	2,346	1,972	1,550	1,923
Prof. serv.	9,959	16,212	27,498	2,922	4,415	8,346	3,978	7,388	14,365	1,166	1,746	4,601	1,018	1,371	2,129	292	363	613
Pub. admin.	9,622	13,541	16,735	937	1,395	2,249	4,903	7,393	8,338	297	399	1,060	2,402	2,248	1,649	113	103	117
Total	140,868	192,386	254,759	85,776	97,892	100,524	97,337	153,636	218,357	50,159	81,477	89,406	162,383	84,252	44,073	180,328	72,696	18,473

 TABLE 2. EMPLOYED PERSONS 14 YEARS OLD AND OVER BY MAJOR INDUSTRY GROUP, TYPE OF RESIDENCE, AND COLOR IN MISSISSIPPI: 1950, 1960, AND 1970

Source: Same census reports cited in Table 1: 1950 figures are from Table 30a, pp. 36-37; 1960 figures are from Table 61, pp. 129-130; and 1970 figures are from Table 55, pp. 162-163. The 1950 and 1960 figures were adjusted for "not reported"; 1970 figures were adjusted to include employed population 14 and 15 years old.

	Urban					Rura	l Nonfar	m	Rural Farm				
	White		Nonwhite		White		Nonwhite		White		Nonwhite		
Industry	50-60	60-70	50-60	60-70	50-60	60-70	50-60	60-70	50-60	60-70	50-60	60-70	
Agric., etc.	4.95	16.02	. 1.93	-30.83	66.64	-16.77	145.99	-50.87	-65.34	-66.77	-65.52	-86.08	
Mining	62.34	1.81	35.11	22.60	100.00	49.21	1.68	166.12	6.82	-22.18	60.98	-7.58	
Constr.	16.75	27.21	3.94	1.43	56.55	39.04	66.71	55.07	-12.18	-40.18	44.56	-45.81	
Manuf.	69.41	28.67	0.37	49.79	111.74	63.57	12.20	99.70	15.17	-34.31	-37.49	-5.85	
Transp., etc.	14.08	14.29	9.70	8.63	46.56	51.92	12.04	55.46	1.36	-36.09	19.66	-33.21	
Trade	19,00	22.48	9.58	-15.35	26.23	33.06	33.69	12.31	-16.07	-30.62	10.23	-34.85	
Fin.	82.57	43.41	20.53	28.87	71.45	81.33	8.94	75.38	10.12	24.88	-12.50	14.29	
Bus. serv.	38.26	81.36	97.96	128.35	107.25	108.92	245.45	281.58	36.78	-16.81	220.00	-12.50	
Repr. serv.	9.58	18.19	-13.95	2.10	0.95	25.32	-8.02	22.53	-43.69	-48.24	-46.99	-32.62	
Pvt. hsld.	102.42	-34.09	21.57	-47.60	147.00	-29.59	60.25	-30.73	92.59	-73.22	48.84	-74.32	
Pers. serv.	22.22	12.64	2.81	-0.19	27.31	33.47	4.71	46.33	-13.08	-20.43	11.51	-39.80	
Entrmnt.	-21.82	0.36	6.74	-23.95	-20.35	-4.21	10.90	-1.16	-51.95	12.16	66.67	-46.67	
Ed. serv.	63.57	100.37	86.50	86.14	19.17	45.32	71.14	144.01	-20.02	-14.78	-21.40	24.06	
Prof. serv.	62.79	69.62	51.10	89.04	85.72	94.44	49.74	163.52	34.68	55.29	24.32	68.32	
Pub. admin.	40.73	23.59	48.88	61.22	50.79	12.78	34.34	165.66	-6.41	-26.65	-8.50	13.59	
Total	36.57	32.42	14.13	2.69	57.84	42.13	62.44	9.73	-48.12	-47.69	-59.69	-74.59	

TABLE 3. PERCENT CHANGE IN EMPLOYED PERSONS 14 YEARS OLD AND OVER BY MAJOR INDUSTRY GROUP, TYPE OF RESIDENCE, AND COLOR IN MISSISSIPPI: 1950-1970

Source: Computed from Table 2 above.

TABLE 4. ANOVA FOR CHANGES IN THE OCCUPATIONAL STRUCTURE OF EMPLOYED URBAN, RURAL NONFARM, AND RURAL FARM RESIDENTS IN MISSISSIPPI, BY COLOR: 1950-1970

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Squares	Computed F	
(A) Due occupation	95.040.7412	10	9,504,0741	2,698 ^a	
(B) Due residence	36.869.8193	2	18,434,9096	5.234 ^a	
(C) Due color	3,760,8452	1	3,760.8452	1.068 ^b	
Due AB	34.756.8164	20	1,737.8408	0.493 ^b	
Due AC	7,327.8701	10	732.7870	0.208 ^b	
Due BC	69,242.0635	2	34,621.0318	9.829 ^c	
Due ABC	x	x	x	x	
Residual	302,933.4735	86	3,522.4822		
Total	549,931.6292	131			

^xSum of squares due ABC (41,411.7383, with 20 degrees of freedom) were added to the residuals (261,521.7352) because of their insignificant contribution (F = .523). ^aSignificant at .01 level. ^bNot significant. ^cSignificant at .005 level.

TABLE 5. ANOVA FOR CHANGES IN THE INDUSTRIAL STRUCTURE OF EMPLOYED URBAN, RURAL NONFARM, AND RURAL FARM RESIDENTS IN MISSISSIPPI, BY COLOR: 1950-1970

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Squares	Calculated F
(A) Due industries	177,263.1484	14	12,661.6535	6.472 ^a
(B) Due residence	40,754.7812	2	20,377.3906	10.417ª
(C) Due color	700.1389	1	700.1389	0.358 ^D
Due AB	47,112.3750	28	1,682.5848	0.860
Due AC	2,422.1152	14	173.0082	0.088 ^b
Due BC	86,314.5840	2	43,157.2920	22.061 ^a
Due ABC	x	x	х	x
Residual	230,835.0856	118	1,956.2295	
Total	585,402.2283	179		

^xSum of squares due ABC (46,713.7852, with 28 degrees of freedom) were added to the residuals (194,121.3004) because of their insignificant contribution (F = .816).

^aSignificant at .001. ^bNot significant.

REFERENCES

Blau, Peter M. and Otis D. Duncan. 1967. <u>The</u> <u>American Occupational Structure</u>. New York: John Wiley.

El Attar, M. E. 1974. <u>Some Aspects of Popula-</u> tion Dynamics in Mississippi. MAFES Bulletin 814. Mississippi State: Mississippi Agriculture and Forestry Experiment Station.

El Attar, M. E. and J. Saunders. 1974. "Mississippi Jobs, Measuring Components of Occupational Change." <u>Growth and Change</u>. 5(October), 32-38. U. S. Bureau of the Census. 1952. U. S. Census of Population: 1950. Vol. II. Characteristics of Population. Mississippi. Washington, D. C.: U. S. Government Printing Office.

U. S. Bureau of the Census. 1961. U. S. Census of Population: 1960. General Social and Economic Characteristics. Mississippi Final Report PC (1)-26C. Washington, D.C.: U. S. Government Printing Office.

U. S. Bureau of the Census. 1972. U. S. Census of Population: 1970. General Social and Economic Characteristics. Final Report PC(1)-C26 Mississippi. Washington, D.C.: U. S. Government Printing Office.