

This PDF is a selection from an out-of-print volume from the National Bureau of Economic Research

Volume Title: Studies in Income and Wealth, Volume 15

Volume Author/Editor: Conference on Research in Income and Wealth

Volume Publisher: NBER

Volume ISBN: 0-870-14170-8

Volume URL: <http://www.nber.org/books/unkn52-1>

Publication Date: 1952

Chapter Title: Some Effects of Region, Community Size, Color, and Occupation on Family and Individual Income

Chapter Author: D. Gale Johnson

Chapter URL: <http://www.nber.org/chapters/c9765>

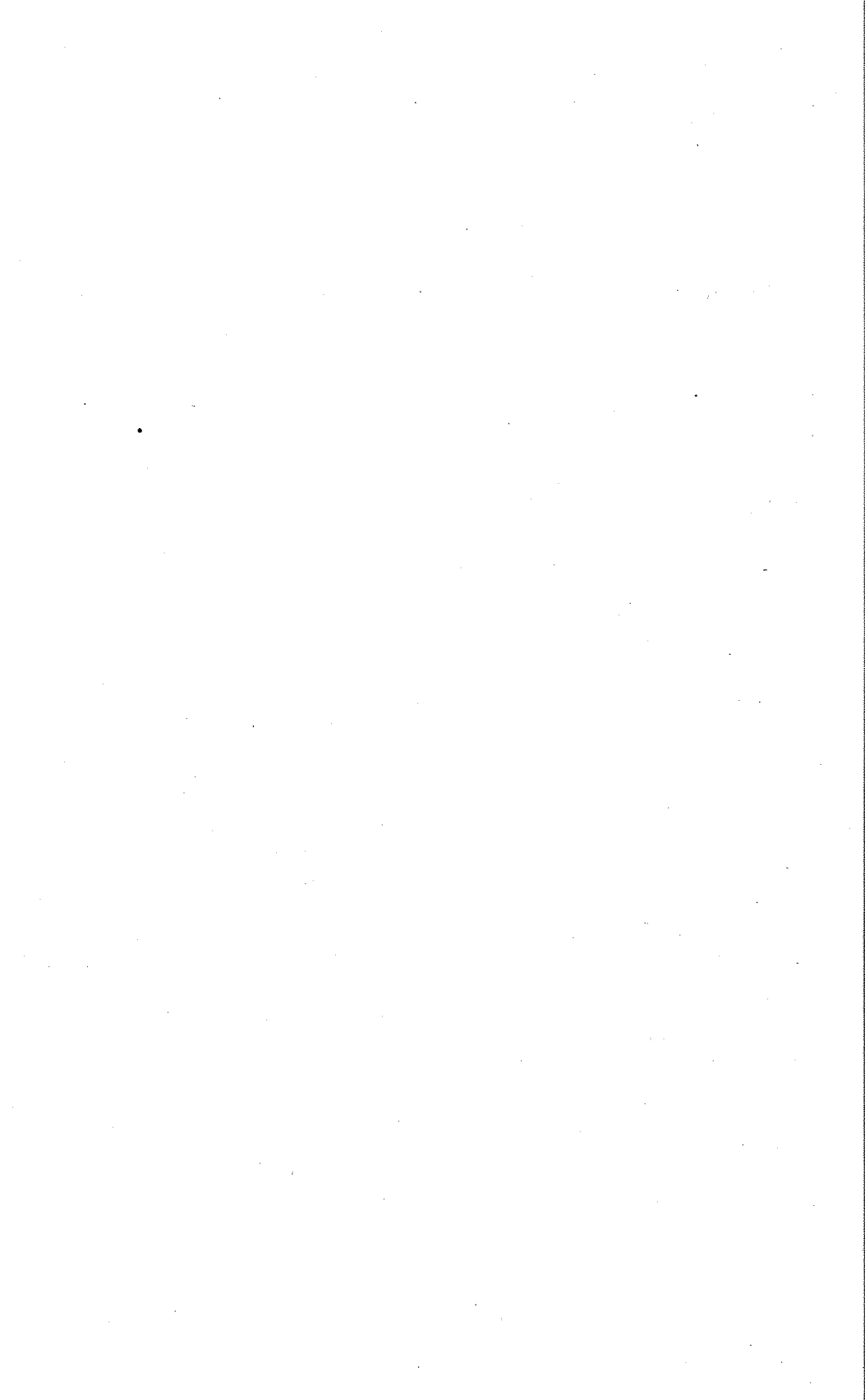
Chapter pages in book: (p. 49 - 74)

Part III

Some Effects of Region, Community Size, Color, and Occupation on Family and Individual Income

D. GALE JOHNSON
University of Chicago

In compiling the data for this paper I had the assistance of three workers on a project carried on under my general direction: Stephen A. Packer, Marjorie Penniman, and Marilyn Corn Nottenburg. I had access to an unpublished Master's thesis by Mr. Packer, 'Causes and Extent of Low Returns to Southern Agricultural Labor' (University of Chicago Library). The research on which this paper is based was financed by a Rockefeller Foundation grant for Agricultural Economics Research at the University of Chicago.



IN AN EFFORT TO DETERMINE why incomes of southern farm families or farm workers are generally much smaller than incomes of farm families or farm workers in the rest of the country, one hypothesis investigated was that the incomes of families in nonfarm communities or engaged in nonfarm occupations were smaller in the South than in the rest of the nation. This paper is a progress report on our efforts to test that hypothesis.

Two puzzles, which may be due to inconsistencies in the data, emerged. First, the data on urban family incomes, including preliminary data from the 1950 Census, indicate that incomes of white families in the South are approximately the same as for the rest of the nation if the influence of community size is eliminated. However, in the majority of cases, white wage earners in a southern industry or occupation earn 10 to 30 percent less than comparable white workers in the rest of the country. Second, the trends in southern incomes per capita relative to the rest of the country seem inconsistent with results indicating an equivalence among regions of urban white family incomes in both 1935-36 and 1946. Moreover, average earnings in manufacturing and wages paid in individual industries in the South have gained on the rest of the nation in the last 15 years.

Despite these puzzles, certain conclusions about regional differences in family incomes can be stated. Some of the evidence supporting the conclusions is presented here.

- 1) Farm operators and farm laborers in the South, both white and negro, have considerably lower average incomes than in the rest of the nation.
- 2) In recent years nonfarm white families in southern communities have had average incomes approximately the same as families in communities of similar size in the rest of the nation.
- 3) Nonfarm negro families in the South have lower average incomes than nonfarm southern white families and than nonfarm negro families in the rest of the country. However, the differentials in incomes have shrunk since 1935.

A REGIONAL DIFFERENCES IN INCOMES OF FARM FAMILIES AND WORKERS

There are no adequate data on total incomes of farm families in the various regions. There are state and regional estimates (for a few years) of the incomes of farm operator families from farms operated plus rent on land owned by farm families, but none to indicate other sources of income which may be from a third to a half as much as the included farm income. The 1940 Census of Population gives regional data on the *cash* income of farm laborer families whose sole income was salaries or wages. It provides also regional data on wage and salary income for all rural farm families.

The 1935-36 Consumer Purchases Study did not provide reliable regional estimates of farm family income, partly because of the effect of abnormal climatic conditions during the period of the survey, partly because of sampling errors especially in the South.¹

Table 1

Realized Average Annual Net Incomes of Farm Operators, by Region, 1929, 1940, and 1945

	1929	1940	1945
New England	\$966	\$684	\$1,800
Middle Atlantic	1,007	865	2,005
East North Central	1,056	887	2,690
West North Central	1,329	940	3,299
South Atlantic	723	608	1,723
East South Central	652	441	1,220
West South Central	884	691	1,460
Mountain	1,328	1,072	3,130
Pacific	1,614	1,117	4,730
United States	979	756	2,254

Sources: H. C. Norcross, 'State Estimates of Expenses and Net Incomes from Agriculture, 1929, 1939-42', USDA, BAE, (mimeo.), 1944, and *Farm Income Situation*, July 1946.

Net income includes net cash income from farming (including net rent from a farm owned by a farm family and operated by another but excluding any farm wages earned by farm family members) plus the rental value of the farm dwelling and the value of products produced and consumed on the farm (valued at farm prices).

Yet the various pieces of evidence that we do have seem to give much the same picture: marked regional variation in the level of farm family income and in the level of returns to farm labor. Tables 1, 2, and 3, presenting some of the relevant data, are largely self-explanatory and require comment only on the effect of the income differential for negroes and whites.

In the South about 40 to 45 percent of all hired work is done by negroes

¹ *Consumer Incomes in the United States* (National Resources Committee, Washington, 1938), pp. 54-6.

Table 2

Average Labor Return per Worker Year from Farming, by Region, 1940 and 1945

	1940	1945		1940	1945
New England	\$510	\$1,090	East South Central	\$260	\$540
Middle Atlantic	565	1,100	West South Central	315	760
East North Central	505	1,455	Mountain	505	1,560
West North Central	500	1,745	Pacific	530	2,200
South Atlantic	260	710	United States	385	1,135

Estimates made by the author from BAE and Census data. Labor return is the difference between net agricultural income and the sum of the estimated rental value of owner-operated land, rent paid on rented farms, and a return on nonland capital.

and about 27 percent of the farm operators are negro. Thus roughly a third of all farm labor is done by negroes and negroes receive lower incomes than whites in agriculture as well as in non-agriculture. The range of

Table 3

Average Farm Wages per Month without Board, by Region, with Estimates for Whites and Nonwhites in the South, 1935, 1940, and 1945

	1935	1940	1945
New England	\$49	\$57	\$126
Middle Atlantic	38	47	109
East North Central	29	42	100
West North Central	32	39	112
Mountain	44	52	138
Pacific	56	66	181
South Atlantic, all	22	27	60
White	26	32	71
Nonwhite	16	20	45
East South Central, all	20	23	54
White	24	27	64
Nonwhite	15	17	40
West South Central, all	24	28	81
White	28	34	95
Nonwhite	18	22	60

Sources: *Farm Wage Rates, Farm Employment, and Related Data* (BAE, 1943), pp. 5-13, *Agricultural Statistics, 1946*, p. 538, and 16th Census, *Population, Families, Family Wage or Salary Income*, Table 1. Estimated wages of white and nonwhite workers in the South are based on the following assumptions: (1) 40 percent of all farm wage workers in the South are nonwhite. (In March 1940 the Census reported 1,832,000 wage workers in the South and 815,000 nonwhite wage workers in the U. S., of which 90 percent are assumed to be in the South.) (2) The wage rate for nonwhite farm laborers is 63 percent of that for whites. In 1939 the annual wage and salary income of white rural farm families without other income was \$404; for nonwhites, \$257. This differential was assumed to apply to wage rates. Other data indicate a smaller differential. Rural farm families all of whose members were salary or wage workers (without other income and whose head was a farm laborer) had the following median money incomes in 1939: whites, \$340; nonwhites, \$255 (calculated from 16th Census, *Population and Housing, Families, Characteristics of Rural-Farm Families*, Table 8). These data indicate that the average income of nonwhite families was 70 percent of that of white families. However, about 20 percent of the white families had more than one worker, while 30 percent of the nonwhite families had more than one.

the ratio of negro to white receipts from agriculture is fairly wide according to the Consumer Purchases Study. In the same communities family incomes of negro farm operators ranged from 50 to 75 percent of white operators' incomes and of negro sharecroppers from 70 to 80 percent of white sharecroppers' incomes.² In 1940 the rural farm negro workers in the South apparently had labor incomes of about 60 or 65 percent of the whites in the same region. The 1940 Census of Agriculture indicated the following ratios of negro to white farm operators with respect to the value of all farm products for each of three southern regions: South Atlantic, 59 percent; East South Central, 62 percent; West South Central, 41 percent.³

If it is assumed that the net operator returns or net labor returns of negroes is 60 percent of that received by whites, the estimated average returns for whites in the South would be from 10 to 15 percent higher than the averages in Tables 1 and 2. Thus in 1945 average net operator returns for white farmers in the South Atlantic region might range from about \$1,900 to \$2,000 and in the East South Central from \$1,350 to \$1,400. The labor return figures (Table 2) would be about \$800 for the South Atlantic region and \$625 for the East South Central, still almost 30 percent below the lowest non-South region in one case and 40 percent in the other.

The data do not include any income from nonfarm work. In 1940 about 20 percent of all rural farm members of the labor force had a non-agricultural major occupation. An unweighted average for the South indicated that 22 percent of the rural farm labor force was engaged in a nonagricultural occupation. Thus the nonfarm income of farm residents is unlikely to be any more significant in the South than in the rest of the nation.

B REGIONAL DIFFERENCES IN INCOMES OF NONFARM FAMILIES

As far as I know, only two studies of family incomes provide data for analyzing the effects of region, color, and community size upon family incomes — the Consumer Purchases Study of 1935-36 and a Bureau of the Census study for 1946. They indicate that for white nonfarm families living in communities of the same size income does not differ appreciably regionally. The 1935-36 data have been analyzed by Herbert E. Klarman and I have reproduced two of his tables to facilitate reference (Tables 4

² *Family Income and Expenditures, Southeast Region, Part 1, Family Income, Farm Series* (USDA, Misc. Pub. 462), Tables 28 and 29.

³ *Analysis of Specified Farm Characteristics by Total Value of Products, Ch. IV, Table 2.* Negroes operated 22 percent of the farms in the South Atlantic region, 27 percent in the East South Central, and 18 percent in the West South Central.

Table 4

Median Incomes of Native White Nonrelief Unbroken Families, by Region and Size of Community, 1935-1936

	Large Cities	Middle- Size Cities	Small Cities	Village Units
MEDIAN INCOMES				
New England	\$1,554	\$1,481	\$1,510	\$1,447
North Central	1,751	1,430	1,376	1,154
Mountain & Plains	1,705	1,630	1,735	1,322
Pacific	1,654	1,455	1,670	1,405
South	1,819	1,740	1,345	1,474
RANK BY REGIONS				
New England	5	3	3	2
North Central	2	5	4	5
Mountain & Plains	3	2	1	4
Pacific	4	4	2	3
South	1	1	5	1

Source: Herbert E. Klarman, 'A Statistical Study of Income Differences Among Communities', *Studies in Income and Wealth, Volume Six* (1943).

Large cities: 100,000-1,500,000; middle-size: 25,000-150,000; small: 2,500-25,000; village units: rural nonfarm communities up to 2,500.

and 5). Klarman included only native white nonrelief unbroken families. The inclusion of relief families would probably not have affected his results, though the inclusion of foreign born would have reduced the averages somewhat for the Northeast. Klarman states that regional ranks are so similar that they could have arisen by chance in more than 50 cases out of 100.

Table 5

Hypothetical Mean Family Incomes for Standardized Occupational Distribution, by Region and Community Size

	Large Cities	Middle- Size Cities	Small Cities	Village Units	Average*
MEAN INCOMES					
New England	\$1,955	\$1,741	\$1,917	\$1,726	\$1,835
North Central	2,028	1,709	1,590	1,389	1,679
Mountain & Plains	1,938	1,942	1,612	1,448	1,735
Pacific	1,870	1,710	1,922	1,621	1,781
South	2,066	1,970	1,796	1,677	1,877
RANK BY REGIONS					
New England	3	3	2	1	2
North Central	2	5	5	5	5
Mountain & Plains	4	2	4	4	4
Pacific	5	4	1	3	3
South	1	1	3	2	1

Source: Klarman, *op. cit.*, p. 225.

* Simple average of row.

In Table 5 the occupational groups are wage earner, clerical, business, and professional. Again the difference in the ranks is not statistically significant.⁴

In this paper only the data on family incomes from the 1946 Bureau of the Census study are used (Table 6). For white families the difference between the South and the Northeast, the highest median, was \$353. The difference for nonwhites between the South and the North Central was \$745. In general, nonwhites seem to have adjusted less well than whites to the regional influences on supply and demand for their services.

Table 6

Median Incomes of White and Nonwhite Urban Families, by Region, 1946

	White	Nonwhite
Northeast	\$3,367	\$2,235
North Central	3,244	2,294
West	3,206	*
South	3,014	1,549
United States	3,246	1,929

Source: Bureau of the Census, *Current Population Reports, Consumer Income*, Series P-60, No. 1, Rev. Table 4.

* Data not given in source. Median for urban and rural nonfarm nonwhite families was \$2,659; median for urban families probably \$2,750-2,800.

A part of the difference in family incomes in the various regions is due to the different distributions of the urban population among community size groups. From median incomes of families by four community size groups for the country as a whole one can calculate a median family income for each region that reflects the effect of the population distribution. Calculated in this way, the United States median is \$3,116, the South median (the least urban region), \$3,009, and the Northeast median (the most urban region), \$3,159. Of the \$353 difference between the median incomes of the South and Northeast about \$150 is explained by the difference in population distribution among urban size groups.⁵

From the same Census study I calculated the median incomes of white rural nonfarm families: \$3,160 for the Northeast, \$3,038 for the West, \$2,410 for the North Central, and \$2,310 for the South. These medians are probably subject to fairly large sampling errors, since the Bureau of

⁴ Herbert E. Klarman, 'A Statistical Study of Income Differences Among Communities', *Studies in Income and Wealth, Volume Six* (1943), pp. 218 and 225.

⁵ This technique of adjustment introduces a small error. The smaller city sizes are somewhat more heavily weighted in the South than the larger city sizes. Consequently, the standardization procedure may reflect the slightly lower level of southern incomes in small cities. Moreover, the city size data for the country as a whole are for all families.

the Census did not calculate them separately. Much of the difference between the two high regions and the two low regions is explained by the lack of comparability of the rural nonfarm category in the various regions. Some of the rural nonfarm areas are in the immediate environs of cities: in the Northeast about 53 percent of the rural nonfarm population was in metropolitan counties in 1940; in the West, 33 percent; in the North Central, 26 percent; and in the South, 20 percent. The rural nonfarm communities in the South and North Central states are probably more representative of distinct communities than in the Northeast.⁶

Incomes of white families in the various regions for communities of comparable size seem to differ little, if any. Differences in real income could arise if the differences in income among communities of different sizes are not equal to differences in the cost of living. A study of migration among communities of various sizes should throw some light upon this question.

C URBAN SALARY AND WAGE INCOMES OF INDIVIDUALS AND FAMILIES

The data on wage and salary income of individuals and of families gathered by the 1940 Census were tabulated for individual earners by region, color, and sex for urban and rural residence classifications.⁷ Since the rural categories are not at all comparable for the various regions, only the urban data were used in this analysis (Table 7). Inclusion of individuals with other income does not seem warranted; in any case, the relationships among the medians are not affected.

The smaller degree of concentration of southern urban residents in large cities must be recognized. The 1940 Census gives data on the median wages of white male (and female) wage and salary workers for three sizes of cities — 2,500-24,999, 25,000-249,999, and 250,000 or more. Using these estimates and the distribution of population by city size, the effect of population distribution on the medians can be calculated. If the South is the base, the effects of population distribution on the median level of annual salaries or wages is \$34 for the West, \$37 for the North Central, and \$106 for the Northeast.⁸

⁶ We have not investigated the income position of the West in any detail. Evidence on incomes seems to indicate that the West has had more favorable family and individual incomes in recent years than other regions. These data are consistent, of course, with the large net migration of people to the West during the last two decades.

⁷ Individuals include all persons who received salaries or wages, not only persons not living in families. Families include 1-person families.

⁸ Data on median incomes by city size from the 16th Census, *Educational Attainment by Economic Characteristics*, Table 29.

Table 7

Median Wage or Salary Income of Urban Residents Who Earned \$1 or More and Had No Other Money Income, by Region, Sex, and Color, 1939

	All Workers ^a		Worked 12 Months ^b	
	Male	Female	Male	Female
W H I T E				
Northeast	\$1,237	\$728	\$1,485	\$920
North Central	1,282	717	1,510	883
South	1,122	686	1,359	826
West	1,334	827	1,611	1,040
United States	1,247	725	1,488	907
N O N W H I T E				
Northeast	835	476	1,020	568
North Central	804	406	981	526
South	500	242	631	296
West	768	496	952	639
United States	602	297	739	366

^a 16th Census, *Population, The Labor Force, Wage or Salary Income in 1939*, Table 5. Excludes individuals on public emergency work.

^b *Ibid.*, Table 5a.

The data on family incomes from wages and salaries are not presented in detail because they indicate nothing not revealed by Table 7. The distribution of the number of earners per white family is very nearly the same in all regions. Southern white families without other money income had a median money income of \$1,389; in the North Central states the median income for all families was \$1,521.⁹ A rough adjustment to exclude nonwhites would raise the figure for the North Central states to about \$1,550-1,575. Some of the difference is explained by the somewhat greater concentration in larger urban areas in the North Central states. The net difference remaining might be 8 to 10 percent.

The 1940 Census presents data on urban family incomes from wages and salaries for families all of whose workers are salary or wage workers by the major occupation of the head for regions, with separate figures for nonwhites in the South (Table 8). For the higher paying occupations, white family incomes in the South are generally within 10 percent of those in other regions. For operatives, domestic service workers, service workers, and laborers, including farm — the occupations in which the competition of nonwhites is most significant — the differences between the South and other regions are about 20 percent.

On the basis of the data on wage and salary income it is unlikely that urban white family incomes in the South were as high as in the rest of

⁹ 16th Census, *Population, Families, Family Wage or Salary Income in 1939*, Table 1.

Table 8

Median Urban Family Incomes from Wages and Salaries by Major Occupation of Head, by Region and by Color for the South, 1939

MAJOR OCCUPATION OF HEAD	NORTHEAST	NORTH			SOUTH	
		CENTRAL	WEST	White	Nonwhite	
Professional	\$2,480	\$2,235	\$2,460	\$2,215	\$850	
Proprietors, etc.	2,770	2,725	2,510	2,510	1,090	
Clerical, sales	1,985	1,830	1,770	1,740	1,045	
Craftsmen, foremen	1,530	1,735	1,700	1,535	750	
Operatives	1,435	1,460	1,505	1,210	710	
Domestic service	585	404	480	305	300	
Protective service	2,220	1,880	1,870	1,605	1,200	
Other service workers	1,215	1,075	1,050	890	670	
Laborers, incl. farm	1,280	1,130	1,030	750	780	

Source: 16th Census, *Population, Families, Family Wage or Salary Income in 1939*, Table 7. Includes only families all of whose workers are wage or salary earners.

the country during the late thirties. The distribution of the white labor force by the occupational groups used in Table 8 indicates nearly identical distributions in all regions. Apparently in 1939 family incomes of urban southern whites could have been as high as in the rest of the country only if nonlabor incomes were more important or if more of the southern whites were in the nonsalaried groups. The first possibility seems unreasonable and the second cannot be tested.

Data are available for 1946 on the civilian money earnings of urban individuals and separately for whites and nonwhites in the United States and the South. Civilian money earnings include all sources of *earned* money income including self-employment. For full time civilian earners, the median earnings of southern white males were higher than the median for all males in the Northeast, though lower than in any other region (Table 9).

Two offsetting adjustments need to be made: one for the less urban nature of the South, the other for the inclusion of the incomes of nonwhites in the data for the three regions other than the South. If the same relative difference exists between the median money earnings of white and all urban residents as between white and all urban families, the median earnings of full time male white earners in the Northeast would be about \$60 higher, in the North Central region about \$40 higher, and in the West, no more than \$15 higher than the medians in Table 9.¹⁰ An adjustment for the more urban character of the other regions (based on the 1940 distribution of

¹⁰The adjustment was made for each region by subtracting the median incomes of all urban families from the median incomes of urban white families in 1946 and multiplying by 0.8, the approximate relationship between the median earnings of full time male earners and the median income of all urban families. For all male earners the multiplier should have been about 0.65.

Table 9

Median Civilian Money Earnings of Urban Residents by Sex, by Region and for Whites in the South, 1946

	All Earners	Full Time Earners*	All Earners	Full Time Earners*
	Males		Females	
United States (white)	\$2,297	\$2,732	\$1,219	\$1,742
Northeast	2,268	2,609	1,335	1,724
North Central	2,285	2,710	1,131	1,676
South (white)	2,123	2,627	1,158	1,732
West	2,366	3,070	942	1,951

Source: *Current Population Reports*, Series P-60, No. 3, Table 9.

* There are no data in the source to indicate the factors responsible for the regional differences between the medians for all and for full time earners except for the obvious explanation of sampling variability. All earners include normal part time workers, workers who were involuntarily unemployed part of the year, and persons who had spent part of the year in the armed forces. The category of all earners included also persons who did unpaid family work for part of the year.

population by city size) would reduce the full time male median earnings about \$120 for the Northeast and \$80 for the North Central and West.¹¹ The two adjustments do not change the rankings of the regions.

Full time urban female workers had higher median earnings in the South than in the North Central and the Northeast when the population distribution among city size was adjusted for. The West has the highest median earnings for females as well as males.

The 1946 data are not strictly comparable with the 1939 data because income from self-employment was included. Even so, we can infer that any disadvantage in labor incomes that southern urban whites may have had in 1939 had disappeared by 1946.¹²

The two most recent Censuses of Manufactures provide data on earnings of workers in manufacturing classified by region and city size. The 1937 Census gives data on hourly earnings of wage earners and the 1947 Census on average annual earnings. The data are not completely comparable on other scores as well. Some industries have been reclassified and the city size classes are not the same. The 1937 Census gives data for all community size groups, including rural nonfarm, while the 1947 data are for cities of 10,000 or more alone. Classifications by industries are avail-

¹¹ The adjustment for population distribution was based on family income data by city size (*Current Population Reports*, Series P-60, No. 3, Table 1). The differences in the median incomes that reflected the effect of population distribution by city size were multiplied by 0.8 to adjust for the difference in the median money income of families and the median money earnings of full time male earners.

¹² Self-employment income is not of much importance for females and the behavior of median earnings for males and females was much the same between the two dates.

able for 1947 only for industrial and metropolitan counties. We can eliminate the effect of color partly by comparing only industries with a high percentage of whites in the South. However, this is not entirely satisfactory since it is not known whether whites in industries with a large proportion of nonwhites receive the same wages as whites in industries employing almost all whites.

Table 10 gives data for 1937 on relative hourly earnings of wage earners in the North and the South for a group of industries employing at least 90 percent white workers. The diversity in relationship is large. The modal range (using intervals of 10 percentage points) is 120 to 129 with 19 cases. The next highest frequency, 14, is in the range 130-139, followed closely by 110-119 with 13 cases. Of the 74 cases, 46 lie between 110 and 139; 13 are 140 or more, and 15 are 109 or less.

Table 10

Average Hourly Earnings in the North as a Percentage of Those in the South, Selected Manufacturing Industries, by Size of City, 1937

	COLOR COM- POSI- TION*	SIZE OF CITY						
		UNDER 2,500	2,500- 4,999	5,000- 9,999	10,000- 24,999	25,000- 99,999	100,000- 499,999	500,000 & OVER
Woolen woven goods	I	115	127	161	106			
Hosiery	I	168	157	139	149	118		
Knitted underwear	I			130			135	
Work clothing	I	120	127	132	115	130	145	141
Shirts	I	125			121	196	127	141
Petroleum refining	II	95	114	128	122	120		
Glass products	I	125	112	101	105	85		
Electrical machinery	I					121		
Machinery n.e.c.		120	143	120	139	126	115	92
Machine shop products		102	160	170	133	117	125	112
Machine repair shops		100	90	91	97	124	98	116
Motor vehicle bodies					189	211		
Cotton thread & yarn	I				130	133		
Cotton woven goods	I	121	137	116	113	122	132	131
Cotton dyeing & finishing	I	134			134	129		
Rayon broad woven	I	116	105	105	114	108		

Source: Census of Manufactures, 1937, *Man-Hour Statistics for 105 Selected Industries*.

* I estimated the color compositions from Census data for 1940. Group I, 95-100 percent white; Group II, 90-95 percent white.

Table 11 provides somewhat similar data for 1947. However, the same industry categories or community size groups are not available. Consequently, the results are not strictly comparable. Moreover, data are used for two northern regions instead of for the North as a whole. All industries in Table 10 except glass are included in Table 11.

Table 11

Average Annual Earnings in Northeast and North Central Regions as a Percentage of Those in the South
Selected Manufacturing Industries, by Size of Community, 1947

	COLOR COM- POSITION ^a	SIZE OF COMMUNITY ^b			
		100,000- 249,999	250,000- 499,999	500,000- 999,999	1,000,000 & OVER
NORTHEAST					
Textile mills	I	110	113	126	113
Apparel	I	105	113	116	105
Printing & pub.	I	106	101	90	107
Leather	II	84	105	88	107
Electrical mach.	I	141	97	90	96
Machinery	II	114	113	109	107
Furniture	II	122	107	136	118
NORTH CENTRAL					
Textile mills	I	105	121	112	112
Apparel	I	105	117	127	114
Printing & pub.	I	111	117	104	118
Leather	II	104	114	98	110
Electrical mach.	I	135	123	95	99
Machinery	II	116	121	110	112
Furniture	II	126	125	126	123

Source: 1947 Census of Manufactures, State Reports.

^a See note to Table 10.

^b Community size is the population of a metropolitan area or of an industrial county. Detailed industry data were not available by cities.

In 1947 the modal group for the Northeast is 100-109 with 10 cases out of 28. The distribution is somewhat skewed — the next higher interval having 8 cases and the next lower only 4. (Fifteen of the cases fell in the interval 105-114.) The modal group for the North Central comparison is 110-119 with 12 cases. The next higher interval has 8 cases and the next lower only 4.

For the industries compared the differences between earnings in the North and the South seem to have narrowed somewhat. Relative earnings in the South may well have improved about 10 percent if we assume the same regional industrial distributions in 1947 as existed in 1937.

Our inference about the narrowing of the differential is not refuted by the changes in relative earnings of all workers in manufacturing in the North and the South between 1937 and 1947 (Table 12). The South's position relative to the other regions was appreciably improved (12 percent in one case to almost 20 percent in another, using 1937 as a base).¹⁸

¹⁸ The data on average earnings for all workers in manufacturing indicate more narrowing of the differential between the South and the rest of the nation than does the more detailed classification by industries in Tables 10 and 11. This could be due

Table 12

Average Earnings of Workers in Manufacturing in Three Regions as a Percentage of Earnings in the South, 1937 and 1947

	1937	1947
Northeast	134	118
North Central	155	125
West	146	127
South	100	100

Sources: 1937 Census of Manufactures, *Man-Hour Statistics for 105 Selected Industries*, Table 1-A, and 1947 Census of Manufactures, State Reports.

D THE PUZZLES

Little more can be added on the first puzzle — the apparent contradiction between the data on urban family incomes and on labor incomes or earnings. Stephen A. Packer presents data for other occupational groups (meat packing, fertilizer, school teachers, and bank tellers) indicating that southern white wage earners in communities of a given size receive 10 to 30 percent less than non-southern workers.

Lower earnings in every occupation or industry could be consistent with equivalent family incomes if one or more of three factors were important. 1) Southern nonfarm white families had either more workers per family or more male workers per family. The 1940 Census does not reveal that southern urban white families differ from the national average with respect to the number of workers per family.¹⁴ In southern urban and rural nonfarm communities females constituted as large a proportion of the total white labor force as in all United States urban and rural nonfarm areas respectively. These data are not restricted to individuals in families, however. The 1940 Census does provide data on families with a male head, wife present, which indicate that for the North Central and the South about equal percentages (about 13 percent) of the wives had wage or salary income.¹⁵ Thus it is unlikely that there are many, if any, more male workers

to any or all of the following factors: (1) larger relative rise in wages paid to non-whites than whites; (2) larger relative rise in wage rates in industries concentrated in the South; (3) change in the composition of industrial employment in the South with the higher wage rate industries expanding more in the South than elsewhere; (4) change in the sex and racial composition of southern manufacturing employment relative to the non-South.

¹⁴ Among southern urban white families 21 percent did not have any earners, 54 percent had one, 19 percent two, and 6 percent three or more. Of all U. S. families, 20 percent did not have any earners, 53 percent had one, 20 percent two, and 7 percent three or more (16th Census, *Population, Families, Family Wage or Salary Income in 1939*, Table 4).

¹⁵ *Ibid.*, Table 12.

among nonfarm white families in the South than in the rest of the nation. 2) Among southern white nonfarm families a larger proportion of workers were in the higher paying occupations or industries. In early 1940, 56.4 percent of white southern employed workers in nonfarm jobs were in the four occupational groups with the highest median earnings; in the nation as a whole, 55.1 percent.¹⁶ This difference could not improve the relative position of all southern white workers by more than 2 percent. 3) Southern white urban families have larger nonwage incomes. We have been unable to accept or reject this proposition. The Department of Commerce estimates of income payments by type do not indicate that property incomes are a more important source of income in the South than in the rest of the country. In fact, they indicate the contrary, but it is impossible to eliminate the effects of color composition of the population or to distribute property income between farm and nonfarm groups.

Can a favorable trend in income between 1935 and 1946 in the South be consistent with equivalent incomes of white nonfarm families in both 1935-36 and 1946? We have already discussed the movement of relative earnings in manufacturing; the other data to be considered are per capita income payments by regions.

Between 1935 and 1946 per capita income payments in the Southeast increased from 57 percent of the national average to 67 percent. In the South as a whole, including Texas, Oklahoma, Delaware, Maryland, and the District of Columbia as well as the Southeast the increase was from 60 to 70 percent.¹⁷ The sampling units in the Consumer Purchases Study were probably more representative of the Southeast than of the South as a whole. However, the change in per capita income payments relative to the national average was approximately the same and in what follows we shall consider the South as defined by the Census.

Is the change in the ratio of per capita income payments in the South to the national average between 1935 and 1946 consistent with the hypothesis that southern urban whites had the same incomes in communities of the same size as urban residents in the rest of the nation on both dates? The two sets of data may be consistent. Only 37 percent of the southern population is urban and 23.6 percent of the urban population is

¹⁶ 16th Census, *Population, III, The Labor Force*, Table 58. The median family incomes for each region classified by the occupational group of the family head are given in Table 8. These data tend to rule out the possibility that southern workers are unduly concentrated in the higher paying jobs within each occupational group.

¹⁷ If the South per capita income is expressed as a percentage of the non-South the increase was from 50.2 in 1935 to 62.5 in 1946.

nonwhite. Thus only 28.3 percent of the southern population is urban white.

The rural nonfarm population is 24 percent of the total southern population. In this resident group 19 percent are negro. The evidence fails to indicate that rural nonfarm whites improved their position relative to rural nonfarm residents in the rest of the country or relative to urban residents in the South. For village communities the 1935-36 study indicated that southern family incomes were higher than in any other region. In 1946 white family incomes in the South were lower than in the North Central states, the only region for which comparable data are available.

The remaining 53 percent of the southern population consists of two groups — farm families and negro urban and rural nonfarm families. Net farm income by states or regions is not known for 1935 or 1936. The percentage of the national farm cash income plus the value of home consumption originating in the South declined from 35 in 1935 to 30 in 1946. The percentage of national income originating in agriculture was 10.7 in 1935 and 10.3 in 1946. In the South the proportion of the population living on farms declined from about 44 to 35 percent; in the rest of the country, from 16.6 to 12.8 percent. Per capita income in agriculture, in both the South and the country as a whole, rose somewhat more than nonfarm income. The southern farm population declined 20 percent; in the rest of the country 25 percent. Per capita income in southern farm areas probably rose 25 percent more than nonfarm income; in the rest of the nation, the relative increase was 33 percent.

The 1940 nonfarm negro population was 13 percent of the total southern population. In 1935-36 southern nonfarm negro nonrelief families had a median income a third as large as whites. In 1946 the median negro family income was half that of whites. If neither the percentage of nonfarm negroes in the total population nor the relative position of negroes in the rest of the South has changed, the two sources of change in relative per capita incomes can be assessed if certain additional assumptions are made about the ratio of the per capita income of farm residents to the per capita income of white nonfarm residents. According to BAE estimates, the per capita income of the farm population in 1935 was about 43 percent of the per capita nonfarm income; in 1946, it was about 60 percent. The per capita income of the farm population in the South is about 70 percent of the national average per capita farm income; in the rest of the country, about 130 percent.

The 1946 Census study of incomes indicates that the incomes of white nonfarm families in the non-South are about 5 percent above the national

Table 13

Estimated Effects of Population Redistribution and Changes in Relative Incomes of Farm Residents and Nonfarm Negroes on Relative per Capita Incomes in the South and Non-South, 1935 and 1946

	Population Distribution (%)	Income		South as % of Non-South
		Relative	Total	
<i>1935</i>				
South, total	100		53.4	55.2
Farm	44	0.30	13.2	
Nonfarm negro	13	0.28	3.6	
Nonfarm white	43	0.85	36.6	
Non-South, total	100		96.8	
Farm	17	0.56	9.5	
Nonfarm	83	1.05	87.2	
<i>1946</i>				
South, total	100		64.0	63.1
Farm	36	0.42	15.1	
Nonfarm negro	13	0.42	5.5	
Nonfarm white	51	0.85	43.4	
Non-South, total	100		101.4	
Farm	13	0.77	10.0	
Nonfarm	87	1.05	91.4	

average of nonfarm family incomes, while the South average is about 15 percent below. The same relationships are assumed for 1935.

On the basis of the above assumptions, changes in the population distribution between farm and nonfarm and changes in the relative incomes of farmers and nonfarm negroes would have increased the South per capita income relative to the rest of the country from 55 to 63 percent. The actual change was from 50 to 62 percent (Table 13).

Thus much of the improvement in per capita income in the South can be explained without assuming any change in the position of nonfarm southern whites relative to similarly situated families in the rest of the country. However, if there were no errors in the data on per capita income by region, population distribution, and the incomes of groups other than nonfarm whites, the results are consistent with the statement that the per capita income of nonfarm whites in southern communities of similar size was about 10 percent smaller than in the rest of the country in 1935.

The puzzle is less intricate than was feared when the detailed work was started to determine the consistency of the per capita income data. On the whole, I am confident that these two sets of data tend to confirm the hypothesis that nonfarm whites living in communities of similar size have almost the same incomes. The regional difference may have been about 10 percent in 1935; even if this difference did exist, it was much smaller than generally assumed and probably disappeared by 1946.

COMMENT

Janet Murray and Margaret Brew

Family Economics Division, Bureau of Human Nutrition and Home Economics

A study of rural family living in two Mississippi counties in 1946 throws some light on the relationships of income received by rural farm and rural nonfarm families and by white and negro rural families (including single consumers). The two counties were selected because they were agricultural counties where industrialization had increased in recent years. Since Jones County had become more industrialized than Lee County, the data are of special interest in connection with Mr. Johnson's analysis because they show not only some of the differentials associated with occupation and race but also to some extent the effect of the growth of industry in agricultural communities.

The definition of a farm operator differed from that used by the 1945 Census of Agriculture. Families were interviewed on the farm schedule if they said they operated a farm in 1945, if they operated 3 or more acres, if they owned a cow, or if they raised farm produce worth \$250 or more. For purposes of analysis the farm families were divided into two groups: those with at least \$200 gross cash receipts from farming and those with less. In addition, rural nonfarm families living in either the open country or village areas were interviewed.

On three points made by Mr. Johnson the data from the Mississippi survey provide some evidence. The first relates to his comment on the lack of data on the income of farm operator families from sources other than the farm, which he believes may amount to as much as a third or half of farm income. The importance of nonfarm income, even for those in the first farm group, is shown in the accompanying table. Income from wages, salaries, entrepreneurial (other than farm), and such miscellaneous sources as dependency allotments, direct relief, and veterans' payments, pensions, and annuities, was from one to two times the farm income of white families in Lee and Jones Counties and from half to two-thirds the farm income of negro families. In other terms, this income amounted to 38 and 46 percent of total cash plus noncash income of white families in the two counties respectively, and 23 percent for the negro families in each county.

The second point relates to the differential between the incomes of white and negro families. That this differential is considerable is also

CASH AND NONCASH INCOME OF RURAL FARM AND RURAL NONFARM WHITE AND NEGRO FAMILIES
LEE AND JONES COUNTIES, MISSISSIPPI, 1945

	CASH PLUS NONCASH	All Sources	CASH INCOME FROM			NONCASH INCOME FROM		FAMILY SIZE
			Farm Operation (net)	Wages, Salaries, & Entrepre- neurial	All Other ^a	All Sources ^b	Home-pro- duced Food & Food Received as Gift or Pay ^c	
<i>\$200 or More Gross Cash Farm Income</i>								
LEE COUNTY								
All families	\$1,959	\$1,396	\$697	\$520	\$179	\$563	\$344	4.1
White	2,245	1,595	753	655	187	650	387	4.1
Negro	1,128	786	528	116	142	342	216	4.2
JONES COUNTY								
All families	2,109	1,394	459	661	274	715	411	4.8
White	2,366	1,563	484	768	311	803	452	4.6
Negro	947	554	337	159	58	393	251	5.8
<i>Less than \$200 Gross Cash Farm Income</i>								
LEE COUNTY								
All families	2,030	1,489	-101	1,350	240	541	254	3.5
White	2,221	1,638	-128	1,534	232	583	276	3.5
Negro	1,009	720	37	411	272	289	163	3.4
JONES COUNTY								
All families	2,367	1,809	-107	1,554	362	558	320	4.2
White	2,466	1,894	-113	1,651	356	572	322	4.2
Negro	1,244	872	-40	573	339	372	270	3.9
RURAL NONFARM								
LEE COUNTY								
All families	2,215	1,935	...	1,571	364	280	83	3.1
White	2,352	2,058	...	1,680	378	294	85	3.1
Negro	903	752	...	520	232	151	67	2.8
JONES COUNTY								
All families	2,377	2,152	...	1,752	400	225	52	2.8
White	2,525	2,283	...	1,870	413	242	52	2.8
Negro	1,509	1,384	...	1,068	324	125	52	3.0

NOTES TO TABLE

Unpublished data from a survey of rural family living in Lee and Jones Counties, Mississippi, 1945, conducted cooperatively by the Bureau of Human Nutrition and Home Economics and the Mississippi Agricultural Experiment Station. For additional material see *Rural Levels of Living in Lee and Jones Counties, Mississippi, 1945*, and *A Comparison of Two Methods of Data Collection*, by Barbara B. Reagan and Evelyn Grossman, U. S. Department of Agriculture, *Agriculture Information Bulletin 41*.

* Includes such items as dependency allotments, contributions, relief and veterans' payments, pensions, annuities, rent from real estate (net) including farm real estate, and miscellaneous.

† Home-produced food and fuel; clothing, furnishings, equipment, and fuel received as gift, pay, or relief; rental value of dwelling received as gift or pay; occupancy value of owned or rented farm dwelling and of owned nonfarm dwelling.

‡ Quantities reported by respondents valued at estimated prices farmers received for similar products; a constant set of prices was used for all families.

shown by the table — more strikingly so for money from wages, salaries, and entrepreneurial (other than farm) income than for income from farm or from other sources. The considerable differences in income between the white and negro families are thus undoubtedly related to types of work and to property ownership. Among the farm families selling at least \$200 worth of farm produce, the net income from farm operation was only about 40-50 percent larger for whites than negroes. (Most of the negroes were sharecroppers; most of the white operators were tenants or owners.)

For the farm families selling little or no farm produce, the income of white families in each county was more than twice that of negro families. Among the nonfarm families a differential also obtained.¹

The third point is implied by the data presented by Mr. Johnson showing that differences in the incomes of farm and nonfarm families in the South are exceptionally large. The Mississippi data cannot, of course, provide any evidence on regional comparisons, but they do indicate the range of differences in the incomes of farm and nonfarm families in the two counties. In each county the net money income of white rural nonfarm families was appreciably larger than that of the families in the first farm group. In Jones, the more industrialized county, the income of the rural nonfarm group was about 50 percent larger than that of the first farm group, whereas in Lee it was only about 30 percent larger. In Lee County the income of the white families in the second farm group differed by a relatively small amount from that of the families in the first farm group

¹The differential was considerably less in Jones than in Lee County. However, if the medians instead of the means had been used (there are two extreme cases in Jones County) the relationship between the negro and white families would have been more nearly the same for the two counties.

(although it was largely from nonfarm sources), whereas in Jones the income of the second farm group was about 20 percent larger than that of the first. For negro families, the farm-nonfarm differentials were even larger than for white families in Jones County, but in Lee the money income of the first farm group exceeded that of either the second farm group or the nonfarm group.

The differential between the farm and nonfarm families is, of course, considerably reduced when their cash plus noncash income is compared, since home-produced food is much more important to the former than to the latter. Nevertheless, the cash plus noncash income of all nonfarm families in both Lee and Jones Counties is 13 percent larger than for the first farm group.

In considering the material presented here it may be noted that the data for negro families and for noncash income are based upon smaller samples and are statistically less reliable than the data for cash income and for white families. However, even though the cases are few (particularly those showing the noncash income of negro families), the differences between the net cash income of negro and white families in each county, and the differences between the negro families in Lee and in Jones are statistically significant.

Herman P. Miller and Edwin D. Goldfield
Bureau of the Census

In view of the scanty data at his disposal Mr. Johnson has prepared an interesting case to support his conclusion that "nonfarm white families in southern communities have had average incomes approximately the same as families in communities of similar size in the rest of the nation". However, the Census Bureau Current Population Survey covering 1946 income does not entirely support this conclusion.

**MEDIAN TOTAL MONEY INCOME OF FAMILIES HAVING A WHITE MALE HEAD
25-64 YEARS OLD, BY REGION AND SIZE OF PLACE, UNITED STATES, 1946**

Size of Urban Place of Residence in 1940*	Northeast	North Central	West	South
2,500- 9,999	\$3,500	\$3,099	\$3,236	\$2,963
10,000-249,999	3,500	3,328	3,342	3,153
250,000-999,999	3,337	3,436	4,032	3,628

* Cities of 1,000,000 or more inhabitants are excluded since there are none in the South.

The median incomes of families in the same city-size groups in the South and North Central regions seem to differ little. However, in the West families in each city-size group had higher average incomes than in the South. In the Northeast families in the smaller cities (under 250,000) had higher incomes whereas those in the larger cities (250,000 or more) had somewhat lower incomes than families in the South. These figures are, of course, subject to sampling variation; however, in general they support the conclusion that families in smaller cities in the South tend to have lower incomes than families in the same city-size groups in other regions, whereas families in the larger southern cities have about the same or higher incomes than families in the same city-size groups in other regions.

This conclusion is not inconsistent with other data presented in Mr. Johnson's paper. For example, on the basis of wage or salary data obtained in the 1940 Census, Mr. Johnson concludes that there was probably a difference of 8 to 10 percent between the South and the North Central states and that "for the higher paying occupations, white family incomes in the South are generally within 10 percent of those in other regions. For operatives, domestic service workers, service workers, and laborers, including farm . . . the differences between the South and other regions are about 20 percent". Mr. Johnson's standardization procedure for size of place probably understates the true difference at least in the case of the South and North Central comparison, since he adjusted medians instead of arithmetic means. Even so, the differences that remain are within the 10 to 30 percent range Mr. Johnson says is the difference between the wage rates paid to southern white wage earners and those in the rest of the country. These facts suggest that the first puzzle presented by Mr. Johnson, the apparent contradiction that white nonfarm southern families have the same average incomes as similar families in the rest of the country when wage rates in the South are considerably lower than in the rest of the country, may be due to a lack of adequate data.

It would be interesting to find out just what type of an adjustment Mr. Johnson had in mind when he said: "In general, nonwhites seem to have adjusted less well than whites to the regional influences on supply and demand for their services." Among other things he might have meant that within each region and particularly the South, nonwhites have not been sensitive to shifts in occupational demands or that southern whites in low paying occupations have been more responsive than nonwhites to better economic opportunities in other regions. If he meant the latter, it should be noted that the migration rate among nonwhites in the South has been far higher than that of whites during the last decade. As a matter of fact, a case can probably be made for the thesis that nonwhites in the South

have been more sensitive than whites to regional influences on supply and demand for their services. For example, white and nonwhite southern farmers have average incomes far below those of the nonfarm population in the South as well as below those of farmers in other regions. Nevertheless, between 1940 and 1947 the number of white farmers in the South decreased only 8 percent whereas the number of nonwhite farmers decreased 37 percent.

REPLY

The data presented by Miller and Goldfield add considerably to our knowledge of the level of family incomes as it is affected by region and community size. Their conclusions with respect to the West are consistent with my own speculations in note 6. The difference between incomes in the Northeast and in the South for towns of 2,500-9,999 may well reflect the fact that the residents of such towns in the Northeast earn their incomes in a metropolitan center while most such towns in the South are separate entities. As shown in my paper, more than half the rural nonfarm population in the Northeast and less than a quarter in the South were in metropolitan counties. A similar relationship probably holds for towns of 2,500-9,999.

Some preliminary data have been released from the 1950 Census for incomes in 1949 that are not inconsistent with the 1946 comparisons of incomes for urban white families in my paper. From these data I have estimated the median incomes of urban white families in 1949 — \$3,500 in the Northeast, \$3,650 in the North Central states, \$3,550 in the West, and \$3,350 in the South.¹

If the same adjustments are made for the different distribution of population among urban communities as were made for 1946, the median incomes in the South would be the same as in the Northeast, and \$100 to \$200 below the West and North Central.

An interesting addition to the data on the incomes of families in Lee and Jones Counties, Mississippi, is provided by a somewhat different classification of families by Dorothy Dickins. She classified families by source of income groups defined as follows: (1) farm, more than \$100 gross cash farm income and less than \$50 from off-farm wage work, (2) part-farm, more than \$100 gross cash farm income and more than \$50 from off-farm wage work, (3) off-farm, less than \$100 gross cash farm income and more than \$50 from off-farm wage work, and (4) other, less

¹ Estimated from Bureau of the Census, Employment and Income in the United States, by Regions, 1950, Series PC-7, No. 2, Table 9. Median incomes were given in the source for urban and rural nonfarm families. The median income of white families in the South was calculated to be \$3,025. The medians for the Northeast, North Central, and West — \$3,391, \$3,407, and \$3,499 respectively — were adjusted to achieve an estimate of the medians for white urban families by adding to the above medians the actual differences between the median incomes of white urban families and of all urban and rural nonfarm families in each region in 1946. A similar adjustment was made for the South except that the difference between the medians for white urban and white urban and rural nonfarm families for 1946 was used.

than \$100 gross cash farm income and less than \$50 from off-farm wage work. In Jones County only 15 percent of the families were in the farm group, while in Lee County 37 percent were. In both counties 7 percent were in the other group, and the remainder were divided about equally between off-farm and part-farm.

NET MONEY INCOME PLUS THE VALUE OF HOME PRODUCED FOOD

<i>County</i>	<i>Farm</i>	<i>Off-farm</i>	<i>Part-farm</i>	<i>Other</i>
Jones	\$1,210	\$2,378	\$2,120	\$981
Lee	1,260	2,144	2,378	835

The farm group included more negroes than the off-farm group (about 23 versus 8 percent) but about the same as the part-farm group.² Thus for the families for which agriculture remained the main source of income, the level of incomes was much lower than for the families dependent in large part upon off-farm wage work. We do not know why some farm families retained agriculture as the (almost) sole source of incomes. Possibly a selective process reflecting ability to produce was operative; possibly also these families did not live where they could easily travel daily to nonfarm work.

² Dorothy Dickins, *The Rural Family and its Source of Income*, Mississippi State College, *Bulletin 481*, 1951.