Economic Changes in the South Central Region of the United States

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The economy of the state of Oklahoma has not grown as rapidly as the economy of some other states. To study economic growth in Oklahoma, cognizance must be taken of the interdependence of the economy of Oklahoma with those of other states. Economic changes in Oklahoma and adjoining states have been reviewed. Past developments have been examined in a regional perspective. The study has provided implications for future changes, which will aid in planning for economic development.

Rather than define a specific measure of economic growth, several economic variables will be examined. These will be called growth indicators. They are: (1) changes in population, (2) changes in employment and (3) changes in income. The analysis of these indicators will provide a picture of the economic change in the region, which can be used to assess economic growth in the region.

Designation of the Region

The South Central Region includes Arkansas, Colorado, Kansas, Louisiana, Missouri, New Mexico, Oklahoma and Texas (Figure 1). Except for Louisiana, these states have a contiguous boundary with Oklahoma and were grouped as a region because of their proximity.
The sphere of influence of the Oklahoma economy on the national economy does not stop at the boundaries of these eight states. This is the region where the immediate impact of changes in the Oklahoma economy will be felt and in turn where changes will have the greatest effect on the Oklahoma economy.
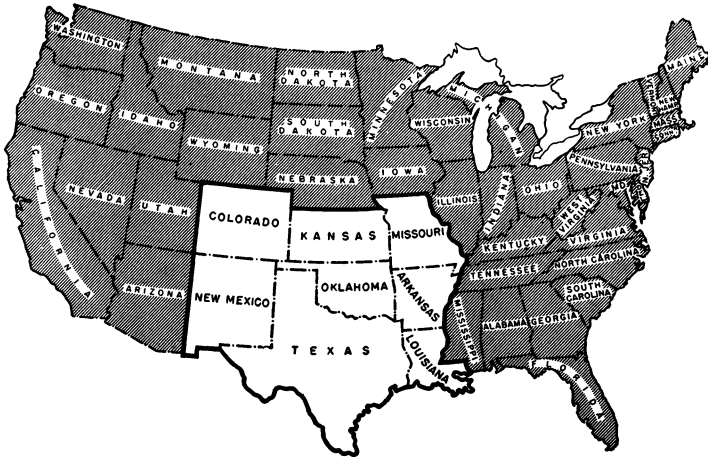
Changes in Population

Changes in Total Population

Net changes in total population and the average annual rates of change from 1950 to 1964 for the South Central Region are listed in

Figure 1:   South Central Region.

Table 1. There are large differences in the annual rates of change among the states. The lack of homogeneity is indicated by the co-efficient of variation which is 64 percent. The annual rate for the region as a whole is approximately equal to the average for the United States. The average for the region is computed from a composite for all the states in the region and the United States average for all states. The two figures are not necessarily indicative of any one state.

All eight states had an increase in total population from 1950 to 1964. Arkansas, Kansas, Missouri and Oklahoma experienced annual growth rates below the average for the region. The rate for Kansas is close to the regional average, but the other three states are considerably below the regional average. Colorado, Louisiana, New Mexico and Texas all had a growth rate above the national average. Colorado and New Mexico had annual rates substantially above both the regional and national average.

Total migration for the region for the 14 year period is also given in Table 1. Migration is the change in population less the natural in-crease. The region as a whole lost 2.2 percent of its population due to outmigration. The rates of migration range from —20.4 percent to +17.1 percent, indicating again the heterogeneity within the region.   All but three of the states experienced an out-migration of people during the period. The states with an in-migration are Colorado, New Mexico and Texas. These three states all had an annual rate of increase in

Table 1. Total Population for 1950 and 1964, Changes in Total Population and Total Migration from 1950 to 1964.

	Total Population				Total Migration	
	April 1, 1950	July 1, 1964	Net Change	Average Annual Rate[2]	Net Migration	Rate[3]
	(1000)	(1000)	(1000)	(percent)	(1000)	(percent)
Arkansas	1,910	1,939	29	0.1	— 389	—20.4
Colorado	1,325	1,936	611	2.7	226	17.1
Kan˜as	1,905	2,227	322	1.1	— 109	— 5.7
Louisiana	2,684	3,487	803	1.9	— 69	— 2.6
Missouri	3,955	4,473	518	0.9	— 177	— 4.5
New Mexico	681	1,013	332	2.8	13	1.9
Oklahoma	2,233	2,461	228	0.7	— 203	— 9.1
Texas	7,711	10,391	2,680	2.2	215	2.8
Region	22,404	27,927	5,523	1.6	— 493	— 2.2
United States[1]	151,326	191,371	40,045	1.7	4,172	2.8
Coefficient of Variation				64		

[1] Includes Alaska and Hawaii. In succeeding tables, the total for the United States includes Alaska and Hawaii unless otherwise noted.

[2] $P_{t+k} = P_t e^{kr}$ where r is the average annual rate of change for k years beginning with year t and P denotes population.

[3] Net total migration as a percent of total population in 1950.

Source: U.S. Bureau of the Census, "Population Estimates," Current Population Reports, Series P-25, No. 304, April 8, 1962, pp. 10-12 and No. 324, January 20, 1966, pp. 10, 11.

total popula'ion above the United States average. To attract migrants, income and employment opportunities must have been greater in these states than in the other five states.

Population Changes from 1950-60 vs. Changes from 1960-64

Not only are there differences among the states, there have been differences in population growth over the 14 years. The 14 years are divided into two periods—one from 1950 to 1960 and the other from 1960 to 1964. Net changes in total population and total migration for the two periods are given in Table 2. Some of the trends just noted have changed since 1960. The trends of the decade from 1950 to 1960 have the dominant effect over the whole 14 year period. So, the changes since 1960 were not apparent in the previous data.

The most notable change is the increased population of Arkansas since 1960. The increase was due in part to an in-migration of people into the state, reversing the trend from 1950 to 1960. Likewise, Oklahoma reversed the trend from 1950 to 1960, experiencing an in-migration from 1960 to 1964. The net change in population for Oklahoma was greater from 1960 to 1964 than for the preceding decade. There are two major reasons for the change in these two states. One is the

Table 2. Net Changes in Total Population and Total Migration for Selected Periods: April 1, 1950 to April 1, 1960 and April 1, 1960 to July 1, 1964.

	Net Change in Total Population		Net Total Migration	
	1950 to 1960	1960 to 1964	1950 to 1960	1960 to 1964
	(1000)	(1000)	(1000)	(1000)
Arkansas	— 123	152	— 433	44
Colorado	429	182	164	62
Kansas	273	48	— 44	— 65
Louisiana	574	230	— 49	— 20
Missouri	365	153	— 134	— 43
New Mexico	270	62	52	— 39
Oklahoma	95	133	— 219	16
Texas	1,868	811	121	94
Region	3,751	1,771	— 542	49
U. S.	27,997	12,048	2,642	1,530

Source: Same as for Table 1.

growth in nonagricultural employment opportunities and the other is a slowing down of the off-farm migration as the rate of loss of agricultural employment declined.

Except for New Mexico, trends for the remaining five states are roughly the same for both periods. Some have grown at a faster rate, but no definite pattern is distinguishable. New Mexico has had an out-migration of people since 1960 as contrasted with a gain from migration during the fifties. A decline in the growth rate of non-agricultural employment from 1960 to 1964 was accompanied by an increased loss of agricultural employment. The stimulation of the economy by the large government expenditures in the 1950's began to level out around 1960, and the economy settled down to a steady but lower rate of growth.

Rural to Urban Movement

Most of the population growth in the South Central Region occurred in the large urban areas. Table 3 shows the change in population and migration from 1950 to 1960 for the SMSA's in the eight states.[1] The net changes in Table 3 can be compared with those in Table 2. The rates of change in total population and migration for the SMSA's are substantially larger than for the states as a whole. The SMSA's appear

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[1] SMSA stands for Standard Metropolitan Statistical Areas as defined by the Bureau of the Census.

Table 3.   Changes in Total Population and Total Migration from 1950 to 1960 for State and SMSA's within States.

	Total Population			Total Migration		
	SMSA's[1]		State	SMSA's		State
	Net Change	Rate[2]	Rate[2]	Net Migration	Rate[3]	Rate[3]
	(1000)	(percent)		(1000)	(percent)	
Arkansas	49	18.7	— 6.4	— 4	— 1.5	—22.7
Colorado	415	53.4	32.4	240	30.9	12.4
Kansas	157	47.9	14.3	63	19.2	— 2.3
Louisiana	403	32.9	21.4	108	8.8	— 1.8
Mi·souri	581	21.2	9.2	118	4.3	— 3.4
New Mexico	117	80.0	39.7	59	40.3	7.6
Oklahoma	246	31.7	4.3	89	11.5	— 9.8
Texas	1,804	42.0	24.2	646	15.0	1.6
Region	3,771	35.8	16.7	1,319	12.5	— 2.4
U. S.	22,755	27.5	18.5	8,126	9.8	1.7

[1] The net changes and the rates were computed from the sum of the figures for all the SMSA's in a state and in the U.S.
[2] Net change as a percent of total population in 1950.
[3] Net migration as a percent of total population in 1950.
Source: U.S. Bureau of the Census, "Components of Population Change, 1950 to 1960, for Counties, Standard Metropolitan Statistical Areas, State Economic Areas, and Economic Subregions," Current Population Reports, Series P-23. No. 7, November 1962, pp. 60-62.

to account for the major portion of growth in the states, which includes migrants from both outside and inside the state. People moving from farms to the cities account for a large part of the growth of the urban centers.

The SMSA's in Arkansas had an increase in population, while the state as a whole recorded a loss in population. Both Missouri and Oklahoma with a low rate of change for the state had a much larger increase in population in the SMSA's in the state. All the states, except Arkansas, experienced an increase in population in the SMSA's due to migration, while only three states as a whole had an in-migration of people. The other four states lost more people than the cities in the states gained. The cities may have lost some of their population, but they were replaced by rural migrants. The conclusion is that the urban areas of a state have grown faster than the state as a whole. In the case of Arkansas, the conclusion is that the urban areas had a samller loss from migration than the whole state.

A breakdown of the population changes by place of residence is given in Table 4. The greatest adjustment was in the rural sector. There was a decline in rural farm population in each state, with the annual rates ranging from —3.2 for Kansas to —8.9 for Louisiana. The states with the largest rate of decline were those with the lowest level of in-

**Table 4.   Change in Total Population from 1950 to 1960 by Place of
            Residence.**

	Total Population					
	Rural Farm		Rural Nonfarm		Urban	
	Net Change	Average Annual Rate	Net Change	Average Annual Rate	Net Change	Average Annual Rate
	(1000)	(percent)	(1000)	(percent)	(1000)	(percent)
Arkansas	— 470	—8.8	212	3.7	134	1.9
Colorado	— 70	—4.4	38	1.2	462	4.4
Kansas	— 123	—3.2	61	1.2	336	3.0
Louisiana	— 334	—8.9	319	4.0	589	3.4
Missouri	— 322	—4.7	244	3.2	445	1.7
New Mexico	— 74	—8.2	61	2.6	283	6.0
Oklahoma	— 294	—7.6	63	1.1	326	2.5
Texas	— 598	—6.3	118	.7	2,350	4.0
Region	—2,285	—6.4	1,116	2.1	4,925	3.3
U. S.	—9,603	—5.4	9,166	2.6	28,437	2.5
Coefficient of Variation	— 34			60		43

Source: U.S. Bureau of the Census, *Statistical Abstract of the United States, 1965,* 86th Annual
          Edition, Washington, D.C., p. 16.

come per farm worker in 1950. The large rate of decline for New Mexico
is due to the rapid growth in the nonfarm sector of the economy. The
average decline for the region is greater than the average for the United
States, so the region has experienced a more rapid rate of adjustment
than some other regions in the country.

Each state had an increase in the rural nonfarm population. The
range in values of the growth rates is not as large as that for the rural
sector. The average for the region is very close to that for the United
States. At least part of the rural nonfarm population came from a trans-
fer of farmers from the rural farm sector, but this sector did not absorb
all the loss from the rural farm sector.

There was an increase in the urban population of each state, and
some of this increase came from the rural farm sector, but not all. The
states with the largest rate of urban growth are not necessarily those
with the largest decline in rural population, for example, Arkansas. The
urban areas of this state did not absorb all the rural migrants, which
accounts for the out-migration from the state. Again, the annual rates
vary considerably among the states. The region as a whole increased
faster than the national average.

Differences Among the Growth Rates

In Table 5, the states have been divided into three categories de-
noting slow, medium and fast growth. The three fast growth states re-

ceived a boost to their economy from increased federal expenditures in
the state. Colorado and New Mexico received another impetus from the
natural tourist attractions which are visited year around. In addition to
increased federal spendings in the state, the Texas economy has received
a boost from several other sources. One of these has been the growth
along the Gulf coast from increased recreation use and the attraction
of retired families. Another source has been the expansion of industries
which use the by-products of the petroleum industry. Increased shipping
has also boosted the economy. As industries expand and more people
move into the state, the demand for ancillary goods and services increases.
In this respect, economic growth is self perpetuating.

The lower rates of increase in the medium growth states are due in
part to the greater agricultural adjustment. The adjustments that took
place from 1950 to 1960 are reflected in the changes in the percents in
Table 6. The states with the largest rural farm population had a greater

**Table 5. States Ranked by Growth Categories According to Changes in
Total Population.**

	Slow Growth		Medium Growth		Fast Growth
State	Average Annual Rate	State	Average Annual Rate	State	Average Annual Rate
Arkansas	0.1	Kansas	1.1	Colorado	2.7
Missouri	0.9	Louisiana	1.9	New Mexico	2.8
Oklahoma	0.7			Texas	2.2

Source: Table 1.

**Table 6. Percent of Total Population by Place of Residence for 1950
and 1960.**

	Rural Farm		Rural Nonfarm		Total Rural		Urban	
	1950	1960	1950	1960	1950	1960	1950	1960
				(percent)				
Arkansas	42	19	25	38	67	57	33	43
Colorado	15	7	22	19	37	26	63	74
Kansas	23	15	25	24	48	39	52	61
Louisiana	21	7	24	30	45	37	55	63
Missouri	22	13	17	21	39	34	61	66
New Mexico	19	6	31	28	50	34	50	66
Oklahoma	25	11	24	26	49	37	51	63
Texas	17	7	20	18	37	25	63	75
Region	22	10	22	23	44	33	56	67
U. S.	15	8	21	22	36	30	64	70

Source: Same as for Table 4.

demand on their urban areas to provide employment for those migrating from the farms. The medium growth states, Kansas and Louisiana, had a higher percent of rural farm population in 1950 than the fast growth states. As jobs became available in the urban areas, many were taken by people moving from the rural areas within the state. New jobs were not sufficient to absorb all the rural migrants as noted by the negative migration figures in Table 1. The insufficient growth in employment resulted from a lack of expansion of industry and related services. Kansas received no external impetus to the extent of the fast growth states. Louisiana benefitted from the increase in economic activity along the Gulf coast and an expansion in industries using petroleum by-products.

The other three states have grown very slowly. The trends, how-ever, appear to be changing in Arkansas and Oklahoma. As shown in Table 6, the rural farm population in Arkansas dropped from 42 to 19 percent of total population. The growth in Arkansas in recent years has been due to the attraction of industry seeking a cheap labor supply. State development agencies have done much to speed industrial growth. The increased growth in the nonagricultural sector in recent years and the slowing down of the rural to urban migration accounts for the reversal of the changes in population since 1960.

Agricultural population adjustment has not been as great in Okla-homa as in Arkansas. The petroleum industry has provided some impetus for growth as have military expenditures by the federal government. This growth was not sufficient though to prevent an out-migration of people in the decade of the 1950's. The growth in the last few years has been due to the expansion of industry and related services. A part of this growth is due to the expansion of petroleum by-products industries.

Missouri also had grown very slowly since 1950. It had a net de-crease in population due to migration for both periods, 1950 to 1960 and 1960 to 1964. The Missouri economy seems to have more or less stabilized over the last decade and a half. The economy has a much larger industrial base than the other states. There has been a significant growth in manufacturing in the state, but it was not sufficient to create jobs for all the rural migrants. There have been no external forces to spur growth as in the fast growth states.

Changes in Employment

Changes in Total Employment

Total employment figures for the South Central Region and for the United States are given in Table 7. There are large differences among

the annual rates of change and between the two periods, 1950 to 1960 and 1960 to 1964. Arkansas is the only state that had a decline in employment, and this occurred between 1950 and 1960. Employment increased in the latter period. Oklahoma had a higher rate of increase in the second period. The increase in employment since 1960 for these two states account for the increase in population from 1960 to 1964 due to in-migration. The rate of increase in employment for New Mexico declined in the latter period to less than half the previous annual rate. This slowing down of the increase in employment accounts for the out-migration from the state since 1960.

The range in rates of change has narrowed considerably in the last four years. The coefficient of variation in the earlier period was nearly three times the coefficient for the latter period. The decrease in variation indicates that differences among the states are narrowing. For the whole region, the annual rate of increase was approximately the same as the United States average for both periods. The region has grown at about the average rate for the nation, but this growth has not been

Table 7. Total Employment and Net Changes in Total Employment for Selected Periods: 1950 to 1960 and 1960 to 1964.

	Total Employment			Net Change		Average Annual Rate[2]	
				1950 to 1960	1960 to 1964	1950 to 1960	1960 to 1964
	1950	1960	1964				
	(1000)	(1000)	(1000)	(1000)	(1000)	(percent)	
Arkansas	654	577	595	— 77	18	—1.3	0.8
Colorado	450	582	630	132	48	2.6	2.0
Kansas	686	721	727	35	6	0.5	0.2
Louisiana	849	941	990	92	49	1.0	1.3
Missouri	1,582	1,622	1,657	40	35	0.3	0.6
New Mexico	211	276	289	65	13	2.7	1.2
Oklahoma	732	738	754	6	16	0.1	0.5
Texas	2,504	2,955	3,144	451	189	1.7	1.6
Region	7,668	8,412	8,786	744	374	0.9	1.1
U. S.[1]	55,148	61,182	63,848	6,034	2,666	1.0	1.1
Coefficient of Variation						142	59

[1] Does not include Alaska and Hawaii.

[2] $E_{t+k} = E_t e^{kr}$ where r is the annual rate of change for k years beginning with year t and E denotes population.

Source: U.S. Department of Agriculture, "Farm Employment, Family and Hired Workers, Annual Averages: States 1950-59, United States, 1910-59," Crop Reporting Board, SRS, Statistical Bulletin No. 334, p. 8.
U.S. Department of Agriculture, "Farm Labor," Crop Reporting Board, SRS, March 11, 1963, p. 5 and March 10, 1965, p. 4.
U.S. Bureau of Labor Statistics, "Employment and Earnings Statistics for the United States 1909-63," Bulletin No. 1312-1, Issued 1964.
U.S. Bureau of Labor Statistics, "Employment and Earnings Statistics for States and Areas 1939-64," Bulletin No. 1370-2, Issued June 1965.

shared to the same extent by all the states in the region. Some have grown considerably faster, others much slower.

The states have been separated into slow, medium and fast growth categories in Table 8 on the basis of the annual rates for 1950 to 1960 and 1960 to 1964. Except for Kansas, the annual rates increased for the slow growth and medium growth categories and decreased for the fast growth category. The rates for the fast growth category are still larger than for the other categories. The exception is Louisiana, which had a rate in the latter period slightly larger than New Mexico.

The slower growing states appear to be catching up to some extent with the more rapidly expanding states. This conclusion must be ec-cepted with some degree of caution, however. The annual rates of change depend heavily on the employment level in the state at the be-ginning of the period. The lower the total employment initially the greater the rate will appear for a given change in employment. However, the above conclusion is still valid. Even though the variation among the states is decreasing, it is unlikely all the states in the region will reach the same rate of increase.

Changes in Agricultural vs. Nonagricultural Employment

The nature of the change in total employment can be seen better by contrasting changes in agricultural and nonagricultural employment. As shown in Table 9, agricultural employment declined in all the states from 1950 to 1964. Except for Arkansas and Oklahoma, all the annual rates of decline from 1950 to 1960 are roughly the same and very close to the United States average. The higher rates for Arkansas and Okla-homa are a result of a higher percent of rural farm population in the states in 1950. From 1960 to 1964, there is more variation among the rates of change. Arkansas and New Mexico had the highest rates, but Oklahoma still had a relatively high rate. The high rate of decline in Arkansas was due to a relatively slow adjustment in the agricultural

Table 8. States Ranked by Growth Categories According to Changes in Total Employment.

State	Slow Growth Average Annual Rate 1950-60	1960-64	State	Medium Growth Average Annual Rate 1950-60	1960-64	State	Fast Growth Average Annual Rate 1950-60	1960-64
Arkansas	—1.3	0.8	Kansas	0.5	0.2	Colorado	2.0	2.0
Missouri	0.3	0.6	Louisiana	1.0	1.3	New Mexico	2.7	1.2
Oklahoma	0.1	0.5				Texas	1.7	1.6

Source: Table 7.

Table 9.   Net Changes in Agricultural and Nonagricultural Employment from Selected Periods: 1950 to 1960 and 1960 to 1964.

	Nonagriculture Employment				Agriculture Employment			
	Net Change		Average Annual Rate		Net Change		Average Annual Rate	
	1950 to 1960	1960 to 1964	1950 to 1960	1960 to 1964	1950 to 1960	1960 to 1964	1950 to 1960	1960 to 1964
	(1000)	(1000)	(percent)		(1000)	(1000)	(percent)	
Arkansas	69	62	2.1	3.9	— 146	— 44	—5.3	—5.9
Colorado	157	58	3.6	2.7	— 25	— 10	—3.2	—4.0
Kansas	95	23	1.9	1.0	— 60	— 17	—3.2	—2.8
Louisiana	154	67	2.2	2.0	— 62	— 18	—3.4	—3.2
Missouri	161	63	1.3	1.1	— 121	— 28	—3.6	—2.7
New Mexico	84	21	4.4	2.1	— 19	— 8	—3.9	—5.6
Oklahoma	105	43	2.0	1.8	— 99	— 27	—4.9	—4.8
Texas	611	258	2.8	2.4	— 160	— 69	—3.2	—4.5
Region	1,436	595	2.3	2.0	— 692	—221	—3.8	—4.0
U. S.[1]	8,903	3,613	1.8	1.6	—2,869	—947	—3.4	—3.6
Coefficient of Variation			40	44			— 21	— 29

[1] Does not include Alaska and Hawaii.
Source: Same as for Table 7.

sector in the past and the availability of nonfarm jobs. The large relative decline in agriculture in New Mexico was due, in part at least, to the relative large increase in nonagricultural employment in the previous decade. There was apparently some lag in the response of rural migrants to increased opportunities in the urban centers.

Nonagricultural employment increased in all the states in the region from 1950 to 1964. The variability in growth rates among the states is greater than in the agricultural sector. From 1950 to 1960, Colorado and New Mexico had the greatest annual growth rate followed by Texas. Missouri had the lowest rate of increase and the other states were roughly the same. From 1960 to 1964, Arkansas had the highest annual rate of increase, which accounts for the population growth in the state during this period. Colorado was second with a lower rate than in the previous period, and Kansas and Missouri were at the bottom of the list with annual rates of approximately one percent. Oklahoma had a slightly smaller rate than in the earlier period.

In most cases, the rate of decline in agricultural employment has been greater than the rate of increase in nonagricultural employment. The exceptions were in Colorado and New Mexico from 1950 to 1960. The difference in the rates in the two sectors accounts for the out-migration shown in Table 2. In general, the loss in agricultural employment is not being compensated for by a gain in nonfarm employment.

Changes in Agricultural Employment by Place of Residence

Table 10 gives a breakdown of agricultural employment by the place of residence of the employee.[2] All the states had fairly large annual rates of decline in the rural farm sector. These rates exceed the annual rates of decline in total agricultural employment in Table 9. More people are moving off the farm than are leaving agriculture. Many of the people that leave rural farm employment maintain their residence in the rural farm areas and seek full or part-time employment elsewhere. This fact is further substantiated by the greater rates of decline in total employment than in total population in the rural farm sector. It is also indicated by the increase in rural nonfarm population. Improved transportation and communication facilities have made possible greater distances between one's place of residence and place of employment.

Both the rural nonfarm and the urban sectors had an increase or modest decrease in agricultural employment. In absolute terms the changes are small because the great majority of agricultural employees maintain their residence in the rural farm sector. Most of the increase in the rural nonfarm sector probably resulted from a move from the rural farm sector. The increase in urban residence of agricultural employees has important implications for future adjustments in a predominately agricultural area. The incomes of these agricultural employees are spent in the urban centers, and thus capital is transferred from the rural to the urban sector. As a result, farmers find themselves paying more for such facilities as schools and hospitals, which places a tremendous burden on the farmers.

Employment by Major Sectors

The net changes in employment by sectors from 1960 to 1964 are given in Table 11. The average annual rates are plotted in Figure 2. As noted before, agriculture employment decreased in all states in the region as did mining employment. Colorado, New Mexico and Oklahoma had rather large annual rates of decline. However, the absolute changes in mining employment were small for all the states. Louisiana was the only state with an increase in employment in the crude petroleum and natural gas sector. These three sectors, agriculture, mining and crude petroleum and natural gas, include what are referred to as the natural resource oriented industries. For the region there was a decline in employment in all three sectors.

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[2] The agricultural employment figures given in Table 10 are not the same as those in Table 9. Census data is used in Table 10. The difference between the two sets of data is explained in U.S. Department of Agriculture, "Farm Employment, Monthly by States 1950-57, United States by Years, 1910-57, By Months, 1940-57," Crop Reporting Board, AMS, Statistical Bulletin No. 236, September 1958, pp. 12-13.

Table 10. Net Changes in Agricultural Employment by Place of Residence from 1950 to 1960.

	Rural Farm				Rural Nonfarm				Urban			
	1950	1960	Net Change	Average Annual Rate	1950	1960	Net Change	Average Annual Rate	1950	1960	Net Change	Average Annual Rate
	(1000)	(1000)	(1000)	(percent)	(1000)	(1000)	(1000)	(%)	(1000)	(1000)	(1000)	(%)
Arkansas	187.7	50.9	— 136.8	—13.1	18.3	22.6	4.3	2.1	4.1	3.8	— 0.3	— 0.8
Colorado	56.2	30.9	— 25.3	— 6.0	9.8	8.9	—0.9	—1.0	4.2	4.3	0.1	0.2
Kansas	140.1	81.1	— 59.0	— 5.5	14.9	14.9	0	0	5.4	5.5	0.1	0.2
Louisiana	122.6	35.4	— 87.2	—12.3	20.0	22.3	2.3	1.1	4.3	3.9	— 0.4	— 1.0
Missouri	235.4	115.2	— 120.2	— 7.2	19.9	19.7	—0.2	—0.1	6.3	5.9	— 0.4	— 0.7
New Mexico	27.9	11.3	— 16.6	— 9.0	6.4	5.5	—0.9	—1.5	2.7	2.2	— 0.5	— 2.1
Oklahoma	132.0	49.4	— 82.6	— 9.9	14.4	14.9	0.5	0.3	5.3	5.6	0.3	0.6
Texas	326.8	153.8	173.0	— 7.5	64.5	64.9	0.4	0.1	35.7	41.3	5.6	1.5
Region	1,228.7	528.0	700.7	— 8.4	168.4	173.8	5.4	0.3	68.0	72.5	4.5	0.6
U. S.[1]	5,643.2	2,759.2	— 2,884.0	— 7.2	832.4	834.9	2.5	[2]	362.0	342.5	—19.5	— 0.5
Coefficient of Variation				— 32				869				—427

[1] Does not include Alaska and Hawaii.
[2] Less than 0.05.

Source: U.S. Bureau of the Census, *Census of Population*, "Detailed Characteristics," 1950 and 1960, Data is from books for individual states, 1950 Data from Table 75, 1960 Data from Table 121.
U.S. Bureau of the Census, *Census of Population 1960*, "General Social and Economic Characteristics," U.S. Summary, Vol. II, Part I, Table 87.
U.S. Bureau of the Census, *Census of Population 1950*, "Characteristics of the Population," U.S. Summary, Vol. II, Part I, Table 53.

Table 11. Net Changes in Employment by Sectors from 1960 to 1964.

	Ark.	Col.	Kan.	La.	Mo.	N.M.	Okla	Tex.	Region	U.S.
	(1000)	(1000)	(1000)	(1000)	(1000)	(1000)	(1000)	(1000)	(1000)	(1000)
Agriculture	—44.0	—10.0	—17.0	—18.0	—28.0	— 8.0	—27.0	— 69.0	—221.0	— 947.0
Mining	0	— 1.9	— 0.2	— 0.4	— 0.7	— 2.0	— 0.6	— 0.4	— 6.2	— 34.0
Crude Petroleum and Natural Gas	— 0.7	— 1.7	— 2.0	2.6	—	— 0.9	— 2.2	— 10.2	— 15.1	— 48.0
Contract Construction	6.6	4.3	— 3.1	12.1	7.6	0.7	1.4	18.5	48.1	155.0
Manufacturing	23.4	2.8	3.4	11.7	8.4	0.9	10.0	48.4	109.0	434.0
Wholesale and Retail Trade	10.8	11.5	4.8	6.7	8.3	4.4	6.4	52.0	104.9	738.0
Finance, Insurance and Real Estate	3.6	5.4	1.9	4.2	6.3	1.8	4.2	18.5	45.9	282.0
Transportation and Public Utilities	1.2	0.8	— 2.7	— 1.5	— 8.1	— 0.7	2.1	7.5	20.6	— 67.0
Service and Miscellaneous	10.7	15.8	10.8	14.2	22.5	7.6	13.3	72.7	167.6	1,051.0
Government	5.8	20.7	10.4	17.8	19.2	8.7	12.8	65.9	161.3	1,129.0
Total	17.4	47.7	6.3	49.4	35.5	12.5	16.2	188.9	373.9	2,693.0

Source: Same as for Table 7.

The growth in the contract construction sector varies among states. Kanses was the only state with a decline in employment in this sector. It appears from Figure 2 that the growth in contract construction parallels somewhat the growth in the manufacturing sector. This would be expected as industries demand new construction and as new employees arriving in the state demand new housing. Both the manufacturing and wholesale and retail trade sectors also have exhibited moderate growth. Again, there is considerable variation among the states for both these sectors. Arkansas had the fastest growth rate in both sectors. This rapid growth is consistent with the in-migration in the state during this period. The regional average is greater than the United States average for manufacturing, which indicates it has gained relative to other regions. The rates were about the same for wholesale and retail trade.
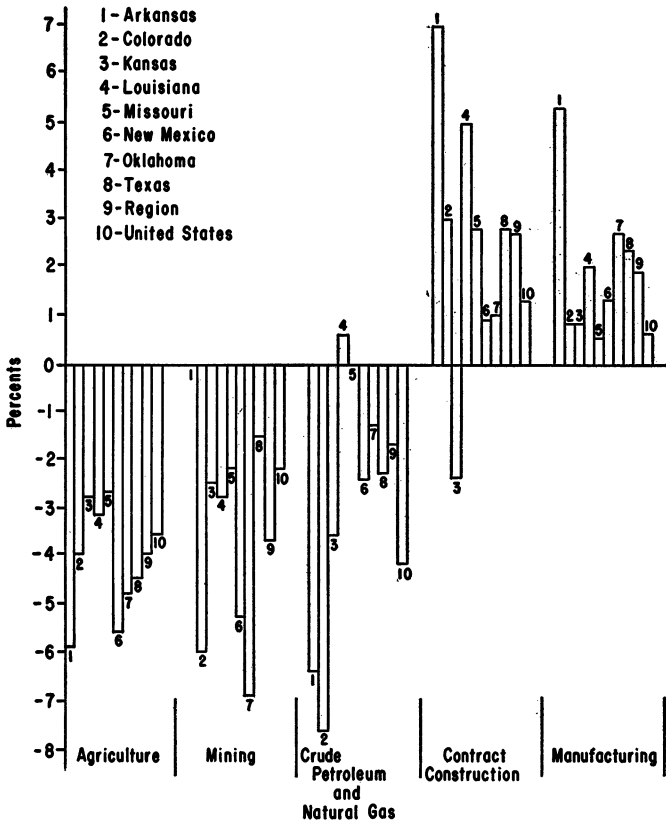

Figure 2A: **Average Annual Rates of Change in Employment by Industrial Sources from 1960 to 1964.**
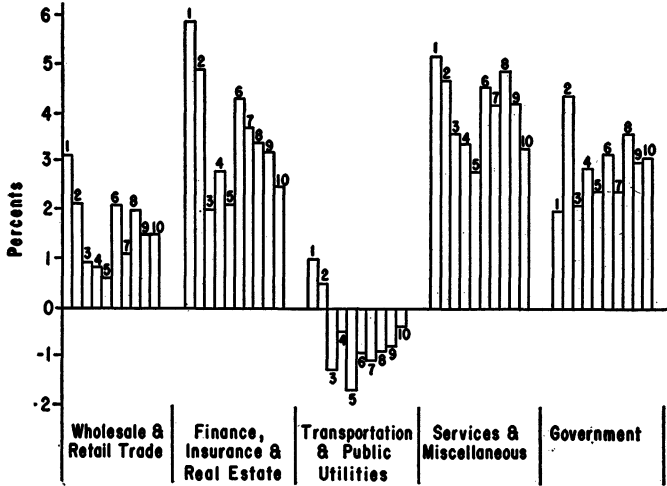
Figure 2B: Continuation of Figure 2A.

The remaining four sectors may be classed as service sectors. Except for transportation and public utilities, these service sectors have experienced the greatest growth. Most of the decline in the transportation and public utilities sector is due to the large decline in railroad employment. These sectors involve ancillary facilities and services that accompany industrial expansion. The rates of growth are fairly uniform for all the states. Except for the government sector, Arkansas had the greatest rate of increase, though not the greatest absolute change. Again, this indicates the growth that occurred in the state since 1960. Colorado ranked second to Arkansas in two of the sectors and had a greater rate of increase in government employment. The employment in this sector involves services supplied by local, state and federal governments. The annual rates of change in the service sectors for Oklahoma were approximately the same as the regional averages. These service sectors account for a major portion of the growth in employment in the region.

Prospects for Future Growth

The percent distributions of 1964 employment by sectors are shown in Figure 3. If the trends from 1960 to 1964 continue, an idea of the growth and adjustment that can be expected in the future can be obtained by comparing Figures 2 and 3. The percent of employment still in agriculture is fairly high for each of the states and except for

Colorado above the national average. Arkansas has the largest percent of
agricultural employment. If present adjustments continue, considerable
migration from farms can be expected. The rural migrants will be seek-
ing off-farm employment, and the manufacturing and service sectors
will have to absorb these migrants. This is apparently what has happen-
ed in Arkansas since 1960 and to a lesser extent in Oklahoma. The
other two natural resource oriented sectors, mining and crude petroleum
and natural gas, account for a rather small proportion of total employ-
ment. Barring some windfall gain, neither of these sectors can be ex-
pected to grow in employment at a very fast rate.

Employment in the contract construction sector can be expected to
grow as the region grows. An increase in industry and population will
require new construction. The two sectors with the largest proportions
of total employment are manufacturing and wholesale and retail trade.
Growth in these two sectors can be expected to initiate and sustain growth
in the whole region. Because of the interrelation between the two
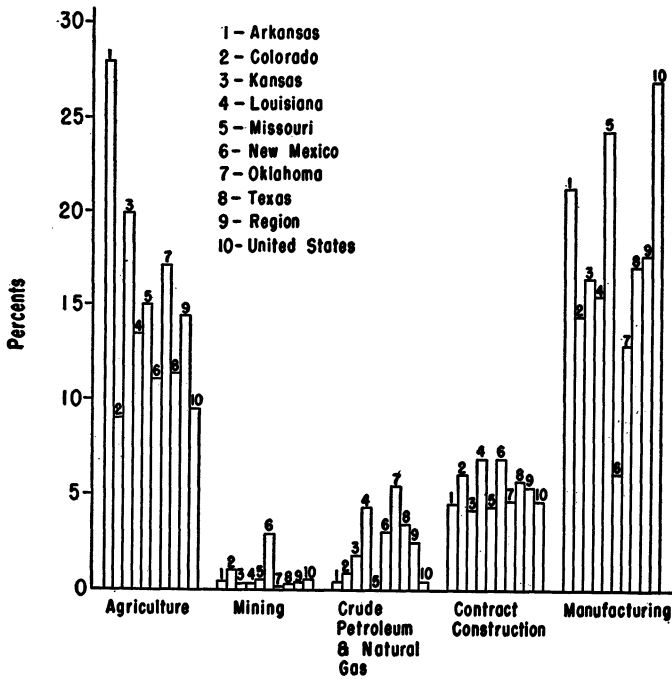sectors, both will probably grow at roughly the same rate. The percent

Figure 3A: **Percent Distribution of Employment by Industrial Sources
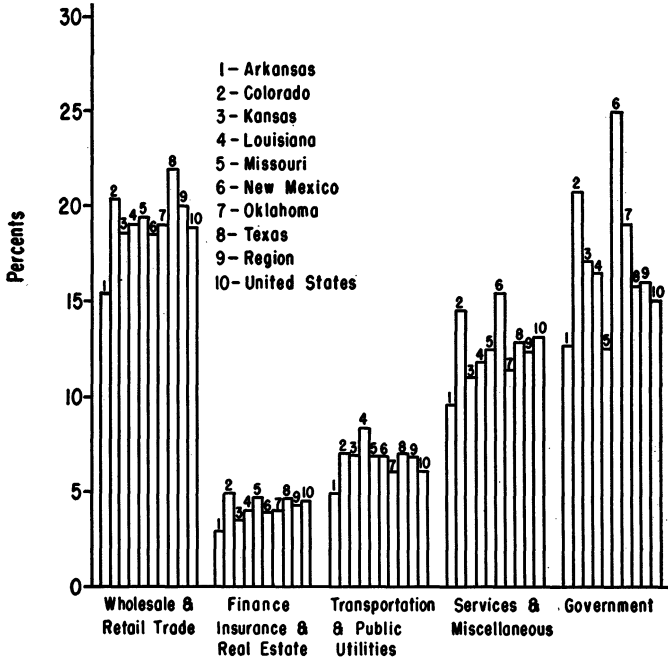for 1964.**

Figure 3B: Continuation of Figure 3A.

employed in the manufacturing sector is below the United States average for all eight states. Because of this smaller industrial base relative to other regions, the South Central Region will likely not grow as fast in absolute terms as the more industrialized regions. New Mexico had a much smaller percent of employment in manufacturing in 1964 than any of the other states. This accounts for the fact that the state was not able to sustain the growth and expansion of the 1950's.

All the service sectors can be expected to grow in the future as more services are demanded by consumers. The growth in these sectors will be tied very closely to the growth in the manufacturing and trade sectors. The finance, insurance and real estate and transportation and public utilities sector have a smaller base to begin with than the other two sectors. These will grow though at a rate comparable to the growth in population. The last sector, government employment, has the largest proportion of workers of the service sectors. New Mexico had the greatest percent, and Colorado and Oklahoma had relatively high percents. These large percentages are due partly to the employment at the military bases

within the state. Growth in this sector is expected as more services are demanded of government at all levels.

Growth due to Military Installations

The hypothesis is advanced that the location of military bases has had a sufficient effect on the growth in the region. Correlation coefficients were computed for net changes in military population and changes in total employment—first including the government sector, then excluding the government sector. The coefficients and the test statistics are shown in Table 12. The statistical hypothesis is that the correlation coefficients are zero. The corresponding phenomenal hypothesis is that the build-up of military personnel in a state has had no effect on the growth of employment in the state.

The conclusions are that the coefficients for 1950 to 1960 are significantly different from zero, while the coefficient for 1960 to 1964 are not significantly different from zero. The conclusions are the same whether or not government employment is included. The significant coefficient for the data including government is higher as would be expected.

The phenomenal conclusion that must be drawn is that increased military activity did affect growth in the region from 1950 to 1960, but not for the succeeding period from 1960 to 1964. The relative increase in military expenditures in the South Central Region was greater in the decade beginning in 1950 than since 1960. Several military installations have been or are being phased out presently. It is safe to assume that large federal expenditures have had a highly significant positive

Table 12. Test of Significance of Correlation Coefficients[1]

Period	r	r[2]	t′	P_I
Employment includes government sector.				
1950-60	0.77	0.59	2.94*	<0.025[2]
1960-64	—0.24	0.06	0.62	>0.250[3]
Employment includes government sector.				
1950-60	0.73	0.53	2.60*	<0.025
1960-64	—0.20	0.04	0.50	>0.250

[1] For explanation of test, see J. Johnston, *Econometric Methods*, McGraw Hill Book Co., New York, p. 33.
   The correlation coefficient is denoted by r, t stands for Student's t and $P_I = P[t \geq t' \mid H]$ is the probability of the error of the first kind, where H is the null hypothesis.
   [2] < less than
   [3] > greater than
   *r is significantly different from zero.
Source: See sources for Table 1 and 7.

impact on the region in the past. The data also indicate that the impact may not be as great for the region now as it was formerly. A large change in military spendings in any one community would have a significant effect on the community. It need not have a significant effect on the whole region though. Such could possibly be the case if the economy of the region is already growing at a fairly rapid rate. This does not appear to be the case though in the South Central Region.

Changes in Income

Changes in Total Personal Income

The region received about 12.5 percent of the total personal income in the United States in 1964. This is only 2 percent less than the proportion of total United States population in the area. Comparatively it appears that the region is in pretty good shape in terms of total income. Because of the large differences among the states in the region, this implication has little significance. Income figures for the individual states are given in Table 13. Changes over time have been computed in terms of constant 1957-59 dollars.

From 1950 to 1960, the greatest rate of increase in total income occurred in Colorado and New Mexico. Except for Arkansas, all the other

Table 13. Total Personal Income and Changes in Total Personal Income for Selected Periods: 1950 to 1960 and 1960 to 1964.

	Total Personal Income[1]			Net Change[1]		Average Annual Rate[2]	
	1950	1960	1964	1950 to 1960	1960 to 1964	1950 to 1960	1960 to 1964
	(million dollars)					(percent)	
Arkansas	1,836	2,322	2,960	486	638	2.4	6.1
Colorado	2,303	3,918	4,666	1,615	748	5.3	4.4
Kansas	3,154	4,355	4,828	1,201	473	3.2	2.6
Louisiana	3,505	5,082	6,022	1,577	940	3.7	4.2
Missouri	6,808	9,238	10,604	2,430	1,366	3.1	3.5
New Mexico	952	1,678	1,904	726	226	5.7	3.2
Oklahoma	3,000	4,176	4,749	1,176	573	3.3	3.2
Texas	12,381	17,930	21,044	5,549	3,114	3.7	4.0
Region	33,939	48,698	56,778	14,759	8,080	3.6	3.8
U. S.	270,264	387,030	454,213	116,766	67,183	3.6	4.0
Coefficient of Variation						30	27

[1] Constant 1957-59 dollars.

[2] $Y_{t+k} = Y_t e^{kr}$ where r is the average annual rate of changing for k years beginning with year t and Y stands for income.

Source: U.S. Bureau of the Census, *Statistical Abstract of the United States,* 86th Annual Edition, Washington, D.C., 1965, p. 361.

U.S. Department of Commerce, "Personal Income by States Since 1929,'" A Supplement to the Survey of Current Business, Office of Business Economics, Washington, D.C., 1956, p. 141.

U.S. Department of Commerce, "Survey of Current Business," Office of Business Economics, Washington, D.C., Vol. 45, No. 7, July 1965, pp. 10-11.

states had approximately the same rate of change. The annual rate for Arkansas was much less than for any of the other states. There has been a considerable shift in the annual rates since 1960. The most obvious changes were in Arkansas and New Mexico. Arkansas had the largest rate for the later period, while New Mexico experienced a substantial drop in the rate of increase. Colorado and Kansas also had a lower rate for the latter period. The remaining four states had approximately the same or slightly higher rates than in the previous decade.

Changes in Per Capita Personal Income

Changes in per capita income are better indicators of the growth of the region than are changes in total income, since changes in population are taken into account. Per capita personal income figures for the South Central Region are given in Table 14. Changes are computed in terms of constant dollars. The annual rates were used to rank the states into growth categories in Table 15. Due to the small variability among the rates, only two categories appear to be appropriate.

Arkansas heads the list with the largest rate of growth in per capita income. The large rate is due in part to the low per capita income at the beginning of the period and to a large out-migration from 1950 to 1960. There was a fairly rapid rate of growth in nonagricultural employment and an in-migration from 1960 to 1964. Missouri had the second highest rate of increase. The net change in total employment from 1960 to 1964 was less than the net out-migration. So the increase in per capita

Table 14. Per Capita Personal Income for 1960 and 1964 and Changes in Per Capita Personal Income from 1960 to 1964.

	Per Capita Personal Income[1]		Net Change[1]	Average Annual Rate
	1960	1964		
	(million dollars)			(percent)
Arkansas	1,297	1,531	234	4.1
Colorado	2,213	2,374	161	1.8
Kansas	1,998	2,170	172	2.0
Louisiana	1,558	1,736	178	2.7
Missouri	2,137	2,405	268	3.0
New Mexico	1,760	1,888	128	1.8
Oklahoma	1,786	1,927	141	1.9
Texas	1,862	2,024	162	2.1
Region	1,862	2,033	171	2.2
U. S.	2,150	2,374	224	2.4
Coefficient of Variation				33

[1] Constant 1957-59 dollars.
Source: Same as for Table 13.

Table 15. States Ranked by Growth Categories According to Changes in Per Capita Personal Income.

Medium Growth		Fast Growth	
State	Average Annual Rate	State	Average Annual Rate
Colorado	1.8	Arkansas	4.1
Kansas	2.0	Louisiana	2.7
New Mexico	1.8	Missouri	3.0
Oklahoma	1.9		
Texas	2.1		

Source: Table 14.

income was due more to the out-migration than to an increase in employment. Louisiana had a rate very close to that for Missouri. The rapid increase in per capita income was accompanied by an out-migration of people and a relatively high rate of increase in total employment.

The other states were classed in the medium growth category, and all five had roughly the same rates of increase. Texas had a relatively high rate of growth in total employment and an in-migration during the period. Texas has previously been classed in the fast growth group with respect to changes in population and employment. The lower classification using the per capita income criterion indicates that population is growing at a faster rate than is employment. The growth in Kansas was due mostly to an out-migration of people, since the rate of increase in total employment was relatively small. Part of the growth in Oklahoma was due to the large out-migration from 1950 to 1960. There was a small in-migration after 1960 and a relatively small rate of increase in total employment. If the in-migration continues and the number of farm workers continue to decline, the rate of growth in per capita income will most likely drop unless the rate of change in employment is substantially increased.

Colorado has had a larger rate of increase in population than in employment. This accounts for the lower ranking of the state according to change in per capita income. There has been a conisderable amount of migration into the state since 1950. New Mexico experienced an out-migration and a tremendous slowing down of the rate of increase in employment since 1960. It also was classed in the fast growth category according to the criteria used earlier. The economy has not been able to maintain the growth of the previous decade. Those states, such as New Mexico, where the increase in per capita income is due in large part to an out-migration of people will be in bad straits if the migration slows down without a compensating increase in employment.

Family Income

Both average and median family income are given in Table 16. These figures are plotted in Figure 4 for ease of comparison. The average and median incomes for all the eight states are above the poverty level of $3,000 family income.[3]   However, the median income for Arkansas is not much above the $3,000 level. The figure for the state re-

[3] For example, see Bird, Allen R., "Poverty in Rural Areas of the United States," USDA, ERS, Resource Development Economics Division, Washington, D.C., November 1964.

Table 16. Median and Average Family Income for 1960.

State	Average Family Income	Median Family Income		State Average less	Average less
		Amount	Rank	U.S. Average	Median
	(dollars)			(dollars)	
Arkansas	4,120	3,184	8	—2,449	936
Colorado	6,675	5,780	1	106	895
Kansas	6,142	5,295	3	— 427	847
Louisiana	5,263	4,272	7	—1,306	991
Missouri	5,948	5,127	4	— 621	821
New Mexico	6,250	5,371	2	— 319	879
Oklahoma	5,498	4,620	6	—1,071	878
Texas	5,829	4,884	5	— 740	945
Region	5,733	n.a.		— 836	n.a.
U. S.	6,569	5,660		———	906

(n.a. = not available.)
Source: U.S. Bureau of the Census, *U.S Census of Population 1960*, "General Social and Economic Characteristics," Data from books for individual states, Table 66.
U.S. Bureau of the Census, *U.S. Census of Population 1960*, "General Social and Economic Characteristics," U.S. Summary, Vol. 1, Part 1, p. 1-225.
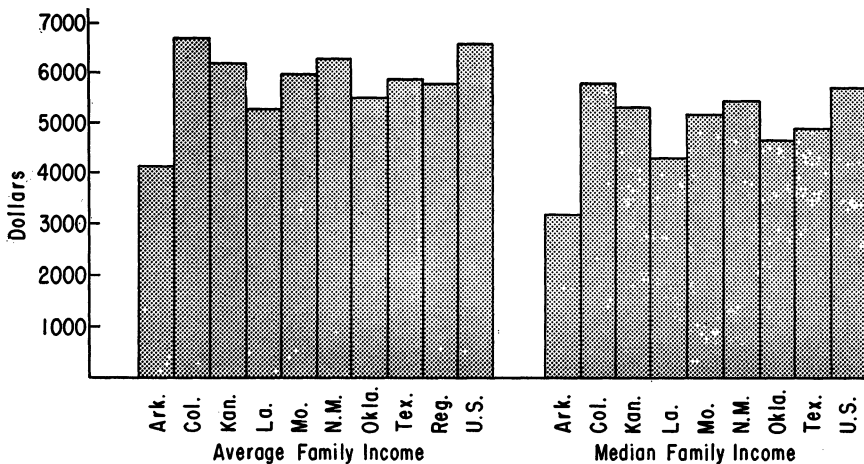
Figure 4:   Average and Median Family Income in 1960.

flects very little of the actual income situation in a state. The effect of the more highly developed counties counteract the effect of the depressed counties. For example, the median income for Oklahoma was well above the $3,000 mark, yet there were 19 out of 77 counties in the state with a median income below $3,000. The poverty incomes in the depressed counties are concealed in the state figure by the much higher incomes in other parts of the state.

These family income figures are useful for comparisons among the states. Arkansas had the lowest median and average family income. Louisiana and Oklahoma followed in that order. Colorado had the largest family income. All the average incomes are below the national average, except for Colorado. Arkansas is considerably below the United States average, as are Louisiana and Oklahoma. This region is not as well off in terms of family income on the average as other regions of the United States. There are a number of low income areas within the region. These areas are mostly in Arkansas, Louisiana and southeastern Oklahoma.

The difference between the average and median family income is a measure of the skewness of the distribution of family income. The average income is larger than the median income for all the states, which indicates that the distributions are skewed to the left. This means there are more families in the low income groups than in the high income groups, as would be expected. A comparison of the differences among states gives a crude indication of the similarity of the states. All the differences are roughly of the same magnitude and close to the average for the United States.

Broad Sources of Personal Income

Total personal income has been divided into three categories: (1) farm income, (2) private nonfarm income and (3) government income disbursements. Changes from 1960 to 1964 in these three sources of income are recorded in Tables 17, 18 and 19. Farm income increased for two of the states, Arkansas and Louisiana, and decreased for the rest. The increase was due in part to the reorganization of farms into more efficient units made possible by rural out-migration. Weather in general causes an extreme variability in farm income over time, and for this reason changes in farm income is a poor measure of growth.

Farm income per farm worker in 1964 is given in the last column of Table 17. Louisiana, Missouri and Oklahoma had the lowest incomes, which were below the national average. There is an excess of farm labor in the states, much of which is underemployed and does not show up in

Table 17. Farm Income for 1960 and 1964, Changes in Farm Income from 1960 to 1964 and Farm Income per Farm Worker in 1964.[1]

	Farm Income[2]		Net Change[2]	Average Annual Rate	Farm Income per Farm Worker
	1960	1964			
	(million dollars)			(percent)	(dollars)
Arkansas	338	418	80	5.3	2,723
Colorado	202	167	— 35	— 4.8	3,175
Kansas	462	406	— 56	— 3.2	3,028
Louisiana	194	230	36	4.3	1,872
Missouri	461	414	— 47	— 2.7	1,806
New Mexico	105	103	— 2	— 0.5	3,469
Oklahoma	312	221	— 91	— 8.6	1,853
Texas	1,075	932	—143	— 3.7	2,845
Region	3,149	2,891	—258	— 2.2	2,473
U. S.	14,293	13,453	—840	— 1.4	2,380
Coefficient of Variation				— 267	

[1] Farm income consists of net income of farm proprietors, farm wages and farm "other" labor income, less personal contributions under the OASI program.
[2] Constant 1957-59 dollars.
Source: U.S. Department of Commerce, "Survey of Current Business," Office of Business Economics, Washington, D.C. Vol. 41, No. 8, August 1961, p. 19 and Vol. 45, No. 7, July 1965, p. 17.

Table 18. Private Nonfarm Income for 1960 and 1964 and Changes in Private Nonfarm Income from 1960 to 1964.[1]

	Private Nonfarm Income[2]		Net Change[2]	Average Annual Rate
	1960	1964		
	(million dollars)			(percent)
Arkansas	1,476	1,887	411	6.1
Colorado	2,999	3,390	481	3.8
Kansas	3,001	3,341	340	2.7
Louisiana	3,819	4,478	659	4.0
Missouri	7,246	8,332	1,086	3.5
New Mexico	1,108	1,229	121	2.6
Oklahoma	2,873	3,304	431	3.5
Texas	13,460	15,827	2,367	3.9
Region	35,891	41,788	5,897	3.8
U. S.	301,513	350,630	49,117	3.8
Coefficient of Varieties				29

[1] Private nonfarm income equals total personal income less farm income and government income disbursements.
[2] Constant 1957-59 dollars.
Source: Same as for Table 17.

the unemployment figures. The excess labor supply indicates that continued high rates of rural out-migration can be expected. The other six states have incomes per worker above the national average. They are in a relatively better position because of past migration, yet there is still some adjustment to be expected, mainly in the form of rural out-migration from small unprofitable farms, for example, in Arkansas.

Table 19. Government Income for 1960 and 1964 and Changes in Government Income from 1960 to 1964.[1]

	Government Income[2]		Net Change[2]	Average Annual Rate
	1960	1964		
	(million dollars)			(percent)
Arkansas	511	655	144	6.2
Colorado	846	1,108	262	6.7
Kansas	906	1,080	174	4.3
Louisiana	1,075	1,314	239	5.0
Missouri	1,529	1,858	329	4.9
New Mexico	466	572	106	5.1
Oklahoma	997	1,224	227	5.2
Texas	3,417	4,286	869	5.7
Region	9,747	12,097	2,350	5.3
U. S.	72,169	90,130	17,961	5.5
Coefficient of Variation				14

[1] Government income consists of income disbursed directly to persons by the Federal and State and local governments. Comprises wages and salaries (net of employee contributions for Social insurance) other labor income, interest and transfer payments.
[2] Constant 1957-59 dollars.
Source: Same as for Table 17.

The private nonfarm income figures show that Arkansas had the greatest percentage increase since 1960. With the exception of Kansas and New Mexico, the rates for the other states are roughly the same. Kansas and New Mexico had rates below the other states in the region. The rate of increase in Oklahoma is not nearly as great as the rate of decline in farm income. This accounts for the rather slow annual rate of growth in per capita income for the state.

The rates of change in government income disbursements are greater than those for private nonfarm income. Income from the government sector increases as more services are demanded of and supplied by government at all levels. Spendings for defense and space exploration have added to the growth of the region. Arkansas and Colorado had the highest rate of increase, while Kansas and Missouri had the lowest rates. The variability among the states though is relatively small.

Major Sources of Personal Income

A breakdown of income for 1964 by major sources is given in Table 20. The percent distributions of wages and salaries are shown in Figure 5. Comparing Figure 5 with Figure 3, the most obvious difference is the low percents of income from farming relative to the high percents of agricultural employment. The result is low farm incomes relative to non farm employment. Thus the rate of adjustment in the agriculture

Table 20. Personal Income by Major Sources for 1964.

Item	Ark.	Colo.	Kan.	La.	Mo.	N. Mex.	Okla.	Tex.	Region	U.S.
				(Millions Dollars)						
Personal Income	3,200	5,044	5,219	6,510	11,463	2,058	5,134	22,749	61,377	491,004
Wage and Salary Disbursements	1,863	3,325	3,106	4,354	7,574	1,439	3,215	15,012	39,888	332,151
Farms	70	40	40	47	47	23	26	254	547	2,766
Mining	12	46	9	21	42	44	10	38	222	2,111
Crude Petroleum and Natural Gas	12	34	65	282	1	52	263	693	1,402	1,840
Contract Construction	123	251	177	334	472	112	186	951	2,606	19,467
Manufacturing	505	568	738	870	2,386	102	517	3,078	8,764	104,494
Wholesale and Retail Trade	331	662	570	794	1,535	221	601	2,996	7,710	59,788
Finance, Insurance, and Real Estate	73	167	120	188	389	56	144	728	1,865	16,069
Transportation and Public Utilities	175	291	330	432	780	118	287	1,394	3,807	26,078
Services	180	411	305	502	793	222	336	1,623	4,372	37,480
Government	376	854	748	871	1,120	487	837	3,221	8,514	61,343
Other Industries	8	1	4	15	9	3	9	37	86	715
Other Labor Income	80	114	135	203	316	51	140	670	1,709	14,100
Proprietor's Income	652	625	946	748	1,405	265	758	2,929	8,328	51,032
Farm	391	145	408	207	410	91	218	774	2,644	12,079
Nonfarm	261	480	537	540	995	174	540	2,154	5,681	38,953
Property Income	344	739	762	781	1,557	211	670	3,149	8,213	68,239
Transfer Payments	338	378	406	581	916	147	496	1,543	4,805	38,125
Less: Personal Contribution for social insurance	78	137	136	156	305	55	146	554	1,567	12,643

Source: U S. Department of Commerce, *Survey of Current Business*, Office of Business Economics, Washington, D.C., Vol. 45, No. 7, July 1965, pp. 12-16.
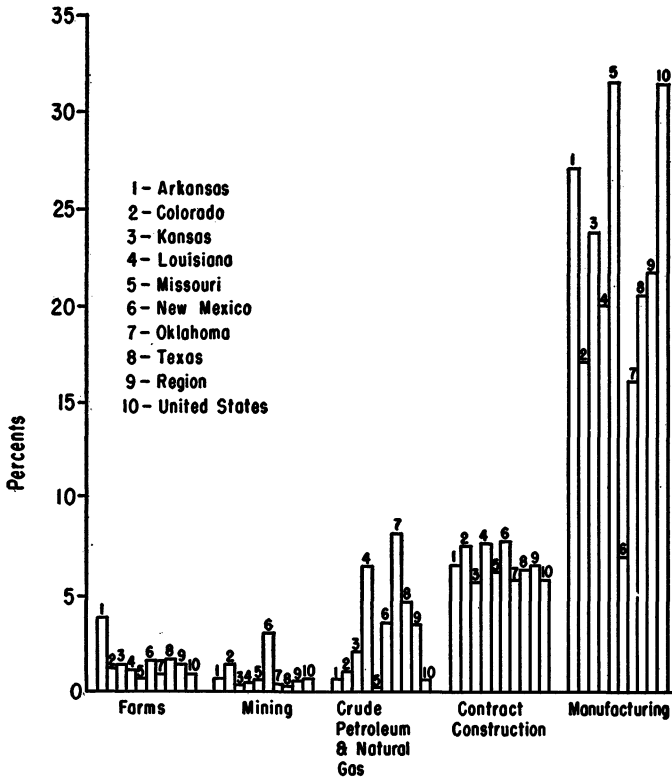
Figure 5A: **Percent Distributions of Wages and Salaries by Industrial Sources for 1964.**

sector is expected to be large in the future. People will continue to move out of agriculture and seek employment elsewhere.

The distributions for the other sectors are roughly the same for both Figures 3 and 5. Three sectors, manufacturing, wholesale and retail trade and government, are the largest sources of wages and salaries as well as the major source of employment. These sectors will cause the greatest growth of the economy within the region. Growth in the service sectors, can be expected to grow at about the same rate as the manufacturing and trade sectors. Little in the way of rapid growth can be expected from the two natural resources oriented sectors, mining and crude petroleum and natural gas.
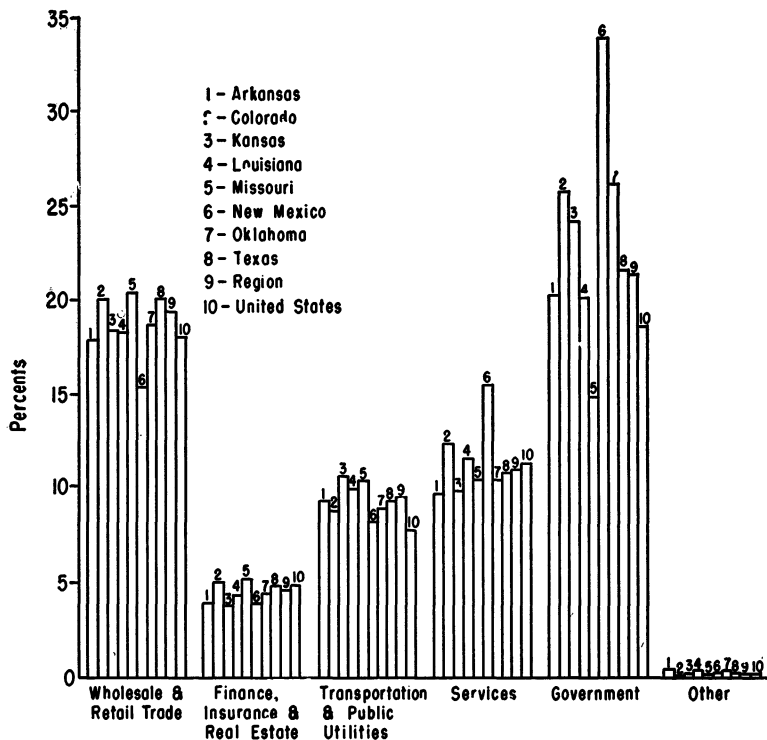
Figure 5B: Continuation of Figure 5A.

Changes in Agriculture

Rural Adjustment

As noted previously, the adjustments in the agricultural sector of the economy of the South Central Region has been substantial. Some additional changes are recorded in Table 21. The total number of commercial farms has decreased nearly 40 percent for the region from 1950 to 1959.[4] Along with the reduction in the number of farms went an increase in the acreage per farm. The rates of increase in the average acreage per farm range from 28.8 percent for Missouri to 68.0 percent for Arkansas. The average for the region is 46.5 percent, which is

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[4] These figures somewhat overstate the adjustment because of the change in definition of commercial farms in 1959. The effect of this adjustment was to exclude approximately 6 percent of the places that would have qualified as farms by the 1950 definition. U.S. Department of Agriculture, ' Number of Farms 1910-1959, Land in Farms 1950-1959 by States," Statistical Bulletin No. 316, Crop Reporting Board, SRS, Washington, D.C., June 1962, p. 2.

Table 21. Changes in Agriculture from 1950 to 1959.

	Rate of Reduction in Number of Commercial Farms[1]	Average Acreage per Farm				All Land in Farms	
		1950	1959	Net Change	Rate	Net Change	Rate
	(percent)		(acres)		(percent)	(1000 acres)	(percent)
Arkansas	53.7	103	173	70	68.0	— 2,412	—12.8
Colorado	28.2	833	1,162	329	39.5	834	2.2
Kansas	26.0	370	481	111	30.0	1,542	3.2
Louisiana	50.7	90	139	49	54.4	— 855	— 7.6
Missouri	35.2	153	197	44	28.8	— 1,970	— 5.6
New Mexico	30.3	2,014	2,908	894	44.4	— 1,229	— 2.6
Oklahoma	38.6	253	378	125	49.4	— 206	— 0.6
Texas	39.3	439	631	192	43.7	— 2,171	— 1.5
Region	38.9	314	460	146	46.5	— 6,467	— 1.7
U. S.	34.8	216	303	87	40.3	—37,912	— 3.3

[1] See footnote 4.
Source: U.S. Bureau of the Census, *Statistical Abstract of the United States,* 1955, 76th Annual Edition, p. 653 and 1964, 85th Annual Edition, pp. 611, 616.

slightly above the average for the United States. Some of the land was retired from agricultural production, but the reduction in total acreages was small. The changes in agriculture have had considerable impact on the whole economy of a state, not just the rural sector. The loss of people through migration has entailed adjustments for those who sell to and buy from farmers. Many of the smaller trade centers have experienced a reduction in their business. Also as farms become larger, more capital has been invested in non-labor inputs. The result has been a change in the consumption pattern of the farmer and his family which again affects local businesses.

The change in income per farm has not kept pace with the change in farm size. Changes in realized net income per farm in constant dollars are given in Table 22. Though farm size increased in all the states from 1950 to 1960, only half the states in the South Central Region had an increase in net income per farm during the same period. For those states with an increase in net income per farm, the rates of change were substantially greater than the national average. Arkansas had the greatest rate of increase with 41.2 percent, followed by Oklahoma with a 29.2 percent increase. Both these states had a relatively low level of net income per farm in 1950. From 1960 to 1964, only one state, Oklahoma, showed a decline in net income per farm. The rate of decline was large due to a relatively large decline in total farm income. The other seven states had an increase in per farm income since 1960, with Arkansas again at the top of the list. As noted before (Table 17), total farm income declined in six of the eight states since 1960. Thus the implication from Table 22

Table 22. Realized Net Income per Farm and Changes in Realized Net Income per Farm, 1950 to 1960 and 1960 to 1964.

	Realized Net Income Per Farm[1]			Net Change		Rate	
				1950 to 1960	1960 to 1964	1950 to 1960	1960 to 1964
	1950	1960	1964				
	(dollars)					(percent)	
Arkansas	1,876	2,649	4,103	773	1,454	41.2	54.9
Colorado	4,241	4,093	4,091	—148	— 2	— 3.5	[2]
Kansas	3,652	3,276	3,846	—376	570	—10.3	17.4
Louisiana	1,741	2,032	2,973	291	941	16.7	46.3
Missouri	2,406	2,304	2,462	—102	158	— 4.2	6.9
New Mexico	4,202	4,615	5,985	413	1,370	9.8	29.7
Oklahoma	1,845	2,384	1,955	539	— 429	29.2	—18.0
Texas	3,463	3,463	3,630	0	167	0	4.8
Region	2,718	2,896	3,276	178	380	6.5	13.1
U. S.	2,717	2,867	3,448	150	581	5.5	20.3

[1] Constant 1957-59 dollars.
[2] Less than 0.1 percent.
Source: U.S. Department of Agriculture, "Farm Income State Estimates 1949-1964," FIS 199 Supplement, ERS, August 1965.
U.S. Department of Agriculture, "Number of Farms 1910-1959, Land in Farms 1950-1959 by States," Statistical Bulletin No. 316, SRS, June 1962.
U.S. Department of Agriculture, "Number of Farms," SRS, February 23, 1962 and January 18, 1965.

is that the reduction in number of farms has been greater than the reduction in total farm income for five of the six states. This difference in the two rates accounts for the increase in per farm income.

The percent distributions of commercial farms by economic class for 1960 are plotted in Figure 6. The graphs are essentially income distributions curves for the commercial farms of the state. In terms of income, the classes are ranked from lowest income class VI to highest income class I.[5] The distributions for Arkansas and Louisiana are particularly skewed to the left, indicating a large percentage of commercial farms in the lower income classes. As a result of the skewness, a decline in the percentage of these lower income class farms can be expected in the two states. The reduction in the number of these farms will release farm labor and allow more consolidation. The distributions for Kansas, Missouri and Oklahoma are less skewed to the left, yet there are still a relatively large percentage of farms in the lower income classes. A considerable reduction in number of farms can also be expected for these states. Colorado had approximately a normal distribution, and as a result the reduction in the number of farms will not be as great as for the above states. New Mexico and Texas had more of a uniform

[5] For a definition of the classes, see U.S. Bureau of the Census, *U.S. Census of Agriculture 1959*, "Economic Class of Farm," Vol. II, General Report, Chapter I, pp. 1191-1192.
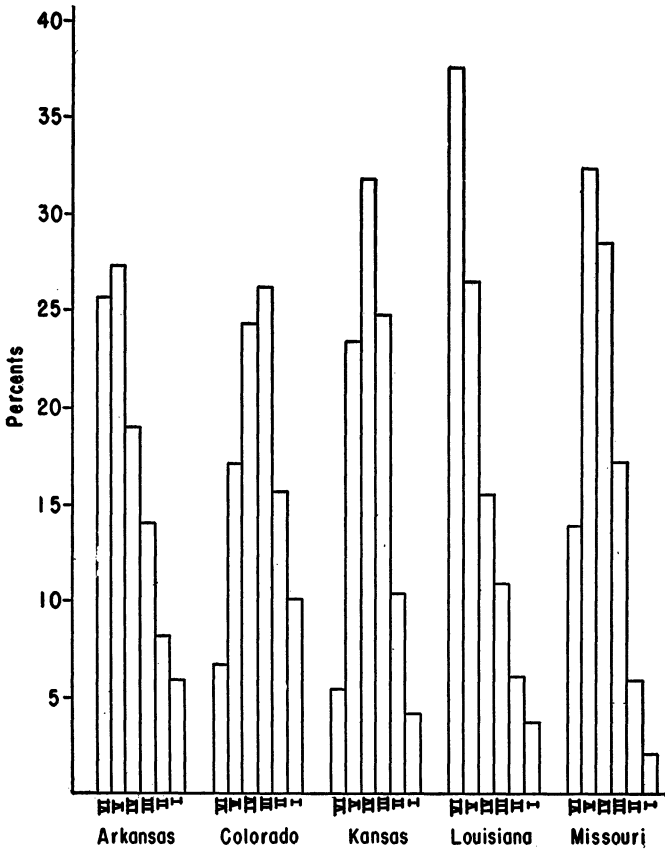
Figure 6A: Percent Distributions of Commercial Farms by Economic Class in 1960.

distribution. The distributions are probably the result of past adjustment that will continue into the future. The percentage of small farms will decline until the distributions are more normal. The rate of reduction in the two states has probably slowed down in recent years and the future changes will not be as great as those in Arkansas and Louisiana, for example. The general conclusion is that the percent of the farms in the lower income classes will continue to decline until the distributions are normal or even skewed to the right. The rates of adjustments among the states in the region will vary considerably depending on the number of smaller farms in the state. In general, there is a positive relation be-
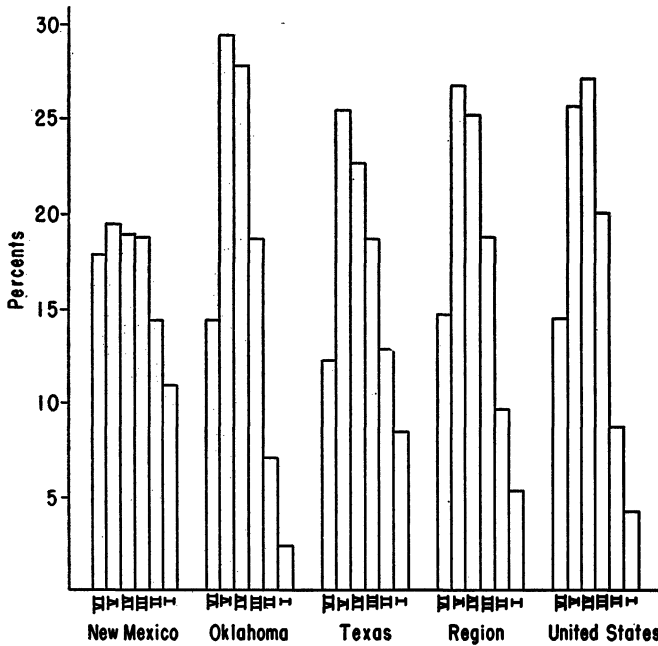
Figure 6B: Continuation of Figure 6A.

tween the absolute rate of reduction and the percentage of farms in
the lower income classes.

Conclusions and Implications

Summary

The most obvious conclusion is the heterogeneity among the states
in the South Central Region. Changes in the states have varied con-
siderably, and this lack of homogeneity will be an important factor for
economic development within the region.

The states with the most rapid sustained growth are Colorado and
Texas. Arkansas has grown rapidly since 1960, but this growth followed
considerable declines in the previous decade. The economy of New
Mexico has not sustained the growth it experienced during the 1950's.
The other states in the region have grown at a moderate rate. Louisiana

and Oklahoma will most likely experience adjustments in the future, comparable to those in Arkansas in recent years. These two states along with Arkansas still have a high proportion of agriculture employment, as well as the lowest incomes in the region. This adjustment will not assure that the levels of income and employment in these states will rise to the level of the more prosperous states, such as Colorado.

Implications for Oklahoma

The implications of the heterogeneity for area development work are both positive and negative. Those states that are growing faster than Oklahoma will undoubtedly attract migrants from the state. This will improve the employment situation in Oklahoma, where there is presently a large supply of both unemployed and underemployed labor. Presently, total employment is not growing rapidly in Oklahoma. Out-migration will have two direct effects: (1) it will raise per capita income due to the loss in population and (2) it will provide jobs that will attract people to move out of agricultural employment. It will alleviate to some extent the labor problem in Oklahoma, but it will not eliminate it.

Another positive effect stems from the interdependence of the total United States economy. For example, growth in Colorado and Texas will increase the demand for goods and services produced in Oklahoma. Likewise, Oklahoma will share to some extent in the general growth of the national economy. Again, it does not appear that the effect on the economy of Oklahoma will be sufficient to stimulate rapid growth.

There is one likely potential that may develop in the future for Oklahoma. As the states along the east, west and Gulf coasts become more heavily populated, people will tend to move inland. The states in the Southwest will probably be the first to realize a gain in population from this move. These states have the advantages of climate and sufficient water supplies over states further north and west. At the present, Oklahoma has no widespread shortage of water, and there are a large number of lakes and reservoirs providing recreational sites. These may be developed to attract tourist and retirement families. With the advent of relatively cheap air-conditioning, the climate inside can be controlled year round. Oklahoma has a cheap supply of fuel in the form of natural gas. At the moment these advantages do not outweigh those of the coast of Florida or California in the minds of most people. As these areas become more crowded however, the advantages may shift in favor of the Southwest. This is speculation for the distant future and little effect will be felt any time soon.

Any prospects for radical changes in the rate of growth of the economy of Oklahoma are not now apparent. It is fairly safe to assume that the state will experience at least a moderate rate of growth. Future adjustment, particularly in agriculture, will be great, but these are not the type of adjustments that stimulate rapid growth.

A negative implication of the differential growth rates is that the people moving from the state in response to greater expansion elsewhere are the more productive members of the labor force. Also people from less developed or declining areas will be attracted to Oklahoma. If these people show up in large numbers, this would have a depressing effect on the economy, but the probability of any large scale movement into the state in the near future is small. Presently, there is a large supply of excess labor in the state already that would take care of any increase in employment. However, much of this excess labor is in the unskilled or semi-skilled categories.

The greatest promise of expansion lies in the industrial and trade sectors. Ancillary service industries, of course, will expand at approximately the same rate. There is some potential due to an increase in recreation sites and facilities. More migration out of the state or to urban centers can be expected. Much of the excess labor in the state is considered immobile, and it will require a special incentive move. With the present federal programs to aid individuals and areas, incentives may be in forms that do not require the people to move.