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An ECONOMIC SURVEY of
the APPALACHIAN REGION,
With Special Reference to Agriculture

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THE APPALACHIAN REGION

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HIGHLIGHTS

1. In 1960, Appalachia's population was over 50 percent rural but only 9 percent farm. The only State areas in the Region where more than 50 percent of the population lived in urban areas were in Pennsylvania and Alabama.

2. Agricultural development has not occurred on a wide scale in Appalachia, mainly because of the critical lack of land adapted to mechanized farming.

Only 31 percent of the non-Federal and urban land in Appalachia is suitable for normal cultivation of crops, and an additional 14 percent is suitable for only occasional cultivation. Corresponding U. S. figures are 44 and 12 percent.

The lack of adequate agricultural land severely limits the production of crops requiring extensive cultivation. Much of the cultivatable land is in small isolated tracts or on rough terrain which cannot be farmed efficiently with modern machinery.

3. Because of limited productive land in the region, a significant number of its farmers have not been able to compete successfully in the production of most agricultural products. During 1950-60, a larger proportion of Appalachian farmers, farms, and farmland were withdrawn from agriculture than in the rest of the United States. All of this decline was in farms with sales less than $2,500. In the 1950 decade, regional agricultural employment declined about 335,000.

4. Many Appalachian farm operators control insufficient resources to produce an income comparable to that of farm operators in the rest of the United States. Furthermore, during the 1950 decade, the income gap seems to have widened. In 1950, average sales per farm were $2,766 less in Appalachia than in the United States. By 1959, the difference was $4,888.

5. Many farm operators, unable to earn enough income from farming for an adequate level of living for their families, have turned to nonfarm employment. A larger proportion of farmers in Appalachia work off their farms 100 days or more per year, and have incomes from nonfarm sources exceeding the value of farm products sold, than in the rest of the United States.

6. Educational attainment is below that for the rest of the United States. In 1960, only 32 percent of Appalachia's population 25 years old and over had finished high school, and only 5 percent of this age group had completed 4 years of college. Corresponding figures for the rest of the United States are 42 and 8 percent.

7. In 1959, there were 31,000 commercial farms in the Appalachian Region having yearly gross sales of $10,000 or more. Operators of these farms control sufficient land and capital resources to produce relatively large outputs of agricultural products. Although this group of farms comprised only 17 percent of all commercial farms in the Region (and less than 10 percent in central Appalachia where the terrain is extremely rough) compared to 33 percent in the United States, there was a large proportional increase in their numbers from 1950 to 1959. In 1950, this group comprised only 4 percent of all Appalachian commercial farms.

The increase in farms in the $2,500 to $9,999 income category indicates that some of these farmers have also been able to expand their operations and increase their incomes. In 1959, there were 89,000 Appalachian farms in this category. Of these, 36,000 (9,000 more than in 1950) had yearly gross sales of $5,000 to $9,999, and 53,000 (3,000 more than in 1950) had yearly gross sales of $2,500 to $4,999.

8. As a result of topography, agriculture in the Region is based primarily on livestock production. Proportional increases in the value of livestock and livestock

products sold indicate livestock production is increasing in importance. In 1950, 62 percent of total farm sales were derived from livestock and livestock products. By 1959, 69 percent were so derived.

9. The possibility of expanding production of livestock in Appalachia varies with the livestock enterprise. While most major livestock enterprises may expand in local areas, beef production seems to have the best possibilities for Regionwide expansion. Substantial increases in numbers of beef cows from 1950 to 1959 and corresponding decreases in numbers of other forage-consuming livestock indicate a definite trend toward expanded beef production.

10. Crop production in the Appalachian Region is adapted to livestock production. Forage crops are important in all parts of the Region. There was a significant shift from grain to forage production in the 1950's.

11. Productivity per farm worker is expected to increase as farm machinery is made more efficient and other technological innovations are adopted. U. S. agricultural employment will decline an estimated 2 percent per year between 1960 and 1975. Due to continued competition from other agricultural areas, the pressures for shifts of workers out of agriculture in Appalachia will probably be at least as great as the U. S. average.

12. Employment opportunities were lacking in some nonagricultural industries in Appalachia during the 1950 decade. In addition to the 335,000 workers who left agriculture, the combined effects of declining demand for bituminous coal and rising productivity in the industry resulted in a reduction of 265,000 workers. Net employment declines also occurred in furniture, lumber, and wood products, and textile mill products manufacturing groups. In the service industries, railroad employment declined. Net employment gains in all manufacturing, trades and services, and construction amounted to about 568,000, but was not sufficient to prevent a net decrease of 32,000 in total regional employment.

13. In Appalachia, manufacturing, trade, and service employment is clustered in and around the larger urban centers. Employment changes in the 1950's however, indicate regional manufacturing employment increased relatively more in the smaller urban and rural areas than in the larger urban centers. But the proportion of the Region's trade and service workers in the larger urban areas remained nearly constant.

14. Past nonfarm employment trends in Appalachia and projected nonfarm employment levels for the United States provide some indication of the major industry groups which are most likely to provide the greatest employment opportunities for qualified workers.

In the bituminous coal industry, future gains are expected in output but not in employment because of increased mechanization.

Employment gains occurred in manufacturing, trades and services, and construction in the 1950 decade. Employment gains probably will continue to occur in these industries. The major increase in total employment is expected to be in the service-producing industries. Between 1960 and 1975, service employment for the United States is expected to increase 44 percent.

15. The effect of insufficient job opportunities on population growth rates, outmigration, unemployment, and income is quite pronounced in most Appalachian subareas. In the 1950 decade, the population increased only 1.5 percent, compared with the national increase of 18.5 percent. In West Virginia, and in the Appalachian parts of Kentucky, and Virginia--areas where large reductions occurred in coal mining employment --the population declined 7, 15, and 6 percent, respectively.

16. The loss in population in West Virginia, and Appalachian portions of Kentucky, and Virginia was due to outmigration. Each of these areas had a greater net outmigration of population from 1950 to 1960 than an actual loss in population. Net outmigration occurred in the regional part of the other Appalachian States; however, the natural increase in population was large enough to counteract this loss and add to the 1950 population. This migration resulted in a decline in the number of people in the 18 to 64 age group.

17. Lack of job opportunities in Appalachia resulted in large increases in unemployment in the 1950 decade despite the heavy outmigration. In 1950, the rate of unemployment, 5.1 percent of the civilian labor force, was only 0.3 higher than the national average. The rate was equal to or below the national average in all State areas except Pennsylvania and Maryland. By 1960, Appalachian unemployment had increased to 7 percent of the labor force while the national unemployment rate was only about 5 percent.

18. Income levels in the Appalachian counties not only are below national averages but also are below those of the States in which these counties lie. In 1960, per capita income for the Appalachian Region was $1,451, compared with $1,617 for the surrounding area and $1,850 for the United States.

AN ECONOMIC SURVEY OF THE APPALACHIAN REGION,
WITH SPECIAL REFERENCE TO AGRICULTURE

by

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INTRODUCTION

For at least the last four decades, the economy of the Appalachian
highland area has been in a depressed condition, as reflected by the high rate
of unemployment and low per capita income. Throughout this period several
groups, both public and private, have called for measures to ameliorate these
conditions. Even before the depression of the 1930's, efforts were made to
alert the public to the serious economic and social conditions existing in
this area. One of the pioneering efforts was made by John C. Campbell in 1921.
He conducted the first comprehensive survey of Appalachian problems and
opportunities (2). 2/ His survey included 210 counties in Maryland, West
Virginia, Kentucky, Virginia, Tennessee, North Carolina, South Carolina,
Georgia, and Alabama.

In the mid-1930's, after the depression had compounded the social and
economic problems of the mountain people, the U. S. Department of Agriculture
conducted an extensive study which provided excellent information on the
historical development of the major economic and social conditions and problems
confronting the Appalachian people at that time (11). The geographic area for
this study included 239 counties located in the same States Campbell surveyed.

The last comprehensive survey of the Appalachians was conducted in
1958 (4). This survey included 190 counties in West Virginia, Kentucky,
Virginia, Tennessee, North Carolina, Georgia, and Alabama.

In the introduction to this study, Dr. Rupert B. Vance reiterated the
prevalence of social and economic problems in the Appalachian Region by
writing: "Over a period of time the Appalachians have come to be recognized as
a definite problem area in the national economy. Variations are great among
communities and class groups and the majority will rank among comparable
groups in the Nation. Nevertheless, there remains a core problem which can be
recognized throughout a long period of regional history" (4, p. 3).

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2/ Underscored numbers in parentheses refer to items in Literature Cited,
p. 36.

The major theme through all the comprehensive studies of the Appalachian area is that this Region represents a persistent problem area in the national economy. Efforts have been made by Federal, State, and local groups to improve economic and social conditions. Federal welfare and public works programs fulfilled some of the needs, but these programs were national in scope and did not meet many specific needs of people in this Region. State and local governments also have had, and presently have, programs designed to increase employment and income in their respective areas.

Appalachia, however, extends across State lines and includes urban as well as rural areas. Programs designed to assist one State sector or urban area without provisions to assist adjoining areas have often proved less than successful. The future growth of Appalachia must provide for the interdependency of all subareas, and the interdependency of this Region with other regions and the Nation. Local, State, and Federal groups recently cooperated in proposing, through the President's Appalachian Regional Commission, a Federal-State economic and social development program designed specifically for ameliorating Appalachia's problems.

Purpose and Scope of Study

The purpose of this report is to examine data pertaining to the important economic trends in the Appalachian economy. Special attention is given to agricultural problems and opportunities, and emphasis is placed on employment trends in all sectors of the regional economy.

In recent years, technological innovations have influenced strong structural changes in agriculture in the United States, as reflected in the change from subsistence to commercial-type farming. The lack of suitable land resources for agricultural production in much of Appalachia has prevented many farmers from adopting the innovations necessary to make this transition. This inability to change from subsistence to commercial production has adversely affected the competitive position of much of Appalachia's agriculture.

Opportunities are limited in the Region's agricultural sector, but agriculture is an important part of the Region's economy. Therefore, it is important to examine the types of current agricultural adjustments and to indicate the problems and opportunities in this sector.

Since agriculture will remain a decreasing employment industry for the next decade or more, an examination of the trends in employment in other sectors of Appalachia's economy was necessary. If the labor released from agriculture and other basic industries, such as mining, is to be employed in Appalachia, the greatest opportunity for employment is expected in industries where trends indicate growth in employment.

In examining the direction and magnitude of changes that occurred in Appalachia's agriculture and other major industries between 1950 and 1960, comparisons are made between Appalachia, the surrounding area 3/, and the

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3/ Non-Appalachian counties in the Appalachian States.

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United States. These comparisons are made to present Appalachia's relative economic position. Since Appalachia is a region of many contrasts, intraregional comparisons are also made.

Only one State, West Virginia, lies entirely within Appalachia. The remainder is comprised of counties of 8 States. Therefore, it was necessary to assemble county data. Comparisons between areas, as well as over time, required that the county data be comparable. Data in various U. S. Department of Commerce, Bureau of the Census publications met this requirement best. Therefore, with only an occasional exception, the data in this report were obtained from Bureau of the Census publications.

The Study Area

The Appalachian Region, as defined for this report, was delineated by the President's Appalachian Regional Commission in July 1963. The Region includes 322 counties in Pennsylvania, Maryland, West Virginia, Kentucky, Virginia, Tennessee, North Carolina, Georgia, and Alabama. 4/

APPALACHIAN AGRICULTURAL PROBLEMS AND POTENTIALS 5/

Farm Population Changes

In recent decades, a large segment of the U. S. population has shifted from rural to urban residence. Between 1950 and 1960, for example, the percentage of rural residents in the United States dropped from 36 to 30 percent, while the percentage of urban residents increased from 64 to 70 percent. In the Appalachian Region, a similar but slower trend developed.

4/   There are actually 323 counties included in this report. Cobb County, Ga., was included in the tabulations before the boundary of the Region was determined in July 1963. At that time Ohio chose to remain out of the regional development program. On April 28, 1964, Ohio became a participating State in the Appalachian program, affecting 24 counties. South Carolina joined the program on July 20, 1964; 6 counties were designated at that time. About the same time, Kentucky added 5 counties to those designated previously. This report includes only those counties designated prior to July 1963.
5/   Much of the material in this section was developed previously by the authors for use in a special report, The Appalachian Region's Agriculture: Its Problems and Potentials for Development, prepared for the President's Appalachian Regional Commission. Individual State reports on agricultural problems and potentials were developed by Economic Research Service field staff and Agricultural Experiment Station staffs in Alabama, Georgia, Kentucky, Maryland, North Carolina, Pennsylvania, Tennessee, Virginia, and West Virginia. These State reports were used by the Commission to answer specific questions concerning agriculture in specific subareas of the region, and in preparation of those sections in the regional report concerned with obstacles and potentials for agricultural development.

While the percentage of rural residents declined from 54 to 51 percent, the increase in urban residents was only from 46 to 49 percent (table 1; all tables are in the appendix.)

Despite an increase in the urban population, the Region remained predominantly rural in 1960. Furthermore, most of Appalachia is more rural than the total figure indicates. The regional parts of Pennsylvania and Alabama, more industrially oriented than the rest of the Region, were the only State areas where over one-half of the population lived in urban areas. In the other State areas, the urban population varied from 45 percent in Maryland to only 18 percent in Kentucky (table 1).

Although Appalachia's total rural population decreased only slightly in 1950-59, its rural farm population declined sharply. This reduction characterized change in the composition of the population in Appalachia, as well as the surrounding area and the United States. However, the percentage decrease in the farm population in Appalachia (57 percent) was larger than the decrease in the surrounding area (43 percent) and the United States (43 percent) [table 2].

The farm population decrease is largely the result of two factors. The first, and most important, results from technological advances in agricultural production which have increased the productivity per worker. Fewer people are needed to produce the Nation's food and fiber requirements than in previous years. This technological revolution has caused a larger proportion of Appalachian farmers to leave agriculture than in other regions. This trend is attributed to the lack of suitable land resources for agriculture in much of Appalachia. Many Appalachian farmers have not been able to compete in producing and marketing farm products with farmers in other farming areas of the United States and subsequently moved from the farm or took off-farm employment. The second factor causing a reduction in the farm population is a change in the census definition of a farm. This change eliminated from the census count many of the smaller farms in Appalachia.

While the farm population decreased, the rural nonfarm population increased appreciably. However, regional nonfarm growth (28 percent) was less than that for the surrounding area (36 percent) and the United States (30 percent). Many of the new rural nonfarm residents in Appalachia did not actually change residence. For the most part, the classification change was the result of either farmers changing occupations or definitional change. Generally, rural nonfarm families are dependent upon nonagricultural income for their livelihood. However, many of these families produce significant quantities of food for their own use and enjoy other low cost-of-living advantages enjoyed by farm families.

Appalachian Agricultural Problems

Lack of Suitable Land Resources

The major obstacle to the development of agriculture in the Appalachian Region is the critical lack of land adapted to mechanized farming. The roughness of most of the uplands restricts their use for crop production.

However, some areas are suitable for orchard, vineyard, and pasture production. These crops usually do not require regular cultivation, and the climatic conditions are favorable for their growth. Furthermore, in both the northern and southern parts of the Region, some mountain plateaus contain some upland suitable for regular crop production.

The lack of land suitable for mechanized cultivation is shown in data on land capability. Data on land capability and limitation in land use for agricultural purposes applicable to Appalachia were derived from the Conservation Needs Inventory (10). These data were developed from information on sample area plots for soil, slope, erosion, and other land conditions as of 1958 and were expanded to entire counties.

The land capability classification scheme used by the Conservation Needs Inventory Committees places all the land included in the inventory acreage into 8 capability classes. 6/ The limitation in suitable land uses for agricultural purposes becomes progressively greater from class I to class VIII. 7/ Land in the first 3 classes is suitable for regular cultivation and has few limitations that restrict its use. Land in class IV is suitable for only occasional cultivation. Land in classes V through VIII is generally unsuitable for cultivation. Therefore, the majority of the land suitable for cultivation falls in classes I through III. Class IV land is only marginal cropland.

The distribution of inventory acreage by land capability classes is shown in table 3. The percentage of land in classes I through III (that best suited for cultivation) is lower in Appalachia than in the surrounding area or the United States. In Appalachia, only 31 percent of the inventory acreage is in classes I through III, compared with 55 percent in the surrounding area and 44 percent in the United States. An additional 14 percent of the acreage in Appalachia is class IV (marginal cropland), compared with 15 percent in the surrounding area and 12 percent in the United States.

Intraregional comparison of the distribution of inventory acreage by capability classes shows that the ratio of classes I-III land to total acreage is highest in the northern part, declines toward the center, where the terrain is more mountainous, and increases again toward the southern extremity.

The lack of classes I-III land severely limits production of crops requiring extensive cultivation in the Appalachian areas of West Virginia,

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6/ Inventory acreage includes all land except: (1) Land owned by the Federal Government other than cropland operated under lease or permit, (2) urban and built-up areas, and (3) water areas of less than 40 acres in size and streams less than one-eighth of a mile wide. Larger water areas and streams are not included in the total land area.

7/ The inventory acreage is not comparable to land in farms. The grouping of soils into capability classes was done on the basis of their capability to produce common cultivated crops and pasture plants, without deterioration over a long period, not on how the land was actually used. Farmland, as well as nonfarm land, was included in this classification.

Kentucky, Virginia, and North Carolina. Only 17 percent of the total inventory acreage in West Virginia, 16 percent in both Kentucky and Virginia, and 22 percent in North Carolina is in land capability classes I-III. Although some wide valleys and large moderate slopes are found in these areas, much of the cultivatable land is in small, isolated tracts which cannot be farmed efficiently with modern machinery. The steepness and roughness of the terrain surrounding many of these tracts prohibit their combination into larger tracts. Thus, much land which might be physically suitable for cultivation is not and cannot be economically cultivated.

The terrain in the regional part of Pennsylvania, Maryland, Tennessee, Georgia, and Alabama is not generally as rough as in the central part. The valleys are usually wider and the slopes are not as steep. However, the terrain in some localities, especially in central Pennsylvania, eastern Tennessee, and northern Georgia, is as rough as in the central part of Appalachia.

The topography has impeded development of large farms, which are characteristic of the relatively more prosperous farming areas of the United States. In 1959, the average size Appalachian farm contained only 106 acres, compared with 132 acres in the surrounding area and 302 acres for the United States. In general, acreage per farm increased between 1950 and 1959. However, there was a much smaller increase in farm size in the Appalachian Region than in the surrounding area or the United States (table 4). Although large acreages are not essential for success in some types of farming (specialty crop and poultry farms are examples), gross farm income tends to increase with size of farm. Efficiency in managerial operations and application of mechanized power and other new technology also tend to rise as gross income increases. Operators of small farms often cannot efficiently utilize new technological advances.

Total farm acreage in the Appalachian Region decreased 22 percent during the 1950 decade. In the same period, total farm acreage in the surrounding area decreased 16 percent. In contrast to these changes, total farm acreage decreased only 3 percent nationally (table 4). With the exception of Maryland and Tennessee, a greater relative decrease occurred in farm acreage in the Appalachian counties than in the surrounding area because: (1) A larger relative decrease occurred in farm numbers in the Appalachian counties than in the surrounding area (table 5); and (2) farms in mountainous terrain are not as easily combined into larger units as farms in areas having more level topography. Many Appalachian farmers have retired their land from agricultural production because they have been unable to compete successfully in agricultural production.

Topography limits harvested cropland acreage in Appalachia more than total farm acreage. The general roughness of the land surface has resulted in a relatively small acreage of harvested crops (22 percent of the total farm-land in 1959), which are produced largely without the advantage of advanced mechanical equipment and power.

There is considerable variation in the harvested cropland as a proportion of the total farmland in the State portions of Appalachia. The relationship between harvested cropland and total farmland chiefly follows the same

pattern as the relationship between land capability classes I-III acreage and total inventory acreage. For example, in West Virginia, Kentucky, Virginia, and North Carolina, the proportion of total inventory acreage in land capability classes I-III is relatively low, ranging from 22 percent in North Carolina to 16 percent in Virginia (table 3). Similarly, the proportion of farmland from which crops were harvested in 1959 ranged from 17 percent in North Carolina to 14 percent in West Virginia (table 6). In Pennsylvania, Maryland, Tennessee, and Alabama, where the proportion of total inventory acreage in land capability classes I-III is greater, the proportion of farmland from which crops were harvested in 1959 was also greater. The only exception to this pattern was in Georgia, where 34 percent of the land is in land capability classes I-III, but only 15 percent of the total farmland was in harvested crops.

The shortage of suitable agricultural land resources in many Appalachian counties and the problems of mechanization and expansion in farm size associated with this shortage is reflected in the change in farm numbers and agricultural employment. 8/ The trend established in the United States over the last decade has been a sharp reduction in farm numbers and employment. Similar trends have developed in the Appalachian Region; however, changes have been proportionally greater (tables 5 and 7).

Decreases in farm numbers and agricultural employment have generally been associated with industrialization. Continued industrialization usually results in a shift of operators of less productive farms from full-time farming to part-time farming, and eventually to full-time employment in industry. This occupational change has occurred in varying degrees in Appalachia and the United States depending, of course, on the extent of industrialization and job opportunities available to farm operators, given their levels of skills and education.

In areas where coal production is heavily concentrated, however, the decrease in farm numbers is not associated with industrialization. Although the number of farms declined in all Appalachian counties between 1950 and 1959, a group of counties in the coal areas of southern West Virginia, eastern Kentucky, and southwestern Virginia had the largest proportional decreases. The largest proportional decrease in any Appalachian county occurred in McDowell County, W. Va., where approximately 79 percent fewer farms were reported in 1959 than in 1950.

8/ According to one comparison, there are more farms in Appalachia than people employed in agriculture in the Region. The number of farms was taken, from the U. S. Census of Agriculture and the number of people employed in agriculture from the U. S. Census of Population. In the Census of Population, the occupation of a worker was determined by the number of hours worked per week at a particular job. If the worker worked at two or more jobs, the job at which he worked the greatest number of hours during the week of the interview determined the occupational category in which he was placed. Since a large proportion of Appalachia's farmers work off their farms, many would be listed as nonagricultural workers. Due to the small proportion of the civilian labor force employed in forestry and fisheries, workers in these industries were included with agricultural workers.

In 1950, most people listed by the Bureau of the Census as farmers in this group of counties received a greater proportion of their income from their mining jobs than from their farms. As the demand for coal decreased and the mining industry mechanized, many of these miner-farmers lost their mining jobs. Since most of these part-time farmers did not control sufficient agricultural resources to earn even a subsistence from farming, many were forced to migrate to other areas in an effort to find employment. Consequently, a large number of units identified as farms in 1950 were abandoned by 1959. Similar situations occurred in other Appalachian counties where coal is mined; however, a larger proportion of the farmers were affected in the southern West Virginia-- eastern Kentucky--southwestern Virginia area than in other coal producing areas.

Control of Insufficient Resources

The lack of suitable land resources for agriculture in much of Appalachia and the problems of mechanization and expansion associated with this shortage have adversely affected the competitive position of much of Appalachia's farming. The cost of producing most agricultural products is higher in most areas of the Appalachian Region than in better farming regions of the United States. If Appalachian farmers are to remain in farming, they must compete in the production and marketing of farm products with farmers in other farming areas.

Most farm operators in Appalachia control insufficient resources to produce an income comparable to that of farm operators in other sections of the United States. For example, Appalachian farm operators have less capital invested in land and buildings than farm operators in the surrounding area or the United States. In 1959, the average value of land and buildings for all Appalachian farms was $12,032, compared with $17,943 for the surrounding area and $33,173 for the United States. In the same year, the value of investment in land and buildings for commercial farms in Appalachia ($16,416) was higher than for all farms in the Region but lower than the values reported for the surrounding area and the United States (table 8). 9/

9/ In the 1950 and 1959 agricultural censuses, farms were classified on the basis of gross farm sales as commercial and other farms. In both censuses, commercial farms were divided into 6 economic classes. The 1959 class inter- vals were different from those used in 1950. In 1950, all farms with a value of sales of $1,200 or more were classified as commercial. Farms with sales of $250 to $1,199 were also classified as commercial, provided the farm operator worked off the farm less than 100 days per year, and provided other income the farm family received was less than the value of farm products sold. In 1959, all farms with gross sales of $2,500 or more were commercial. In addition, farms with sales of $50 to $2,499 were classified as commercial if the operator was under 65 years of age, did not work off the farm 100 days or more per year, and other income was less than the farm sales. In both censuses, the above restrictions apply only to class VI farms.
Operators of farms in classes I through V would work off-farm more than 100 days, and other income the family received could exceed the value of farm products sold.

Between 1950 and 1959, the average value of investment in land and buildings per farm decreased in Appalachia relative to the surrounding area and the United States. In 1950, the average value of land and buildings for all farms in the Region was 80 and 43 percent of the average value invested in the surrounding area and the United States, respectively. In 1959, the average value had decreased to 67 and 36 percent, respectively. A similar relationship existed between the average value of land and buildings per commercial farm in the Appalachian Region, the surrounding area, and the United States.

Farm income received from farm products sold in the Appalachian Region is low. Furthermore, the Appalachian farm income gap seems to be widening. In 1959, the average value of all farm products sold in the Region was only $3,330 per farm. Although the total value of farm products sold in Appalachia increased 50 percent from 1950 to 1959, a greater disparity existed in sales per farm between Appalachia and the surrounding area and the United States in 1959 than in 1950. In 1950, average sales per farm were $2,766 less in Appalachia than in the United States, and $1,061 less in Appalachia than in the surrounding area. By 1959, the difference between average sales per farm in Appalachia and the United States, and Appalachia and the surrounding area was $4,888 and $1,700, respectively (table 9).

During the 1950's, the regional portions of some Appalachian States experienced considerably greater increases in total farm sales than those in other States. In the regional part of Georgia, total farm sales increased 126 percent. This large increase, occurring at the same time farm numbers were decreasing, increased the average value of farm sales from $1,276 in 1950 to $5,512 in 1959. A large proportion of this increase in Georgia, as well as in Alabama and North Carolina, came from the large increase in the quantity of broilers produced in these areas.

The regional part of Kentucky had the lowest average value of sales per farm of any of the Appalachian State portions in 1950 and 1959. For this area, the average value of sales per farm was only $881 in 1950 and $1,844 in 1959 (table 9).

As a result of low farm income, a substantial number of Appalachian farm operators are unable to provide their families with a level of living comparable to that enjoyed by other farm families in the United States. Level of living indexes prepared by Cowhig (3) reveal that the average farm operator level of living index for the Appalachian Region in 1950 and 1959 was 34 and 72, respectively. In the same years, the indexes for the United States were 59 and 100. The regional part of Pennsylvania was the only State portion of Appalachia for which the indexes for 1950 and 1959 were higher than the national average (table 10).

Another measure of living levels of Appalachian farm families is the condition of housing. In Appalachia, 29 percent of the farm homes are deteriorating, that is, they are in need of major repair; and 9 percent are in such dilapidated condition they endanger the safety and health of the occupants. Corresponding U. S. figures are 23 percent deteriorating and 7 percent dilapidated (6, p. 4).

Data on plumbing facilities provide further evidence of the condition of Appalachian farm housing. Over one-half of Appalachia's farmhouses lack complete plumbing facilities, compared with just over a third for the United States (6, p. 5).

Many farm operators, unable to earn an income from farming that will provide an adequate level of living for their families, have turned to nonfarm employment as a means to supplement their farm income. As would be expected in Appalachia where farm income is relatively low, the percentage of farm operators working off the farm and having income from nonfarm sources is high. Furthermore, in 1950-59, there was a proportional increase in off-farm work in the Region, as well as in the regional portion of each State. The percentage of all farmers in the Region working off-farm 100 days or more per year increased from 32 percent in 1950 to 38 percent in 1959 (table 11). Although the percentage of farmers working off-farm more than 100 days in 1950 and 1959 was greater in Appalachia than in the surrounding area and in the Nation, the percentage increase in farmers working off their farms 100 days or more was slightly greater in the surrounding area and in the United States than in the Appalachian Region.

The proportion of all farm families having incomes greater than the value of farm products sold was greater than the proportion of farmers working off-farm 100 days or more per year. This was true for the Appalachian Region, as well as for the surrounding area and the United States.

Regular commercial farm operators and their families do not engage in nonfarm work to the same extent as noncommercial farm families. However, many commercial farm operators in the Appalachian Region work off their farms. The percentage of Appalachian commercial farm operators working off their farms 100 days or more increased from 9 to 15 percent from 1950 to 1959. Furthermore, the percentage having incomes from other sources greater than farm sales increased from approximately 12 to 15 percent. The percentage of commercial farm operators reporting these circumstances was higher in the Appalachian Region than in the surrounding area and the United States; however, the differences were small. 10/

Deficiencies In Education

Many areas in the Appalachian Region have serious deficiencies in their educational programs which have severely limited the opportunities of the farm and nonfarm population. In 1960, only 32 percent of Appalachia's population

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10/ The group of commercial farm operators having extremely low incomes is not included in the data in table 11. This group operated class VI farms. According to the census definition of class VI farms, the operator could not work off-farm as much as 100 days per year, and other income he and his family received could not exceed the value of the farm sales. Therefore, for 1950, all commercial farms with gross sales of less than $1,200 were excluded from the data in table 11, and for 1959, those farms with gross sales of less than $2,500 were excluded.

25 years old and over had finished high school, compared with 42 percent for the remainder of the United States. In this respect, no State section of Appalachia reaches the national average (7, p. 8).

The Region also lacks an adequate supply of college graduates. Only 5 percent of the population 25 years old and over had completed 4 years of college as of 1960. This compares with 8 percent in the remainder of the United States.

If this segment of the Appalachian population was educated to the same level as the corresponding group in the rest of the United States, the region would have an estimated 800,000 more high school graduates and 226,000 more college graduates (7, p. 10).

Appalachian Agricultural Potentials

The potential for commercial agriculture in the Appalachian Region is limited primarily because of its topography. During recent decades, Appalachia's competitive position in the production and marketing of most agricultural products has declined relative to other regions. For farm operators in Appalachia to compete successfully with those in other farming areas, they must secure greater efficiencies in production and increase their output and sales. They must gain control of adequate land and capital resources and accelerate the adoption of known technological innovations, especially improved managerial techniques.

Since Appalachian farms are relatively small, many must be combined into economic units. A major obstacle to this needed change, however, is the lack of agricultural land in units large enough to be feasibly combined. Only 31 percent of the total agricultural land in the Region is suitable for normal cultivation of crops -- class I-III; another 14 percent is suitable for only occasional cultivation -- class IV (table 3).

The lack of cultivable land is very evident in Appalachia, including most of West Virginia and the regional portions of Kentucky, Virginia, and North Carolina. For example, less than 3 percent of the agricultural land is suitable for normal cultivation in Logan, McDowell, and Mingo Counties, W. Va.; Buchanan and Wise Counties, Va.; and Harlan, Letcher, and Perry Counties, Ky. The lack of agricultural land does not seem to be as great a deterrent to farm consolidation in much of the Appalachian portions of Pennsylvania, Maryland, and Alabama and in many Tennessee and Georgia counties.

There are, however, other obstacles to farm consolidation, even if suitable land is available. Consolidation involves the movement of people, which is a slow process. The average age of all farm operators in Appalachia is approximately 52 years (14). People at this age level are reluctant to sell their land and homes to move to other areas. In addition, when land is placed on the market, it is often priced so high that a farmer cannot justify its purchase for agricultural use. Where land prices are lower, land capability is also lower. This is not to imply that no farm consolidation will occur in Appalachia. Some consolidation will occur even in areas where suitable land is scarce.

Since it is unlikely that farm consolidation will occur on an appreciable scale in most sections of Appalachia, the farm operators who will most likely be able to compete successfully in commercial agricultural production are those who presently control adequate land resources. Adjustments on these farms in the form of greater capital investments, use of improved productive practices, and better management will help increase farm income.

Most of those farm operators who have been able to adjust to the changes in agriculture in the 1950's probably will be able to do so in future years. Basically, farmers who, as a group, were able to adjust have been operators of commercial farms with gross sales of $2,500 or more per year, and especially those with farm sales greater than $10,000 per year.

In 1959, there were 31,000 commercial farms in the Appalachian Region having yearly gross sales of $10,000 or more. Operators of these farms control sufficient land and capital resources to produce relatively large outputs of agricultural products. Although this group of farms comprised only 17 percent of all commercial farms in the Region (and less than 10 percent in central Appalachia where the terrain is extremely rough), compared with 33 percent in the United States, there was a large proportional increase in their numbers from 1950 to 1959. In 1950, this group comprised only 4 percent of all Appalachian commercial farms (table 12).

Farm operators with yearly gross farm sales of $2,500 to $9,999 usually control fewer land and capital resources than operators in the $10,000 a year group. However, many in this lower income group will be able to continue to compete successfully in the production of agricultural products with the resources they now control and are able to acquire. Further, the increase in farms in this income category indicates that some farmers have been able to expand their operations and increase their incomes. In 1959, there were 89,000 Appalachian farms in this category. Of these, 36,000 (9,000 more than in 1950) had yearly gross sales of $5,000 to $9,999, and 53,000 (3,000 more than in 1950) had yearly gross sales of $2,500 to $4,999 (table 12).

In general, the farms having gross sales of $2,500 or more per year, especially those with farm sales greater than $10,000 per year, constitute the major part of the agricultural potential in the Appalachian Region. Most of these farmers must increase their output and sale of farm products to continue to compete successfully, however. For some, this will necessitate an increase in farm acreage. For others, external expansion is either not possible or feasible. Farmers in this latter group will have to expand production greatly on the present farm unit if they are to compete. This will require increased use of fertilizer, lime, improved varieties of crops, improved livestock, and higher levels of management.

The commercial farmers having yearly gross farm sales of less than $2,500 have limited resources for producing agricultural products. The large decrease in numbers in this group--from 213,000 in 1950 to 64,000 in 1959--indicates that the majority of these farmers have been unable to compete successfully in

agriculture. 11/ Therefore, as a group, they present very little potential for future agricultural production. In West Virginia, for example, the average value of all farm products sold by this group of farmers was only $849 in 1959. This group represented 39 percent of the total number of commercial farms in West Virginia but sold only 5 percent of the agricultural products sold by commercial farmers. Similar situations exist in the regional portions of the other Appalachian States.

These low-income farmers have two alternatives to increase their incomes. The first is to become competitive through farm enlargement and increased agricultural production. When one considers the relatively low rate of return realized by even the best farmers, it seems doubtful that many of these low-income farmers can accumulate enough capital to acquire the farm resources necessary to move to higher income levels. Considering the large decrease in the number of farms in this group from 1950 to 1959, it appears that only a limited number were able to make the transition. Assuming that all the increase in the number of Appalachian farms having yearly gross sales of $2,500 or more came from this group (see footnote 11), only 1 of 5 moved into the higher income groups. A limited number of these farmers may be able to increase their incomes and levels of living on the units they now own by producing a specialty crop which yields a high return and requires a low capital investment.

The second alternative available to farmers whose yearly farm sales are less than $2,500 is to supplement their low farm income with income from part-time off-farm employment. This would allow them to improve their level of living and retain their present farms without increasing their investment in agricultural resources. This alternative, however, is not available to all low-income farmers. Many have only limited skills for off-farm work. In addition, the lack of jobs in the Region, as reflected in the high rates of unemployment especially in rural areas, further limits this alternative.

Income earned from nonfarm employment has enabled many low-income farmers to provide their families with a desirable level of living. Part-time farmers, as defined by the 1959 Census of Agriculture, were those who sold less than $2,500 worth of farm products per year, were less than 65 years old, and either worked off-farm 100 days or more per year, or the income earned from nonfarm sources by the farmer and members of his household was greater than the value of farm products sold.

11/ Between 1950 and 1959, a large number of Appalachian commercial farm operators having farm sales of less than $2,500 per year apparently left farming. According to census data, this group decreased by 149,000. For these operators to have remained in agriculture in the Appalachian Region, as defined by the census, their status must have changed so that they would have been reclassified and placed in one of the two farm groups that experienced gains in farm numbers from 1950 to 1959. These two farm groups were commercial farms with yearly farm sales of $2,500 or more and part-time farms. Farm numbers in these groups increased by 75,000 (table 12). Assuming that all this increase was comprised of farmers classified as having farm sales of less than $2,500 in 1950, which is unlikely, this leaves over 70,000 farm operators in this low-income group unaccounted for in 1959.

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Although the percentage of all farmers in Appalachia represented by this group is large--38 percent in 1959 (table 12)--the value of farm products sold by this group comprised only a small proportion of the value of all farm products sold in 1959. For example, in West Virginia, these part-time farmers comprised nearly half of all farm operators, but produced only 11 percent of the value of all farm products sold. The average value sold per farm was only $516. Therefore, on the average, these farmers are not receiving sufficient income from the sale of farm products to provide a subsistence level of family living. However, the additional income they receive from nonfarm sources plus the value of agricultural products produced for home consumption helps to increase their level of living.

In general, the size of farm owned by Appalachian part-time farmers is too small to justify economically the use of modern technology. They will find greater competition as agriculture becomes more mechanized with still greater uses of modern technology in production. Therefore, they will probably not contribute significantly to future agricultural production in the Region.

For this group of part-time farmers and the commercial farmers with yearly gross farm sales of less than $2,500, off-farm work will be necessary to obtain a level of living comparable with that of other farmers, or with nonfarm workers. Therefore, improvement of their present level of living will depend largely upon the availability of off-farm work and their skills and ability to perform nonfarm work, rather than upon agricultural improvement.

Potentials for Livestock

The land in much of Appalachia is not favorable to the production of most major field crops, since most cultivated crops cannot be economically produced on steep hillsides or in narrow, irregular parcels of land along streams and roads. The topography, therefore, dictates an agricultural economy based primarily on livestock production. The value of livestock and livestock products sold by Appalachian farmers indicates the importance of livestock as a farm enterprise, and the increase in this value indicates that livestock production is becoming more important. In 1959, this value totaled nearly $935 million, representing 69 percent of the total value of all farm products sold, and was $375 million greater than the value of livestock and livestock products sold in 1950. In that year, 62 percent of the total value was derived from livestock (table 13).

Data on farms, by type, also show that livestock gained in importance relative to crop production. 12/ In 1959, the main enterprise, based on source of income, on 52 percent of Appalachia's commercial farms was some type of livestock, compared with about 40 percent in 1950 (tables 14 and 15).

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12/ In the 1950 and 1959 Censuses of Agriculture, commercial farms were classified on the basis of the relationship of the value of sales of one or more enterprises to the total value of sales of all farm products sold. A farm was classified as a particular type when 50 percent or more of the total value of farm sales was derived from a single enterprise or from a group of similar enterprises.

Intraregional differences in the relative importance of livestock are quite large. Despite relative gains in all State portions of the Region, less than one-half the commercial farms in Kentucky, Tennessee, North Carolina, and Alabama were in the livestock category in 1959. Burley tobacco, a crop yielding high returns per acre, comprised the main cash income on many farms in Virginia, Kentucky, Tennessee, and North Carolina. Cotton was grown on many Alabama farms.

Beef.--The possibility of expanding production of livestock in Appalachia varies with the livestock enterprise. Beef production, especially that of feeder cattle, appears to have the best possibilities for Regionwide expansion, however. Substantial increases in beef cow numbers from 1950 to 1959, while decreases occurred in other forage-consuming livestock numbers, indicate a definite trend toward expanded beef production throughout the Region.

While beef cow numbers increased in the Appalachian Region, the surrounding area, and the United States from 1950 to 1959, Appalachia had a greater relative increase than either the surrounding area or the United States. During these years, beef cow numbers increased 135 percent in Appalachia, compared with 110 percent in the surrounding area and 54 percent in the United States (table 15). This increase in beef cow numbers in Appalachia more than offset the decrease in dairy cow numbers (table 5). This shift toward beef production reflects an effort to utilize pasture and hay released by other kinds of livestock.

The cow-calf enterprise is the principal form of beef production in the Appalachian Region. This type of livestock enterprise is found extensively throughout most of the Region; and with the exception of central and southern West Virginia, the extreme eastern counties of Kentucky, and the extreme western counties of Virginia, where roughness of terrain prohibits the establishment of productive pastures, a good potential seems to exist for expansion of feeder cattle production.

The continuing growth in beef production in Appalachia depends on several factors, however. One of the major factors inhibiting expansion in beef as well as other livestock enterprises is the requirement for large capital investment. Many farmers, even in areas where feeder cattle can be economically produced, cannot or are not willing to invest the necessary capital.

The national demand for beef will also greatly influence regional production. While there is an expanding demand for beef, buyers are demanding a product of high uniform quality and continuing quantity. Appalachian farmers must fulfill these requirements or buyers will find a supply elsewhere. Appalachian producers appear to be able to compete with producers in other areas in this respect, however.

Expansion also depends upon increases in productivity in livestock, and hay and forage crops. While adequate pasture and hay land are available in most areas of the Region for the expansion of beef herds, pasture and hay improvement through increased use of lime and fertilizer and the development of grasses better adapted to the climate and topography of Appalachia will be necessary to increase the amount of forage available to beef producers.

Increased efficiency in the production of feeder cattle, resulting in lower feed requirements and costs, will further improve the competitive position of Appalachian livestock producers.

The possibility for increasing production of other kinds of livestock appears to be more limited. While there seems to be some potential for other livestock enterprises in certain areas, feeder cattle seem to have the greatest Regionwide possibilities.

Dairy.--Dairying is a declining source of farm income in Appalachia. While cow numbers declined in the Region from 1950 to 1959, as well as in the United States (table 15), milk production increased in the United States. Greater production per cow was responsible for this increase. In the Appalachian Region, however, total milk production declined in most areas, and expanded at only a low rate in other areas. In areas where production expanded, mostly near urban centers, production is becoming concentrated on fewer and larger farms. Processor requirements that producers install new sanitation and storage equipment, such as the bulk tank, are making it difficult for small farm operators to compete in the production for fluid milk markets.

Increases in the production of milk depend upon increases in demand. An increase in demand within Appalachia depends upon within-Region increases in population and per capita consumption of milk. Since the population of Appalachia increased only 1.5 percent from 1950 to 1960, and actually declined in 3 State portions, any increase in demand for dairy products resulting from population increases will be small until this population trend is changed. Increases in per capita consumption of milk within the Region are not likely to increase the demand for milk by any appreciable amount.

Increases in production in Appalachia also depend on the competitiveness of Appalachian farmers with producers in other areas in supplying the demand for dairy products in markets within as well as outside the Region. Appalachian producers are disadvantaged in this respect since they are faced with relatively high production and marketing costs. Milk production involves the use of substantial quantities of grain and other concentrates. Since Appalachia is a deficit grain-producing area, most of these supplies must be imported. Unfavorable terrain and low density of dairy farms also increase the marketing cost of fluid milk.

Poultry.--Portions of the Appalachian Region are important in commercial broiler production and to a lesser extent in commercial egg production.

Georgia, Alabama, and North Carolina ranked first, third, and fourth, respectively, in the United States in total broilers sold in 1959 (9, p. 4-19). The Appalachian counties of these States accounted for 77, 86, and 30 percent of the total commercial broiler production in their respective States in 1959, and 13, 8, and 2 percent, respectively, of the total commercial broiler production in the United States (table 16). Broiler production for the Region accounted for 29 percent of the national production in 1959 (table 18). The regional portions of Alabama, Georgia, and North Carolina comprise major broiler-producing areas. The efficiency of production in these areas, relative

to other broiler-producing areas, should permit producers to make the adjustments necessary to remain competitive.

In the regional portions of the other Appalachian States, the potential for increased broiler production does not appear as favorable. Although substantial quantities of broilers are produced and sold in these areas (table 17), producers are finding it increasingly difficult to compete with Alabama, Georgia, and North Carolina areas.

With the exception of regional portions of Pennsylvania, Georgia, and Alabama, commercial egg production is not a very important enterprise in the Appalachian Region. As shown in table 17, the Appalachian counties of these States accounted for 51, 54, and 72 percent of the total egg production in their respective States in 1959; and 3, 2, and 1 percent, respectively, of the total egg production of the United States. Commercial egg production for the Appalachian Region accounted for only 9 percent of the total U. S. production.

Other Livestock.--The potential for expanding production of other livestock enterprises in Appalachia is limited to local areas. For example, hog production decreased in many areas, and expanded only slightly in other areas during 1950-59 (table 18). High transportation costs increase the cost of grain and other feedstuffs that must be shipped into the Region, thereby increasing the cost of production relative to other major production regions.

Sheep production is only a minor livestock enterprise in most areas. In some areas sheep numbers increased between 1950 and 1959, but in others they declined sufficiently to cause a decrease for the Region (table 18).

Potentials for Crop Production

Because of topographic and climatic conditions, crop production in the Appalachian Region is adapted to livestock production. Forage crops necessarily occupy an important place in the cropping system in all parts of the Region. The cool, moist climate is favorable for producing grasses. Production of crops such as tree fruits, tobacco, and cotton are important only in local areas.

During 1950-59, there was a significant shift from grain to forage production (table 19). This trend will probably continue as forage-consuming livestock increase in importance in Appalachia.

Other field crops comprise an important source of farm income only in selected areas. Burley tobacco is the principal cash crop on many of the smaller farms in the regional parts of Kentucky, Virginia, Tennessee, and North Carolina, while cotton is produced on many farms in Alabama. Small acreages of these crops will continue to be produced in the Region. However, acreage increases depend upon acreage allotment and price support programs.

Tree fruits, especially apples and peaches, comprise an important source of farm income only in certain areas of Appalachia. The most important apple-producing areas are in northeastern West Virginia, northern Virginia, western

Maryland, and in Pennsylvania. Apples are produced on a smaller scale in southern Virginia and in parts of North Carolina. Most of these producers are highly efficient and are able to compete successfully with producers in other regions.

EMPLOYMENT TRENDS IN MAJOR NONAGRICULTURAL ECONOMIC ACTIVITIES

Declining employment opportunities in Appalachia's agriculture have forced many workers to turn to nonagricultural activities in search of fuller employment and higher incomes. Between 1950 and 1960, a total of 335,000 workers dropped out of the agricultural labor force (table 7). The technological and economic pressures that have forced workers out of agriculture in the past are expected to continue. Productivity of farm labor is expected to increase as farm machinery is made more efficient and other technological innovations are adopted. Therefore, between 1960 and 1975, U. S. agricultural employment (farmers, farm managers, farm laborers, and foremen) is expected to decline an estimated 28 percent, or an average of 1.9 percent per year ([20], p. 244). Due to the strong competitive conditions confronting Appalachian farmers, the pressures for shifts of workers out of agriculture in Appalachia will probably be at least as great as the U. S. average.

This development raises a major question. Will these displaced agricultural workers be able to find jobs in other sectors of the Appalachian economy, or will they be forced to migrate to labor markets outside of Appalachia, or will they be forced to join the unemployed? The answer will depend upon the characteristics of the displaced workers as well as the condition of the economy inside and outside Appalachia. For example, nonfarm employment opportunities for farm people will depend upon (1) the age, education, and training of the displaced worker; (2) his ability to acquire additional training and new skills to perform nonagricultural work; (3) his willingness to acquire additional training and to move to areas of employment; (4) the general condition of the economy outside Appalachia; (5) the demand situation for products produced by industries in Appalachia; and (6) the employment situation in industries in Appalachia.

No attempt will be made in this section to fully investigate any of these characteristics or conditions. Generally, only employment trends of Appalachia's major nonfarm economic activities will be examined. It is assumed that the greatest opportunity for nonfarm employment in Appalachia will be in industries where trends indicate increases in employment.

Mining

Mining has generally been recognized as one of Appalachia's major industries and has been considered a key element in the Region's economic growth. Traditionally a large user of labor, mining has provided employment for thousands of workers in the extraction and processing of minerals.

In terms of product value and employment, coal is the most important mineral in the Appalachian Region. In 1960, nearly 65 percent of the Nation's

production of bituminous coal and lignite, and the total production of anthracite coal, was produced in Appalachia (18). 13/ In that same year, approximately 85 percent of Appalachia's total mineral industry employment was engaged in mining and processing bituminous coal. Limestone, building sand, and stone are the other important minerals mined in the Region. Natural gas and petroleum extraction also provide some employment.

Regional production of bituminous coal is concentrated in an elongated triangle; with the base in north central Pennsylvania and the vertex in Alabama. In 1960, bituminous coal was produced in 134 Appalachian counties. The counties were distributed as follows: 29 in Pennsylvania, 2 in Maryland, 36 in West Virginia, 32 in Kentucky, 7 in Virginia, 17 in Tennessee, 1 in Georgia, and 10 in Alabama. The regional portion of North Carolina was the only State area in which no coal was produced. The anthracite coal was produced exclusively in 4 counties in east central Pennsylvania.

The economies of many communities in the heavily concentrated coal-producing areas are almost entirely dependent upon coal. The loss of traditional coal markets in recent years has created substantial unemployment and income losses. Adding to the reduction in employment has been the additional effect of an industrywide mechanization program.

The seriousness of the problem is accentuated in that few alternative employment opportunities are available in these communities. Since the location of a coal-mining operation is controlled by the natural location of coal, mines are frequently located in rugged terrain, great distances from urban centers. These isolated areas are often unfavorable to the location of industries other than mining, and ordinarily few if any alternative employment opportunities exist.

Changes in Coal Production

The peak of U. S. bituminous coal and lignite production was reached in 1947, when nearly 631 million tons were mined. By 1950, production had dropped to 516 million tons and by 1960 had declined to only 416 million tons (18, p. 5). This decline was due largely to a decline in demand by railroads as they changed from steam to diesel power, and to the switch from coal to oil and gas for space heating.

In 1960, consumption of bituminous coal by railroads was 59 million tons less than in 1950, and total retail deliveries were 54 million tons less. Furthermore, the 1960 consumption by coke oven plants and steel and rolling mills was down 26 million tons below the 1950 level. The decline in these markets was partially offset by an increase in demand by electric power utilities, however. In 1960, a total of 86 million tons more were used in the generation of electricity than in 1950 (15, p. 723). Even this increase in demand has been curtailed by an increase in output of electricity per unit of

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13/ The production of bituminous coal and lignite is combined in the Bureau of Mines publications. However, there is no lignite produced in the Appalachian Region.

coal consumed. In 1950, 1.19 pounds of coal produced 1 kilowatt-hour of electricity; in 1960, only 0.88 pound produced the same amount of power (15, p. 537).

As a result of the decrease in demand, regional production of bituminous coal declined 21.6 percent from 1950 to 1960 (table 20). During the same period, the value of coal produced decreased approximately 25 percent, and the average price received per ton decreased from $5.26 to $5.07.

The proportional decrease in bituminous coal and lignite production in the United States was slightly less than in the Appalachian Region (19.5 percent, compared with 21.6 percent). However, production in the surrounding area increased 26.7 percent. In 1960, the entire output in the surrounding area was produced in Western Kentucky and in 1 county in Virginia (8, p. 3).14/

In an effort to cut production cost so as to compete with other fuels, coal producers adopted measures to increase the productivity of their employees. The use of equipment such as cutting machines, mechanical cleaners, and continuous mining machines, which combines the extraction and loading of coal into one operation, brought about substantial productivity gains. In 1950, the average of tons produced per man-day for the entire industry was 6.77. By 1960, this figure had increased to 12.83, a 90 percent gain. In Appalachia, the increase in productivity (86 percent) was only slightly below the industry average (table 21).

Changes in Employment

The combined effects of declining demand and rising productivity have resulted in a substantial reduction in employment in the coal industry. Between 1950 and 1960, regional employment in mining declined from nearly 452,000 to 186,000, a loss of approximately 265,000 jobs. 15/ The large coal-producing areas suffered the greatest loss in employment, with the regional portions of Pennsylvania, West Virginia, and Kentucky losing approximately 128,000, 75,000, and 31,000 mining jobs, respectively (table 22).

A substantial decrease also occurred in the percentage of the regional labor force employed in mining from 1950 to 1960. The percentage employed in mining decreased from 8.6 percent in 1950 to 3.5 percent in 1960. Larger changes occurred in West Virginia and in the regional portion of Kentucky. In 1950, approximately one-fifth of the civilian labor force in West Virginia and in the regional part of Kentucky was employed in mining. By 1960, 10 percent of West Virginia's labor force and approximately 12 percent of the Appalachian portion of Kentucky's labor force was employed in mining.

The economic impact of the decline in coal production was much greater in areas where coal mining was the major sourse of employment. In 1950,

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14/ The coal mined in western Kentucky is used mainly for thermal generation of electricity.

15/ These employment data include total employment in the mineral industry. However, approximately 85 percent of the regional mineral industry employment is engaged in bituminous coal mining.

as much as 40 percent of the civilian labor force was employed in mining in 16 Appalachian counties; 30 to 39.9 percent was employed in mining in 9 counties; and 20 to 29.9 percent was so employed in 21 counties. The data in table 24 indicate the percentage of the total regional change in bituminous coal production, employment in mining, unemployment, and net outmigration from 1950 to 1960 attributable to these 46 counties. The decrease in total bituminous coal production in these counties accounted for 61 percent of the total regional decrease, while over 66 percent of the regional decrease in mining employment occurred in these counties.

With few alternative employment opportunities available, unemployed miners were forced to move to other areas to seek employment. By 1960, nearly 27 percent of the 1950 population of these counties had moved away. This large outflow of people accounted for nearly 43 percent of the total regional outmigration from 1950 to 1960. Not all the unemployed left these counties, however, since 26 percent of the total regional increase in the unemployed was located there in 1960.

Manufacturing

A common conception of the Appalachian Region is that it is predominantly an agricultural and mining area. However, except for the regional portion of Kentucky, more workers are employed in manufacturing than in agriculture and mining combined.

Between 1950 and 1960, regional employment in all manufacturing industries increased nearly 213,000, or 15.4 percent. While regional manufacturing employment growth did not attain the national rate of 19 percent, growth was substantial in the face of declining employment in agriculture and mining. Moreover, in 1960, manufacturing employment comprised a larger proportion of the civilian labor force in the Appalachian Region (30.1 percent) than in the United States (25.7 percent). See table 23.

There was a considerable range in the manufacturing employment growth rates for regional portions of the Appalachian States. The growth rates for Pennsylvania, Maryland, and West Virginia were much lower than the rates for the other State areas. Manufacturing employment increased less in Maryland (2.2 percent), and more in Georgia (37.8 percent), than in any other State portion of the Region.

Some State portions are more industrialized than others. Kentucky in 1960 was the least industrialized, with less than 13 percent of the labor force employed in manufacturing. The next lowest was West Virginia, where just over 21 percent of the labor force was so employed. The highest proportion was in Georgia, where nearly 39 percent of the labor force was employed in manufacturing.

Manufacturing Employment by Industry Group

The distribution of regional employment by manufacturing industry group

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in 1950 and 1960 is presented in table 25. The data in tables 26 through 34 show employment by each manufacturing industry group for each State portion of Appalachia.

The regional employment growth rates from 1950 to 1960 for the various industry groups ranged from nearly 10 percent for the metals group to 164 percent for the transportation equipment group. Two industry groups (1) furniture, lumber, and wood products, and (2) textile mill products, had absolute declines in employment during the 1950 decade.

The metals industries group is one of the most important sources of employment for workers in the Appalachian Region. Included in this group are the primary and fabricated metal producers. The primary metals industries include smelting and refining of raw materials into the basic metals, steel ingot, steel mill products, aluminum, and copper. Some of the important products of the fabricated metals industries are tin cans, sheetmetal products, and hardware products. This industry group provides employment for more Appalachian workers than any manufacturing industry group, agriculture, or mining. Almost 68 percent of the regional employment in this industry group in 1960 was located in Pennsylvania, however. Most of the remainder was in Alabama, West Virginia, and Tennessee.

The employment growth rate from 1950 to 1960 for the metals industry group was the lowest of the major regional manufacturing groups. Nevertheless, the increase in the number employed (36,100) was second only to the apparel and other fabricated textile products group (table 25).

Tables 26 through 34 show employment in manufacturing by industry group in the Appalachian portion of each State for 1950 and 1960.

Concentration of employment in the metal industries in the Alabama portion increased substantially from 1950 to 1960; this area received nearly 49 percent of the additions to the Region's metalworking employment. An additional 30 percent of the growth occurred in Pennsylvania and West Virginia.

The metals industry has one of the highest wage rates of any manufacturing group. In 1960, the industry average was $5,797 per employee (15, pp. 778-781).

The second largest employer in the manufacturing groups is the textile mill products group. This industry, paying a relatively low average annual wage of only $3,568 (15, pp. 776-777), employed nearly 177,000 workers in 1960, most of whom were in the southern part of the Region. For example, in regional North Carolina and Georgia, over 15 and 13 percent of the 1960 civilian labor force, respectively, were employed in textiles. On a regional basis, however, textile employment accounted for only 3 percent of the labor force and had no employment growth in the 1950 decade. In fact, employment declined nearly 10 percent from the 1950 level. Only 2 State portions, Virginia and North Carolina, experienced gains. In Virginia, the increase amounted to only 600 jobs, while in North Carolina, employment increased by nearly 8,000.

In 1960, the apparel and other fabricated textile group had the third largest number of employees, but had the largest absolute increase in

employment of any manufacturing group between 1950 and 1960. The growth rate was also substantial, at slightly over 42 percent. Over one-half of the Region's apparel employment in 1960 was in Pennsylvania, with most of the remainder in Tennessee, North Carolina, Georgia, and Alabama. However, nearly one-third of the total regional increase in employment between 1950 and 1960 occurred in Tennessee. The wage rate paid by apparel manufacturers is one of the manufacturing industry's lowest, averaging only $3,122 per employee in 1960 (15, pp. 776-777).

The fourth largest employer, the furniture, lumber, and wood products group, had a decline in employment of over 16,000 during the 1950 decade. Only North Carolina experienced a gain in employment in this group. The annual wage for this group is relatively low, averaging only $3,851 in 1960 (15, pp. 776-777). Employment is in logging, sawing, the production of millwork and prefabricated wood products and the production of furniture and fixtures for household and commercial uses. The increase in employment in North Carolina occurred in the furniture manufacture segment.

The food and kindred products group, another large employer in Appalachia, had a 39-percent increase in employment during the 1950 decade. Substantial growth rates were evident in all State portions, with Georgia and Alabama having the highest rates. Activities of this group include the canning and preserving of fruits and vegetables and the preparation of meats, dairy products, grain products, bakery goods, and beverages. The industry annual wage rate averaged $4,775 in 1960 (15, pp. 776-777).

In 1960, chemical manufacturers employed nearly 105,000 Appalachian workers, or 2 percent of the civilian labor force. The 1950 to 1960 employment growth rate reached nearly 30 percent. Although some employment is evident in all State portions of the Region, it is mainly concentrated in the large river basins in Tennessee, West Virginia, and Pennsylvania. This industry group has one of the highest annual wage rates; it averaged over $6,100 per employee in 1960 (15, pp. 778-779).

The remaining major groups--machinery, motor vehicles and other transportation equipment, and printing and publishing--employed fewer workers in 1960 than in 1950. The phenomenally large growth rates that occurred in some of these industries in many areas, especially in electrical machinery and transportation equipment, was the result of only moderate increases in employment to a small employment base. Nevertheless, increases in the number of jobs in these industry groups, however small, mean substantial gains in income, since their annual wage rates are relatively high. In 1960, the annual wage paid motor vehicle and other transportation equipment employees averaged $6,500, while the average for all machinery manufacture and printing and publishing employees was $5,683, and $5,571, respectively (15, pp. 778-781).

Considerable differences obviously existed in the relative growth in manufacturing among most of the State portions of the Region. The relative growth in jobs in manufacturing activities was less in Pennsylvania, Maryland, and West Virginia, than in State portions south of West Virginia. However, industries with employment concentrations in Pennsylvania, Maryland, and West Virginia tended to pay their employees a higher wage rate than industries with

concentrations of employment south of West Virginia. The presence of stronger labor unions and industries requiring higher skilled employees are some factors contributing to the higher wage rates.

Manufacturing Employment Concentrations

In general, manufacturing activity is clustered in and around the larger urban centers, often referred to as industrial-urban complexes. This also seems to be the case in the Appalachian Region. Recent data indicate, however, that regional manufacturing activity increased relatively more in the smaller urban and rural areas than in the larger urban centers. Yet, the increase was slight.

To present this development, regional manufacturing employment data were arranged by counties, according to the size of the largest city within the county. The 1960 population figure was used to determine the city size. All counties in the Region were placed in the following categories: (1) Counties included in Standard Metropolitan Statistical Areas (SMSA), 16/ (2) counties with a city of 25,000 to 49,999, (3) counties with a city of 10,000 to 24,999, (4) counties with a city of 5,000 to 9,999, and (5) counties with a city of less than 5,000. A listing of the counties in each of these categories is presented in tables 35 through 39.

A regional summary of manufacturing employment data for all counties according to the size of the largest city is presented in table 40. County manufacturing employment data by size of largest city is presented by State area in tables 41 through 45.

The data in table 43 indicate the extent to which manufacturing activity is clustered in and around urban centers in the Appalachian Region. With slightly less than one-half of the Region's population living in urban areas, relatively few Appalachian counties are predominantly urban. In 1960, only 10 percent of the population resided in Standard Metropolitan Statistical Areas. In that year, the largest city contained less than 5,000 inhabitants in 58 percent of the counties. Nevertheless, in 1960, one-half of the Region's manufacturing workers lived in SMSA counties; while an additional 9 percent lived in counties containing a city with 25,000 to 49,999 inhabitants. Only 41 percent of the Region's manufacturing employees lived in the 277 counties where the largest city contained less than 25,000 inhabitants.

The counties containing the larger cities, and therefore a large part of the Region's manufacturing employment, are not uniformly distributed throughout the Region, but tend to be clustered in the northern and southern

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16/ In general, each SMSA is a county or group of counties which contains at least one city with 50,000 or more inhabitants, or two cities having contiguous boundaries and constituting, for general economic and social purposes, a single community with a combined population of at least 50,000, the smaller of which must have a population of at least 15,000. In addition to other metropolitan characteristics, at least 75 percent of the labor force of a county included in an SMSA must be in the nonagricultural labor force (1).

extremities. Of the 33 SMSA counties in Appalachia, 13 are in Pennsylvania, 4 are in the northern panhandle of West Virginia, and 7 are in Georgia and Alabama. Most of the manufacturing workers in SMSA counties (82 percent in 1960) were in Pennsylvania, Alabama, and Georgia. Counties where the largest city contained 25,000 to 49,999 inhabitants are also clustered in the northern and southern parts of the Region. Eight of the 13 counties in this category are in Pennsylvania, Maryland, Georgia, and Alabama. In 1960, 70 percent of the Region's manufacturing workers in this group of counties were in these 4 State areas.

Between 1950 and 1960, however, the number of manufacturing employees living in SMSA counties and in counties where the 1960 population of the largest city was from 25,000 to 49,999, increased at a lower rate than the rate of increase for the Region. In fact, the relative growth rate in manufacturing employment increased as the size of the largest city within the county decreased. Furthermore, only about one-third of the total regional increase in manufacturing employment occurred in SMSA's and counties where the largest city was from 25,000 to 49,999. On the other hand, 45 percent of the total increase occurred in counties where the largest city had less than 10,000 population, and 67 percent occurred in counties where the largest had less than 25,000 population.

While manufacturing employment data indicate a shift in employment from the larger urban centers to the more rural areas during the 1950 decade, there is little evidence of any shift in manufacturing plants. 17/ This suggests that some workers may commute from counties where the population of the largest city is small to counties where the cities are larger. An increase in the number of commuting manufacturing workers would increase the number living in some counties, although there was no increase in the number of manufacturing establishments in the counties. However, an increase in the number of workers per establishment in counties with small urban centers relative to counties with larger urban centers would also explain part or perhaps all of this difference.

Perhaps both of these developments occurred; 18/ however, value added by manufacturing data reveal a slight shift in regional manufacturing activity from counties with large urban centers to counties with smaller urban centers. In 1954, the SMSA counties contributed about 60 percent of the total value added by manufacturing in the Region; whereas, in 1958, 58 percent was contributed in the SMSA counties. Of the total regional increase in value added between 1954 and 1958, only 46 percent was added in the SMSA counties.

17/ Manufacturing plant data used here are not comparable with the employment data, but these data do give some indication of the shift in manufacturing plant numbers. The manufacturing plant data were for 1954 and 1958 (12), while the employment data were for 1950 and 1960. Furthermore, the employment data were reported on the basis of residence of the worker, while plant data were reported on the basis of location of the plant.

18/ Employee data in the Census of Manufacturers, which reports on the basis of location of the manufacturing plant, also show that the largest relative and absolute increase in employment between 1954 and 1958 occurred in counties where population of the largest city was less than 25,000.

Construction

Construction, which includes erection, repair, and maintenance of nonmobile structures, is an important economic activity in the Appalachian Region, the surrounding area, and the United States. Between 1950 and 1960, employment in construction remained fairly constant in the Region, when measured as a percentage of the civilian labor force. The same was true in the surrounding area and the United States. Direct employment in construction comprised between 5 and 6 percent of the civilian labor force in the Appalachian Region, the surrounding area, and the United States (table 46).

In addition to the direct employment provided by the construction industry, its activities influence production and employment in industries manufacturing materials used in construction as well as employment in such fields as finance, real estate, insurance, design, and engineering.

Trades and Services

Industries discussed in the preceding sections--agriculture, mining, manufacturing, and construction--are involved in the production of physical products. In this section, however, employment data are presented which pertain to industries in which employees are concerned with providing services rather than producing physical goods.

Although activities of many trade and service establishments are diverse in nature, their objectives are essentially the same; that is, servicing the needs of employees in the physical goods-producing sectors of the economy, as well as the needs of employees in the trade and service industries, the unemployed, and the retired. Employment in the trade and service industries is determined in large part by employment in the physical goods-producing sectors of the economy. In most areas, these industries are relatively large in terms of employment, and the services their employees provide are essential to the physical goods-producing industries and to the total economy.

Rising productivity in the goods-producing industries, combined with an increasing demand for more services, has caused a structural change in the demand for labor; that is, a shift from the physical goods-producing industries to the trades and service sectors. For the U. S. economy, the proportion of the civilian labor force in trade and service industries increased from 51 percent in 1950 to 56 percent in 1960 (table 47). While employment in all trades and services in Appalachia increased absolutely, as well as a proportion of the labor force, the proportional increase was much less than the national average--15 percent, compared with 26 percent.

In 1950, as well as in 1960, employment in the trade and service industries comprised a smaller proportion of the civilian labor force in Appalachia than in the United States, indicating that the quantity of services available to Appalachian residents is below the national average. Nevertheless, the combined trade and service industries in Appalachia provide more employment than the goods-producing industries.

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Trade and Service Employment by Industry Group

The trade and service industries include a large number of activities, of which the main categories are:

(1) Public utilities (including rail, truck, and air transportation, communication systems, and utilities and sanitary systems)

(2) Wholesale trade

(3) Retail trade

(4) Finance, insurance, and real estate

(5) Professional and related services (including services provided by hospitals, educational institutions, and nonprofit organizations)

(6) Public administration (including postal service, and Federal, State, and local public administration)

(7) Other services (including business and repair services and entertainment and recreation services)

(8) Industry not reported (nonclassifiable establishments).

The distribution of regional employment by these major industry groups in 1950 and 1960 is presented in table 48. Employment data by the same industry groups for each State portion of Appalachia are presented in tables 49-57.

During the 1950 decade, employment increased for most of the major groups. A notable exception occurred in the public utilities group. The main factor impeding growth in the utilities group in Appalachia was a significant decline in the number of railroad employees. 19/ This lack of growth was mainly the result of innovations in the passenger and freight transportation fields. Air and bus transportation acquired most of the passenger business from the railroads, and truck transportation secured a large proportion of the increase in freight traffic during the 1950's. Additionally, innovations adopted by the railroads enabled a larger volume of freight to be moved per employee.

Trade and Service Employment Concentrations

As is the case with manufacturing employment, employment in trades and services in Appalachia is clustered in and around the larger urban centers (tables 58 through 63). However, whereas the proportion of the total Region's manufacturing workers living in the larger urban areas decreased from 1950 to 1960 and the proportion increased in the smaller urban and rural areas, the proportion of the total Region's trade and service workers living in the larger

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19/ The percentage decline in number of railroad employees in Appalachia was 38 percent. The corresponding figure for the United States was 32 percent.

urban areas remained nearly constant.

Prospects for Nonfarm Employment Gains

Employment data show that employment opportunities were lacking in some nonagricultural industries in Appalachia as well as in the agricultural sector during the 1950 decade. The data show that in addition to the 335,000 workers forced out of agriculture, the combined effects of declining demand for bituminous coal and rising productivity in the mining and processing of this fuel resulted in a reduction of 265,000 workers. Net employment declines also occurred in some of the major manufacturing groups--notably, furniture, lumber, wood products, and textile mill products; while in services, railroad employment declined. On the positive side, net employment gains in all manufacturing, trades and services, and construction amounted to about 568,000. This increase was not sufficient to prevent a net decrease of 32,000 in total regional employment. By contrast, there was a 15-percent increase in total employment nationally.

It is beyond the scope of this report to estimate future nonfarm employment opportunities in the Appalachian Region. However, past nonfarm employment trends in Appalachia and projected nonfarm employment levels for the United States by major industry groups provide some indication of the major industry groups most likely to provide the greatest opportunity for nonfarm employment.

In the bituminous coal industry, future gains are expected in output but not in employment. The demand for coal is expected to increase appreciably in future years and may reach 940 million tons by 1980 (19, p. 14). Most of this increase will be due to increases in the consumption of coal by electric utilities. A slight upturn was evident even in 1962, when 422 million tons of bituminous coal were mined. This output was 19 million tons more than in 1961 but only 4 million tons more than in 1960 (18, p. 55).

The bituminous coal industry presents little opportunity for employment above the present level, even in the face of increasing demand for coal. Little if any gain is likely to occur in total mining employment by 1975 or 1980 (19, p. 18, and 20). This will be due to further gains in productivity as more mines are fully mechanized.

Manufacturing, trades and services, and construction were the industry sectors in which employment gains occurred in the 1950 decade. On the national level, employment gains probably will continue to occur in these industries but at varying rates. U. S. manufacturing employment is expected to increase about 1.4 percent per year between 1960 and 1975 (20). This projected increase is about one-half of 1 percent less than the actual U. S. manufacturing employment growth rate between 1950 and 1960. Based on this estimate, manufacturing employment as a percentage of total employment will tend to decline.

By 1975, total U. S. employment in the construction field is expected to increase 52 percent above the 1960 level. Since 1950, construction employment has remained at nearly a constant proportion of total employment. This has been true in Appalachia as well as in the Nation. Furthermore, based on the

estimated 1975 employment level, employment in construction will in that year comprise nearly the same proportion of total employment as in 1950.

The major increase in employment is expected to be in the service-producing industries. Between 1960 and 1975, service employment is expected to rise by 44 percent. On an annual basis, this gain is only slightly greater than the 1950 to 1960 average; however, as a proportion of total employment, service-producing employment is expected to increase.

The above projections apply only to the total U. S. economy. No attempt is made to extrapolate these projections to Appalachia. Based on past developments, however, employment gains in Appalachia occurred in the same major industry groups in which future gains are expected on the national level. Whether the magnitude of future employment changes in Appalachia will be comparable to national changes will depend on the extent Appalachia is able to share in the additions to the national product.

EFFECTS OF ECONOMIC PROBLEMS

Vast changes in the production and distribution of goods and services are disrupting and restructuring the population and labor force in the Appalachian Region. Rapid adoption of labor-saving technology in the production sectors of the economy has resulted in declines as well as in structural changes in the existing labor force and the demand for labor. A diminishing demand for labor in agriculture and mining—historically the main users of labor in Appalachia—and the apparent failure of many workers to find satisfactory employment in other industry sectors in the Region have forced large numbers of people to migrate to areas outside the Region in search of better employment opportunities. Not all the unemployed migrate, however. Lack of training and skills demanded by employers prevent many from obtaining jobs in areas either in or outside Appalachia.

The large reduction in the number of workers employed in coal mining and agriculture and the subsequent migration of many of these workers and their families have created serious economic problems for the remaining population. Local economies almost entirely dependent upon coal have been hit the hardest. As mining jobs were terminated, substantial reductions occurred in income and in the demand for all products in the depressed areas. These losses in turn caused additional unemployment in the goods-producing and service industries serving these areas. During this process, the economically distressed area becomes less attractive for businesses and workers. As a result, many additional workers migrate to areas offering better markets for their resources. This process will continue as long as workers think they can improve their economic and social status by moving to other areas.

Population Changes

The effect of insufficient job opportunities on population growth rates is quite pronounced in most Appalachian subareas. In 1960, approximately 15 million people, or 8.4 percent of the population of the United States, lived in

the Appalachian Region. During the preceding 10-year period, the total population of the Region increased only 1.5 percent. The smallness of this increase is apparent when compared with changes in other areas. In the surrounding area, the total population increased 17 percent, which was slightly under the national increase of 18.5 percent (table 64).

Population growth rates for the various State sections of Appalachia were by no means uniform. Of the 6 State portions experiencing net gains in population, Georgia and Alabama had the largest proportional increases with nearly 16 and 7 percent, respectively. On the other hand, West Virginia, and the regional portions of Kentucky, and Virginia--areas in which large reductions occurred in coal-mining employment--experienced net population losses of about 7, 15, and 6 percent, respectively.

Outmigration

Most of the losses in population for West Virginia, Kentucky, and Virginia are due to outmigration. Each of these areas had a greater net outmigration of population from 1950 to 1960 than its actual loss in population. From West Virginia, a net total of 427,000 people migrated during this decade, while the total population decreased only 145,000. Similar events occurred in Kentucky and Virginia. Net outmigration occurred in the regional part of the other Appalachian States; however, the natural increase in population was sufficiently large to counteract this loss and add to the 1950 population (table 64).

Age Composition of the Population

During 1950-59, changes occurred in the age composition of the population in Appalachia. The age group of most productive workers, 18 to 64 years, declined in absolute terms, while the younger and older groups expanded. [20] In contrast, the 18 to 64 group expanded nationally, although the growth rate was below that of the younger and the older groups (table 65).

Changes in the age composition of the population were not similar for all Appalachia. In Kentucky, Virginia, and West Virginia, where outmigration caused a decline in the total population, the number of people in the 18 to 64 age group, as well as in the under 18 age group, decreased. These declines not only reduced the size of the existing labor force but also reduced the size of the potential labor force. There was also a decrease in the 18 to 64 age group in Pennsylvania and Maryland, but an increase in the under 18 age group.

Population gains occurred in the less than 18 and 18 to 64 age groups in all other State areas except North Carolina, where the number under 18 years decreased (table 66). The number of people over 64 years increased in all State portions in the Region.

Comparison of the proportion of the population in these age groups gives

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[20] That part of the population in the 18 to 64 age group is usually considered productive; whereas that part under 18 and over 64 is considered dependent.

an indication of the relative position of Appalachia. Between 1950 and 1960, the proportion of the population between 18 and 64 years decreased in the Region, the surrounding area, and the United States. The decreases were such that in 1960, little difference existed in the percentage of the population in this age group in these areas. However, the percentage for Appalachia was slightly less than in the surrounding area or the United States. To illustrate, 54.3 percent of the population of the Region, 55.1 percent of that of the surrounding area, and 55 percent of that of the United States were in the 18 to 64 age group (table 66).

The Labor Force

Deficits in job opportunities had equally depressing effects on labor force growth rates in Appalachia, since its civilian labor force increased at approximately the same rate as the population. 21/ In contrast to the small increase of only 1.4 percent during the 1950's for Appalachia, the civilian labor force in the United States increased slightly over 15 percent (table 67).

Those State areas in Appalachia which had net losses in population between 1950 and 1960 (Kentucky, Virginia, and West Virginia) also had net losses in the civilian labor force. The civilian labor force in Kentucky and West Virginia decreased relatively more than the population—11 percent, compared with 7.5 percent in West Virginia, and 20.5 percent, compared with 15 percent in Kentucky. However, the civilian labor force in Virginia decreased relatively less than the population—3.1 percent, compared with 5.7 percent.

The other State areas of Appalachia had net gains in the civilian labor force. In Pennsylvania and Maryland, the gains were relatively less than the gains in population; whereas, in Tennessee, North Carolina, Georgia, and Alabama, the civilian labor force increased relatively more than the population.

Ratio of Civilian Labor Force to Civilian Population

The ratio of the civilian labor force to the civilian population is one of the general measures of the economy. The higher the ratio, the lower the proportion of the population that is dependent upon the labor force for support. Per capita income is therefore affected by the ratio.

Ratios of civilian labor force to civilian population for the Appalachian Region, the surrounding area, and the United States for 1950 to 1960 are presented in table 68. In 1950 and 1960, the ratios for the region were smaller than for the surrounding area and the United States. This situation is similar to that which exists for age distribution. That is, the proportion of

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21/ The civilian labor force, as defined by the Bureau of the Census, includes all persons 14 years old and over, except members of the Armed Forces, who are presently employed or actively seeking employment. Persons included in the civilian labor force who are not employed but are actively seeking employment are listed as unemployed.

the population between 18 and 64 years (the productive workers category) is smaller in the Appalachian Region than in the surrounding area or the United States.

Since 1950, the proportion of those in the working ages has been declining. This is true in total Appalachia, as well as the surrounding area and the U. S. population generally. The result has been an increasing proportion of children, and of older people retiring from the labor force. A declining proportion of the population in the working ages has tended to lower the ratio of the civilian labor force to civilian population. This downward trend has been partially offset in the surrounding area and the United States, and almost completely offset in Appalachia, by a growing proportion of women joining the labor force.

The data in table 70 show that the ratio of civilian labor force to civilian population increased in 5 and decreased in 4 Appalachian State areas during the 1950 decade. The areas for which the ratio increased (Virginia, Tennessee, North Carolina, Georgia, and Alabama) had proportional increases in the number of women in the civilian labor force ranging from 44 percent in Georgia to 36 percent in Alabama. The areas for which the ratio of civilian labor force to civilian population decreased (Pennsylvania, Maryland, West Virginia, and Kentucky) had relatively lower increases, ranging from 31 percent in Kentucky to 18 percent in West Virginia. During the 1950 decade, there was a 36-percent increase in the number of women entering the labor force in the United States (16).

Despite the large increase in the number of women entering Appalachia's civilian labor force, the ratio of women to total civilian labor force remained below the ratio for the United States in 1960. In that year, the ratio for Appalachia was 30 percent, compared with 36 percent for the United States.

Unemployment

The deficiency in job opportunities in Appalachia resulted in large increases in unemployment in the 1950 decade despite heavy outmigration. In 1950, Appalachia's rate of unemployment, 5.1 percent of the civilian labor force, was only 0.3 higher than the national average. In fact, the rate was equal to or below the national average in all State portions of Appalachia except Pennsylvania and Maryland. By 1960, however, severe declines in employment in mining and agriculture, and the lack of sufficient job opportunities in other industries, had increased unemployment to 7 percent of the civilian labor force. In contrast, the unemployment rate was only about 5 percent for the United States (table 69).

In 1960, intraregional unemployment rates varied from a high of 9 percent in Kentucky to a low of 4.4 percent in North Carolina, the only State area where the unemployment rate was below the national average. Chronic unemployment is most severe in the coal-mining regions of Kentucky, West Virginia, Pennsylvania, and Virginia, where employment has been affected both by fluctuations in the demand for coal and by technological displacements.

These unemployment statistics show only the unemployed who actively look for employment. Omitted from this category are many who possess little in the way of training and skills, who grew tired of looking for jobs that were not available, and finally withdrew from the labor force. No precise estimate of the magnitude of this group is available. Another group not considered in the unemployment category consists of those who are considered underemployed. Many operators of small Appalachian farms are in this category.

Income

Low income is indicative of the seriousness of Appalachia's economic and social problems. Income levels in the Appalachian counties not only are below those for the Nation, but also are below those for the States which contain these counties. In 1960, per capita income for the Appalachian Region was $1,451, compared with $1,617 for the surrounding area and $1,850 for the United States (table 72).

Intraregional differences in per capita income were quite large. They were highest in the north, decreased toward the center, and improved again toward the southern extremity. Per capita income was highest in Pennsylvania at $1,715 and lowest in Kentucky at $842.

IMPLICATIONS

Throughout the Appalachian Region, employment growth clearly has lagged behind that of the rest of the United States. Income levels remain below those at the national level while unemployment rates exceed the national rate. Outmigration, resulting in net population declines, reflects the lack of employment opportunities in the local economies. While it is true that the seriousness of low income, unemployment, and job opportunity deficits vary considerably among regional subareas, it is also true that a large number of residents in all subareas fail to share fully in the benefits derived from a growing and prosperous national economy.

The basic objective of economic growth is to raise the living levels of all the people. Realization of this objective depends upon higher levels of employment, which in part depend upon continuous improvements in the education and training of the labor force and increases in capital investment.

The attainment of higher levels of education and training is becoming increasingly important as technological advances frequently demand higher educational and training requirements. Training and skills of the labor force are not only major determinants in the rate of economic growth which can be achieved by an economy; for individuals, they determine job opportunities and earning abilities.

Throughout the U. S. economy, technological innovations have influenced strong structural changes in the demand for labor. In general, productivity increases have been greater in the physical goods-producing industries than in others(20, p. 49). The introduction of machines which reduce the demand for

manual labor has had depressing effects on employment. Although many workers can be trained to operate the new machines, the number of workers needed is reduced considerably. This development, combined with an increasing demand for more and improved services, has caused a shift away from physical goods-producing employment to service-producing employment. This turn of events is of particular significance to many subareas of Appalachia, since the local economies have traditionally been based on goods-producing industries. Therefore, the attainment of better education and training is especially important for the Appalachian worker if he is to maintain a productive role in society.

In Appalachia, a large proportion of the additions to the unemployment ranks in the 1950's were previously employed in agriculture and mining, or were newcomers to the labor force. For the most part, these workers were unskilled or possessed only elementary skills. Lacking the training and skills to find remunerative employment in Appalachia, many migrated to other areas. Without adequate training, their chances of finding employment, even in areas where economic activity is expanding at higher rates than in Appalachia, is reduced.

The population shift has obviously had a depressing effect on the quality of public facilities, these areas are able to maintain. The result is that the quality of public services--especially educational opportunities, which in many areas were already below national levels--is falling farther behind at a time when the need for high-quality education and training is increasing.

Analysis of employment trends in Appalachia indicates employment gains occurred in industry groups (most manufacturing and service groups) where employers are frequently demanding of their employees a higher level of competence. Unless the prospective employee has attained, or is capable of attaining, the necessary attributes, his chances of employment in Appalachia or elsewhere will continue to diminish.

There is an apparent need to upgrade and expand educational and training activities in the Appalachian Region. This is of paramount importance in the rural areas where youth not only have a relative educational disadvantage, compared with urban youth; they are increasingly dependent on nonfarm jobs and it is necessary to prepare them for those jobs (5). With manufacturing activity increasing in the smaller urban and rural areas, preparing to do competent work is of immense importance to rural youth. Furthermore, youngsters now working toward careers in agriculture must attain a background of technical knowledge and management skills if success is to be achieved.

A better educational system goes beyond improvements in the formal schooling system. An adequately trained labor force must not only have a good basic education on which the acquisition of future training depends, but also have available a continuing educational system where those who have completed their formal schooling can update their training and maintain a high level of competence.

The persistence of low incomes, unemployment, and related economic conditions in many areas in the Appalachian Region seriously restricts the development of high-quality formal educational systems or adult-training

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programs. If such systems are to be developed in many Appalachian communities, financial and technical assistance must be provided from external sources. Assistance for adult training is presently being provided through such national programs as Manpower Development and Training and Area Redevelopment. The need for the continuation and expansion of these types of programs, especially into the more predominant rural areas, is evident.

Assistance to formal secondary education is not as readily available, however. Yet, the secondary schools supply the educational base for all subsequent training. Except for Federal assistance to vocational education, little external aid is available to Appalachian secondary schools.

Aid to secondary schools would improve the quality of basic education that Appalachian youth receive. A better educated person entering the labor force would eliminate the need for some adult-training programs and make others more effective. Furthermore, the better educated and trained worker is less apt to become unemployed, and is capable of earning higher incomes.

While a better educated labor force is necessary for fuller employment in Appalachia, it is by no means sufficient. Jobs must be available before even a highly trained labor force can enjoy higher living levels.

For the most part, the availability of new jobs in Appalachia ultimately depends upon new investment in the private sector of the economy. The competition among various regions of the United States for new plants and businesses is great, however. Investors are less likely to make investments in areas where transportation, medical, water and sanitary, and other public facilities are inadequate. These conditions may outweigh such favorable ones as availability of labor and raw materials, favorable tax rates, and nearness to markets.

The need to improve the economic and social climate in Appalachia is apparent. Various Federal, State, and local government agencies and private organizations, cognizant of this need, are spending, and planning to spend, significant quantities of resources in an attempt to improve Appalachia's resources and promote economic and social development. Often, these groups must develop and implement programs with only minimum knowledge of the details of the structure of the economy of the Region and its subareas, and the interdependencies among the development of resources and economic growth among local economies in Appalachia and between Appalachia and the rest of the United States. Such groups need more adequate information. Research is needed to determine: (1) the types of economic activity, and their location, that have the best potential for increasing employment and income; (2) the interrelationships among the types of economic activity and economic growth among local economies, and between Appalachia and the rest of the United States; (3) the interrelationships among the development of resources, including labor, and economic growth among the local economies, and between Appalachia and the rest of the United States; and (4) the types of educational programs and facilities needed to educate and train the population adequately.

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Table 1.--Percentage distribution of the population in the Appalachian Region classified as urban, rural nonfarm, and rural farm, by State area, surrounding area, and United States, 1950 to 1960

State area	Urban		Rural nonfarm		Rural farm	
	1950	1960	1950	1960	1950	1960
	Percent					
Pennsylvania-----------	63.1	63.2	28.7	33.0	8.2	3.8
Maryland---------------	44.4	45.3	43.8	48.3	11.8	6.4
West Virginia----------	34.6	38.2	44.9	55.3	20.5	6.5
Kentucky---------------	15.6	18.0	40.4	60.4	44.0	21.6
Virginia---------------	17.6	21.0	46.6	60.0	35.8	19.0
Tennessee--------------	37.9	42.8	30.5	40.8	31.6	16.3
North Carolina---------	21.2	23.1	37.4	58.2	41.4	18.7
Georgia----------------	24.7	30.8	37.6	58.6	37.7	10.6
Alabama----------------	46.4	56.3	25.4	32.8	28.2	10.9
Total Appalachia----	45.6	49.1	33.2	41.9	21.2	9.0
Surrounding area--------	56.2	63.2	23.1	26.8	20.8	10.9
United States-----------	64.0	69.9	20.7	22.6	15.3	7.5

Source: (16).

Table 2.--Percentage change in the urban, rural nonfarm, and rural farm population of the Appalachian region, by State area, surrounding area, and United States, 1950 to 1960

State area	Urban	Rural nonfarm	Rural farm
	Percent		
Pennsylvania-----------	+3.8	+18.9	-51.9
Maryland---------------	+5.2	+14.0	-44.2
West Virginia----------	+2.4	+14.3	-70.6
Kentucky---------------	-1.7	+27.2	-58.3
Virginia---------------	+12.9	+21.3	-50.0
Tennessee--------------	+18.8	+40.9	-45.7
North Carolina---------	+11.1	+58.7	-53.9
Georgia----------------	+44.4	+80.5	-67.5
Alabama----------------	+29.2	+37.4	-58.7
Total Appalachia----	+9.2	+28.1	-56.7
Surrounding area--------	+31.5	+35.5	-43.2
United States-----------	+29.9	+30.2	-42.7

Source: (16).

Table 3.--Inventory acreage by land-capability class, Appalachian Region, by State area, surrounding area, and United States, 1958

State area	Inventory acreage 1/	Classes I - III		Class IV		Classes V - VIII	
		Area	Share	Area	Share	Area	Share
	1,000 acres	1,000 acres	Percent	1,000 acres	Percent	1,000 acres	Percent
Pennsylvania------------:	22,830	9,377	41.1	3,434	15.0	10,018	43.9
Maryland----------------:	955	406	42.5	103	10.8	446	46.7
West Virginia-----------:	13,972	2,382	17.0	1,472	10.5	10,118	72.4
Kentucky----------------:	9,218	1,503	16.3	404	4.4	7,311	79.3
Virginia----------------:	5,030	802	15.9	653	13.0	3,576	71.1
Tennessee---------------:	10,619	3,973	37.4	1,419	13.4	5,226	49.2
North Carolina----------:	5,815	1,260	21.7	1,068	18.4	3,488	60.0
Georgia-----------------:	6,247	2,103	33.7	1,241	19.9	2,903	46.4
Alabama-----------------:	13,202	5,229	39.6	2,086	15.8	5,887	44.6
Total Appalachia------:	87,888	27,035	30.8	11,880	13.5	48,973	55.7
Surrounding area--------:	122,222	67,448	55.2	18,831	15.4	35,944	29.4
United States-----------:	1,452,873	638,009	43.9	169,181	11.6	645,683	44.4

1/ Inventory acreage does not correspond to land in farms.

Source: (10).

Table 4.--Land in farms, proportion of total land area in farms, and average size of farm, Appalachian Region, by State area, surrounding area, and United States, 1950 and 1959

State area	Land in farms, 1959	Percentage of total land area	Percentage change, land in farms, 1950 to 1959	Average size of farm	
				1950	1959
	1,000 acres	Percent	Percent	Acres	Acres
Pennsylvania------------:	9,522	38.3	-16.6	103.4	129.3
Maryland----------------:	488	49.2	-12.2	116.7	148.8
West Virginia-----------:	6,063	39.3	-26.2	100.9	137.8
Kentucky----------------:	5,054	50.9	-18.3	71.8	92.8
Virginia----------------:	2,873	47.8	-17.2	86.1	109.2
Tennessee---------------:	6,187	50.3	-13.9	69.1	83.8
North Carolina----------:	3,130	43.0	-23.2	58.8	72.6
Georgia-----------------:	3,109	43.4	-35.0	85.2	105.8
Alabama-----------------:	6,532	45.1	-27.4	80.1	111.0
Total Appalachia 1/--:	42,958	43.6	-21.8	82.5	105.6
Surrounding area--------:	76,749	58.5	-15.6	101.3	132.0
United States-----------:	1,123,508	49.5	-3.3	215.3	302.4

1/ Because of rounding, some totals may not equal the sum of the items listed.

Source: (14).

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Table 5.--Change in number of farms in the Appalachian region, by State area, surrounding area, and United States, 1950 to 1959

State area	Farms in 1959	Percentage change 1950-59
	1,000	Percent
Pennsylvania---------------------:	73.7	-33.2
Maryland------------------------:	3.3	-31.2
West Virginia-------------------:	44.0	-45.9
Kentucky------------------------:	54.5	-36.8
Virginia------------------------:	26.3	-34.7
Tennessee-----------------------:	73.9	-29.0
North Carolina------------------:	43.1	-37.8
Georgia-------------------------:	29.4	-47.7
Alabama-------------------------:	58.9	-47.6
Total Appalachia 1/-----------:	406.9	-38.8
Surrounding area----------------:	581.3	-35.3
United States-------------------:	3,703.6	-31.2

1/ Because of rounding, some totals may not equal the sum of the items listed.

Source: (14).

Table 6.--Harvested cropland as a percentage of total farmland in the Appalachian Region, by State area, surrounding area, and United States, 1950 and 1959

State area	1950		1959	
	Area	Share of total farm land	Area	Share of total farm land
	1,000 acres	Percent	1,000 acres	Percent
Pennsylvania-----------------:	4,092	35.8	3,483	36.6
Maryland---------------------:	177	31.8	149	30.5
West Virginia----------------:	1,218	14.8	832	13.7
Kentucky---------------------:	1,076	17.4	765	15.1
Virginia---------------------:	573	16.5	421	14.7
Tennessee--------------------:	1,932	26.9	1,334	21.6
North Carolina---------------:	802	19.7	534	17.1
Georgia----------------------:	1,075	22.5	474	15.2
Alabama----------------------:	2,746	30.5	1,648	25.2
Total Appalachia 1/---------:	13,691	24.9	9,640	22.4
Surrounding area-------------:	27,249	29.9	21,868	28.5
United States----------------:	344,564	29.7	311,476	27.7

1/ Because of rounding, some totals may not equal the sum of the items listed.

Source: (14).

Table 7.--Employment in agriculture in the Appalachian Region, by State area, surrounding area, and United States, 1950 and 1960

State area	1950		1960		Change in employment, 1950 to 1960	
	Number employed [1]	Share of civilian labor force	Number employed [1]	Share of civilian labor force	Amount	Rate
	1,000	Percent	1,000	Percent	1,000	Percent
Pennsylvania----------:	112.2	4.7	71.7	2.9	-40.5	-36.1
Maryland--------------:	5.2	7.5	3.6	5.0	-1.7	-32.7
West Virginia---------:	61.8	9.4	23.9	4.1	-37.9	-61.3
Kentucky--------------:	84.7	30.5	35.8	16.2	-48.9	-57.7
Virginia--------------:	36.1	21.8	18.9	11.8	-17.2	-47.6
Tennessee-------------:	102.4	19.8	54.7	9.6	-47.6	-46.5
North Carolina--------:	66.5	25.1	31.6	11.1	-34.9	-52.5
Georgia---------------:	54.7	21.8	21.7	7.3	-33.0	-60.3
Alabama---------------:	120.6	19.6	47.4	7.2	-73.2	-60.7
Total Appalachia [2]--:	644.2	12.3	309.3	5.8	-334.9	-52.0
Surrounding area------:	1,203.5	15.4	675.0	7.6	-528.5	-43.9
United States---------:	7,005.4	11.9	4,349.9	6.4	-2,655.5	-37.9

[1] Due to the small proportion of the civilian labor force employed in forestry and fisheries, workers employed in these industries were included with agricultural workers.
[2] Because of rounding, some totals may not equal the sum of the items listed.

Source: (16).

Table 8.--Value of investment in land and buildings, per farm, all farms and commercial farms, Appalachian Region, by State area, surrounding area, and United States, 1950 and 1959 [1]

State area	All farms		Commercial farms	
	1950	1959	1950	1959
	----------------------------------Dollars-----------------------------------			
Pennsylvania---------------:	8,257	16,785	10,060	21,963
Maryland-------------------:	8,977	17,240	12,164	24,964
West Virginia--------------:	5,852	9,998	9,864	17,297
Kentucky-------------------:	4,160	9,591	6,053	11,007
Virginia-------------------:	7,158	12,496	11,309	19,380
Tennessee------------------:	5,556	11,599	7,805	16,211
North Carolina-------------:	6,795	10,777	7,140	13,543
Georgia--------------------:	4,173	11,564	5,041	14,312
Alabama--------------------:	5,465	11,061	5,686	14,539
Total Appalachia---------:	5,978	12,032	7,736	16,416
Surrounding area----------:	7,452	17,943	8,951	23,110
United States-------------:	13,911	33,173	17,696	44,439

[1] Value has not been adjusted for price changes.

Source: (14).

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Table 9.--Value of farm products sold, Appalachian Region, by State area, surrounding area, and United States, 1950 and 1959

State area	Total value 1/			Average value per farm	
	1950	1959	Change	1950	1959
	1,000 dollars	1,000 dollars	Percent	Dollars	Dollars
Pennsylvania------------:	316,536	416,986	+31.7	2,866	5,660
Maryland----------------:	13,268	20,247	+52.6	2,787	6,171
West Virginia----------:	82,146	99,144	+20.7	1,009	2,253
Kentucky---------------:	75,942	100,455	+32.3	881	1,844
Virginia---------------:	44,732	57,123	+27.7	1,109	2,172
Tennessee--------------:	107,054	165,895	+55.0	1,028	2,246
North Carolina---------:	63,443	105,162	+65.8	915	2,439
Georgia----------------:	71,672	162,002	+126.0	1,276	5,512
Alabama----------------:	127,834	228,128	+78.5	1,138	3,875
Total Appalachia 2/--:	902,627	1,355,142	+50.1	1,357	3,330
Surrounding area-------:	2,170,667	2,923,019	+34.7	2,418	5,030
United States---------:	22,217,256	30,492,721	+38.3	4,123	8,218

1/ Value has not been adjusted for price changes.
2/ Because of rounding, some totals may not equal the sum of the items listed.

Source: (14).

Table 10.--Farm operator level-of-living indexes, Appalachian Region, by State area, 1950 and 1959 1/

(U. S. county average in 1950 = 59; 1959 = 100)

State area	1950	1959
Pennsylvania--------------------:	68	108
Maryland------------------------:	53	96
West Virginia-------------------:	35	68
Kentucky------------------------:	19	46
Virginia------------------------:	34	65
Tennessee-----------------------:	28	68
North Carolina------------------:	22	59
Georgia-------------------------:	28	77
Alabama-------------------------:	24	70
Total Appalachia--------------:	34	72

1/ Indexes for areas are averages of county indexes, unweighted for differences in the number of farms within counties.

Source: (3).

Table 11.--Off-farm employment and farm families with other income greater than the value of farm products sold, all farms, commercial farms, Appalachian Region, by State area, surrounding area, and United States, 1950 and 1959

State area	All farms				Commercial farms			
	Percentage working off-farm 100 days or more		Percentage with income greater than the value of farm products sold		Percentage working off-farm 100 days or more		Percentage with income greater than the value of farm products sold	
	1950	1959	1950	1959	1950	1959	1950	1959
	Percent							
Pennsylvania--------------:	38.1	40.3	40.9	46.5	15.9	18.8	15.2	16.2
Maryland------------------:	34.7	36.0	37.5	45.7	11.5	17.3	11.4	16.6
West Virginia------------:	43.1	43.4	57.1	66.0	12.0	16.5	18.5	20.4
Kentucky------------------:	27.5	28.4	43.8	46.3	5.5	7.4	7.5	7.8
Virginia------------------:	36.0	36.6	44.0	48.2	10.4	9.6	15.1	10.2
Tennessee----------------:	29.2	35.9	41.9	50.7	6.7	12.1	13.6	13.7
North Carolina----------:	32.0	36.6	44.7	51.9	6.8	12.2	9.1	12.9
Georgia------------------:	30.0	44.8	48.9	61.6	9.1	28.4	15.8	33.9
Alabama------------------:	24.0	37.6	37.4	47.4	5.2	15.2	8.0	14.7
Total Appalachia------:	32.1	37.5	44.1	51.2	9.0	14.9	12.2	15.3
Surrounding area--------:	20.7	28.6	26.9	36.2	7.4	12.6	8.4	12.2
United States-----------:	23.9	29.9	29.1	35.8	9.3	14.5	9.1	12.5

Source: (14).

Table 12.--Number and percentage of commercial farms, and of commercial and noncommercial farms
according to value of sales, Appalachian Region, by State area, surrounding area,
and United States, 1950 and 1959

State area	TOTAL COMMERCIAL FARMS			
	1950		1959	
	Farms	Percentage of all farms 1/	Farms	Percentage of all farms 1/
	1,000	Percent	1,000	Percent
Pennsylvania---------:	62.6	56.7	40.6	55.1
Maryland-------------:	2.5	53.3	1.8	54.8
West Virginia--------:	23.3	28.6	12.6	28.6
Kentucky-------------:	35.8	41.5	25.4	46.6
Virginia-------------:	16.6	41.2	10.2	38.6
Tennessee-----------:	48.2	46.3	32.0	43.3
North Carolina-------:	29.0	41.8	18.1	42.0
Georgia-------------:	23.5	41.8	14.0	47.7
Alabama-------------:	62.3	55.7	30.2	51.4
Total Appalachia 2/:	303.8	45.7	184.8	45.4
Surrounding area-----:	616.3	68.6	361.3	62.2
United States--------:	3,706.4	68.9	2,416.0	65.2

	COMMERCIAL FARMS WITH VALUE OF SALES --							
	Greater than $10,000 3/				From $5,000 to $9,999 4/			
	1950		1959		1950		1959	
	Farms	Percentage 5/	Farms	Percentage 5/	Farms	Percentage 5/	Farms	Percentage 5/
	1,000	Percent	1,000	Percent	1,000	Percent	1,000	Percent
Pennsylvania---------:	6.0	9.5	12.6	31.1	15.1	24.1	13.5	33.3
Maryland-------------:	.3	10.9	.6	35.1	.5	18.9	.5	28.9
West Virginia--------:	1.4	5.9	2.1	16.5	2.0	8.7	2.1	16.4
Kentucky-------------:	.5	1.4	1.3	5.1	1.5	4.3	3.0	11.9
Virginia-------------:	.6	3.8	1.0	9.4	.9	5.3	1.2	12.1
Tennessee-----------:	.9	1.9	2.5	8.0	2.1	4.5	4.4	13.9
North Carolina-------:	.5	1.8	1.7	9.3	1.1	3.8	2.7	15.1
Georgia-------------:	1.1	4.5	4.6	32.7	2.1	8.9	3.2	22.6
Alabama-------------:	.9	1.5	5.1	17.0	1.9	3.0	5.1	16.7
Total Appalachia 2/:	12.2	4.0	31.5	17.1	27.2	9.0	35.8	19.3
Surrounding area-----:	32.6	5.3	68.6	19.0	61.3	9.9	88.2	24.4
United States--------:	484.4	13.1	795.5	32.9	721.2	19.5	653.9	27.1

See footnotes at end of table.

--Continued

Table 12.--Number and percentage of commercial farms, and of commercial and noncommercial farms according to value of sales, Appalachian Region, by State area, surrounding area, and United States, 1950 and 1959 -- continued

State area	COMMERCIAL FARMS WITH VALUE OF SALES --							
	From $2,500 to $4,999 6/				Less than $2,500 7/			
	1950		1959		1950		1959	
	Farms	Percentage 5/	Farms	Percentage 5/	Farms	Percentage 5/	Farms	Percentage 5/
	1,000	Percent	1,000	Percent	1,000	Percent	1,000	Percent
Pennsylvania---------	18.2	29.1	10.4	25.5	23.3	37.3	4.1	10.1
Maryland-------------	.6	23.9	.4	22.8	1.2	46.3	.2	13.1
West Virginia--------	3.8	16.2	3.5	28.0	16.1	69.2	4.9	39.1
Kentucky-------------	4.9	13.9	7.3	28.9	28.5	80.4	13.7	54.2
Virginia-------------	2.1	13.0	2.7	26.5	12.9	78.0	5.3	51.9
Tennessee-----------	6.0	12.7	10.4	32.7	38.4	80.9	14.5	45.5
North Carolina-------	4.5	15.6	6.0	33.4	22.8	78.8	7.6	42.2
Georgia--------------	3.3	14.0	3.2	23.1	17.1	72.6	3.0	21.6
Alabama--------------	7.1	11.3	9.2	30.5	52.5	84.2	10.8	35.7
Total Appalachia 2/	50.5	16.7	53.3	28.8	212.8	70.3	64.3	34.8
Surrounding area-----	151.8	24.6	120.8	33.4	371.8	60.3	83.6	23.1
United States--------	882.3	23.8	617.7	25.6	1,618.5	43.7	349.0	14.4

State area	NONCOMMERCIAL FARMS							
	Part-time farms				Other farms 8/			
	1950		1959		1950		1959	
	Farms	Percentage 1/	Farms	Percentage 1/	Farms	Percentage 1/	Farms	Percentage 1/
	1,000	Percent	1,000	Percent	1,000	Percent	1,000	Percent
Pennsylvania---------	17.9	16.2	23.9	32.4	30.0	27.2	9.1	12.3
Maryland-------------	.8	16.4	1.1	33.6	1.4	30.3	.4	13.0
West Virginia--------	14.3	17.6	21.5	48.8	43.8	53.8	9.9	22.5
Kentucky-------------	11.6	13.4	19.1	35.1	38.8	45.0	9.9	18.2
Virginia-------------	6.6	16.4	10.5	40.4	17.2	42.6	5.5	20.9
Tennessee-----------	19.4	18.6	29.1	39.4	36.5	35.1	13.0	17.6
North Carolina-------	10.2	14.7	17.2	39.9	30.2	43.6	8.0	18.6
Georgia--------------	10.3	18.3	11.3	38.5	22.5	40.0	3.9	13.3
Alabama--------------	19.2	17.1	20.9	35.5	30.8	27.4	7.4	12.5
Total Appalachia 2/	110.3	16.6	154.6	38.0	251.1	37.7	67.1	16.5
Surrounding area-----	102.6	11.4	144.8	24.9	178.5	19.9	75.7	13.0
United States--------	639.2	11.9	884.8	23.9	1,033.6	19.2	407.2	11.0

1/ Percentage of all farms. 2/ Because of rounding, some totals may not equal the sum of the items listed. 3/ Economic class I and II farms in 1950, class I, II, and III farms in 1959. 4/ Economic class III farms in 1950, class IV farms in 1959. 5/ Percentage of all commercial farms. 6/ Economic class IV farms in 1950, class V farms in 1959. 7/ Economic class V and VI farms in 1950, class VI farms in 1959. 8/ Other farms include residential, part-retirement, and abnormal farms. Source: (14).

Table 13.--Value of livestock and livestock products sold, Appalachian Region, by State area, surrounding area, and United States, 1950 and 1959

State area	Total value of livestock and livestock products [1]			Value share of all farm products derived from livestock	
	1950	1959	Percentage change	1950	1959
	1,000 dollars	1,000 dollars	Percent	Percent	Percent
Pennsylvania---------:	254,014	331,216	+30.4	80.2	79.4
Maryland-------------:	9,659	15,521	+60.7	72.8	76.7
West Virginia--------:	67,172	77,868	+15.9	81.8	78.5
Kentucky-------------:	32,050	46,693	+45.7	42.2	46.5
Virginia-------------:	32,427	42,165	+30.0	72.5	73.8
Tennessee------------:	60,426	100,343	+66.1	56.4	60.5
North Carolina-------:	24,870	55,418	+122.8	39.2	52.7
Georgia--------------:	46,564	141,099	+203.0	65.0	87.1
Alabama--------------:	32,429	124,383	+283.6	25.4	54.5
Total Appalachia [2]:	559,606	934,706	+67.0	62.0	69.0
Surrounding area-----:	861,025	1,339,085	+55.5	39.7	45.8
United States--------:	12,197,274	17,045,431	+39.7	54.9	55.9

1/ Value has not been adjusted for price changes.
2/ Because of rounding, some totals may not equal the sum of the items listed.

Source: (14).

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Table 14.--Type of commercial farms, by State area, Appalachian Region, 1950 and 1959

State area	All com-mercial farms	Field crops other than vegetable and fruit and nut		Poultry		Dairy		Livestock other than poultry and dairy		General		Other 1/	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
1950													
Pennsylvania----------	62,583	2,825	4.5	8,904	14.2	35,809	57.2	5,323	8.5	6,991	11.2	2,727	4.4
Maryland--------------	2,536	157	6.2	229	9.0	1,063	41.9	467	18.4	459	18.1	161	6.3
West Virginia---------	23,286	1,597	6.9	3,330	14.3	4,330	18.6	9,945	42.7	2,920	12.5	1,164	5.0
Kentucky--------------	35,793	24,357	68.0	526	1.5	1,052	2.9	5,020	14.0	4,295	12.0	543	1.5
Virginia--------------	16,562	4,116	24.9	353	2.1	3,069	18.5	4,994	30.2	2,325	14.0	501	3.0
Tennessee-------------	48,205	20,066	41.6	1,050	2.2	5,630	11.7	9,127	18.9	11,017	22.9	1,315	2.7
North Carolina--------	28,977	17,553	60.6	1,805	6.2	2,026	7.0	2,744	9.5	2,834	9.8	2,015	7.0
Georgia--------------	23,493	12,051	51.3	5,921	25.2	788	3.4	1,197	5.1	2,164	9.2	1,316	5.6
Alabama--------------	62,323	50,167	80.5	1,380	2.2	1,351	2.2	2,685	4.3	4,985	8.0	1,752	2.8
Total Appalachia 2/-	303,758	132,889	43.7	23,498	7.7	55,118	18.1	41,502	13.7	37,990	12.5	11,494	3.8
1959													
Pennsylvania----------	40,618	1,560	3.8	4,204	10.4	25,170	62.0	5,041	12.4	2,222	5.5	2,421	6.0
Maryland--------------	1,799	30	1.7	91	5.1	1,085	60.3	382	21.2	91	5.1	120	6.7
West Virginia---------	12,605	839	6.7	1,600	12.7	2,705	21.5	6,134	48.7	614	4.9	713	5.7
Kentucky--------------	25,386	16,604	65.4	623	2.5	1,628	6.4	4,219	16.6	2,034	8.0	279	1.1
Virginia--------------	10,162	2,966	29.2	213	2.1	2,320	22.8	3,512	34.6	807	7.9	344	3.4
Tennessee-------------	31,953	13,436	42.0	1,349	4.2	4,656	14.6	7,384	23.1	4,253	13.3	875	2.7
North Carolina--------	18,058	10,363	57.4	1,936	10.7	1,479	8.2	2,157	11.9	905	5.0	1,218	6.7
Georgia--------------	14,018	3,129	22.3	7,701	54.9	612	4.4	1,626	11.6	409	2.9	521	3.7
Alabama--------------	30,238	18,672	61.8	4,514	14.9	972	3.2	3,202	10.6	1,814	6.0	1,064	3.5
Total Appalachia----	184,837	67,599	36.6	22,231	12.0	40,627	22.0	33,657	18.2	13,149	7.1	7,555	4.1

1/ Miscellaneous, vegetable, fruit, and nut farms.
2/ Sum of categories does not equal total commercial farms because of discrepancy in the census tabulation in Floyd and Lee counties, Va.

Source: (14).

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Table 15.--Number of beef cows and dairy cows on farms, Appalachian Region, by State area, surrounding area, and United States, 1950 and 1959

State area	Beef cows			Dairy cows		
	1950	1959	Percentage change	1950	1959	Percentage change
	1,000	1,000	Percent	1,000	1,000	Percent
Pennsylvania----------	31.1	76.5	+146.3	636.4	620.8	-2.5
Maryland---------------	4.1	8.6	+110.6	26.8	29.7	+10.8
West Virginia---------	82.7	141.9	+71.6	204.0	121.1	-40.6
Kentucky---------------	32.9	79.3	+140.8	166.0	117.1	-29.4
Virginia---------------	50.3	81.7	+62.5	123.7	92.6	-25.2
Tennessee-------------	67.4	164.0	+143.3	281.3	236.7	-15.9
North Carolina--------	18.3	45.9	+150.6	121.8	83.6	-31.4
Georgia---------------	14.8	66.5	+349.6	73.6	48.7	-33.9
Alabama---------------	46.5	152.1	+227.0	160.3	95.8	-40.2
Total Appalachia 1/--	348.0	816.5	+134.6	1,793.8	1,446.0	-19.4
Surrounding area-------	967.0	2,028.1	+109.7	2,138.8	1,578.0	-26.2
United States----------	16,069.2	24,751.5	+54.1	21,232.6	16,522.0	-22.2

1/ Because of rounding, some totals may not equal the sum of the items listed.

Source: (14).

Table 16.--Broilers and eggs sold, Appalachian Region, by State area, 1959

State area	Broilers		Chicken eggs	
	Share of State total	Share of conterminous U. S. total	Share of State total	Share of conterminous U. S. total
	Percent			
Pennsylvania----------	56.9	1.3	51.2	3.1
Maryland-------------	.8	1/	15.8	.1
West Virginia--------	100.0	1.6	100.0	.4
Kentucky-------------	50.4	.5	33.9	.2
Virginia-------------	6.3	.2	8.7	.1
Tennessee------------	76.2	1.5	48.9	.6
North Carolina-------	30.4	2.3	29.2	.8
Georgia-------------	77.0	12.6	53.9	1.8
Alabama-------------	85.6	8.4	72.1	1.3
Total Appalachia---	57.6	28.7	39.3	8.7

1/ Less than .05 percent.

Source: (14).

Table 17.--Number of broilers sold, Appalachian Region, by State area, surrounding area, and United States, 1954 and 1959

State area	1954	1959	Change
	1,000	1,000	Percent
Pennsylvania----------:	13,123.2	18,298.3	+39.4
Maryland--------------:	1,178.2	621.5	-47.3
West Virginia---------:	18,196.0	22,936.3	+26.1
Kentucky--------------:	1,773.1	6,872.2	+287.6
Virginia--------------:	1,745.0	2,580.3	+47.9
Tennessee-------------:	4,631.6	21,225.2	+358.3
North Carolina--------:	10,604.8	32,603.6	+207.4
Georgia---------------:	101,958.7	179,995.0	+76.5
Alabama---------------:	32,634.5	119,231.3	+265.4
Total Appalachia 1/--:	185,845.2	404,363.6	+117.6
Surrounding area------:	147,501.8	297,729.2	+101.8
United States---------:	792,373.7	1,414,259.4	+78.5

1/ Because of rounding some totals may not equal the sum of the items listed.

Source: (14).

Table 18.--Number of hogs and pigs and ewes on farms, Appalachian Region, by State area, surrounding area, and United States, 1950 and 1959

State area	Hogs and Pigs			Ewes		
	1950	1959	Change	1950	1959	Change
	1,000	1,000	Percent	1,000	1,000	Percent
Pennsylvania----------:	413.7	404.6	-2.2	124.4	135.5	+9.0
Maryland--------------:	30.3	23.8	-21.3	4.5	6.5	+43.6
West Virginia---------:	197.3	148.2	-24.9	232.6	211.0	-9.3
Kentucky--------------:	250.6	276.5	+10.3	50.6	33.9	-33.1
Virginia--------------:	120.2	98.0	-18.5	117.6	114.4	-2.7
Tennessee-------------:	431.0	495.8	+15.0	45.6	48.8	+6.9
North Carolina--------:	111.9	125.9	+12.5	15.4	21.4	+39.2
Georgia---------------:	122.4	184.0	+50.3	1.7	7.5	+332.4
Alabama---------------:	348.6	493.1	+41.4	3.2	8.5	+164.3
Total Appalachia 1/--:	2,026.0	2,249.8	+11.0	595.7	587.5	-1.4
Surrounding area------:	6,554.1	7,503.2	+14.5	738.1	730.8	-1.0
United States---------:	55,788.6	67,949.3	+21.8	19,841.8	20,991.6	+5.8

1/ Because of rounding, some totals may not equal the sum of the items listed.

Source: (14).

Table 19.--Harvested cropland by major crops, by State area, Appalachian Region, and surrounding area, 1950 and 1959

State area	Total			
	Appalachia		Surrounding area	
	1950	1959	1950	1959
	------1,000 acres------			
Pennsylvania----------:	4,092	3,483	1,545	1,371
Maryland--------------:	177	149	1,354	1,307
West Virginia---------:	1,218	832	---	---
Kentucky--------------:	1,076	765	3,978	3,248
Virginia--------------:	573	421	2,741	2,437
Tennessee-------------:	1,932	1,334	3,643	2,782
North Carolina--------:	802	534	4,980	4,212
Georgia---------------:	1,075	474	6,023	4,444
Alabama---------------:	2,746	1,648	2,983	2,067
Total 1/----------:	13,691	9,640	27,249	21,868

State area	All hay				Corn			
	Appalachia		Surrounding area		Appalachia		Surrounding area	
	1950	1959	1950	1959	1950	1959	1950	1959
	------1,000 acres------							
Pennsylvania----------:	1,697	1,714	432	446	820	703	442	430
Maryland--------------:	61	68	350	340	40	36	401	426
West Virginia---------:	738	601	---	---	238	119	---	---
Kentucky--------------:	417	362	1,223	1,109	477	286	1,736	1,364
Virginia--------------:	281	278	855	816	154	86	795	642
Tennessee-------------:	833	648	785	547	686	416	1,390	1,000
North Carolina--------:	225	203	641	409	269	141	1,839	1,671
Georgia---------------:	134	105	203	238	420	186	2,556	2,242
Alabama---------------:	205	165	201	215	1,168	860	1,304	1,007
Total 1/----------:	4,590	4,145	4,692	4,120	4,274	2,834	10,463	8,783

State area	Wheat				Oats			
	Appalachia		Surrounding area		Appalachia		Surrounding area	
	1950	1959	1950	1959	1950	1959	1950	1959
	------1,000 acres------							
Pennsylvania----------:	560	299	302	202	620	535	96	95
Maryland--------------:	33	14	271	136	13	14	25	39
West Virginia---------:	65	23	---	---	29	25	--	--
Kentucky--------------:	23	8	246	150	10	7	46	43
Virginia--------------:	53	16	323	238	11	15	72	87
Tennessee-------------:	127	63	112	94	93	64	78	62
North Carolina--------:	42	38	286	330	21	23	213	253
Georgia---------------:	34	28	87	67	52	31	213	202
Alabama---------------:	6	24	4	23	23	35	35	55
Total 1/----------:	942	512	1,629	1,241	872	749	778	837

See footnotes at end of table.

Table 19.--Harvested cropland by major crops, by State area, Appalachian Region, and surrounding area, 1950 and 1959 -- continued

State area	Barley				Tobacco			
	Appalachia		Surrounding area		Appalachia		Surrounding area	
	1950	1959	1950	1959	1950	1959	1950	1959
	1,000 acres							
Pennsylvania-----------:	70	69	77	64	2/	2/	34	30
Maryland---------------:	10	6	68	67	0	0	47	40
West Virginia----------:	11	9	--	--	3	2	--	--
Kentucky---------------:	6	8	63	59	64	47	259	165
Virginia---------------:	8	4	70	101	11	9	104	77
Tennessee--------------:	16	13	45	31	54	41	50	33
North Carolina---------:	4	5	25	55	41	32	563	418
Georgia----------------:	1	2	2	8	2/	2/	91	69
Alabama----------------:	2/	1	2/	2/	0	0	2/	2/
Total 1/----------:	127	118	349	385	174	132	1,149	831

State area	Tree, fruits, nuts and grapes				Other crops			
	Appalachia		Surrounding area		Appalachia		Surrounding area	
	1950	1959	1950	1959	1950	1959	1950	1959
	1,000 acres							
Pennsylvania-----------:	102	55	46	39	222	107	117	62
Maryland---------------:	13	8	10	5	7	2	182	255
West Virginia----------:	73	39	--	--	61	14	---	---
Kentucky---------------:	20	7	20	10	57	40	386	348
Virginia---------------:	26	3	97	5	29	10	425	470
Tennessee--------------:	21	8	18	7	102	81	1,165	1,008
North Carolina---------:	31	19	29	17	169	72	1,383	1,059
Georgia----------------:	18	10	196	185	415	112	2,676	1,433
Alabama----------------:	29	22	58	53	1,315	541	1,381	714
Total 1/----------:	334	171	474	321	2,377	979	7,715	5,348

1/ Because of rounding, some totals may not equal the sum of the items listed.
2/ Less than 500 acres.

Source: (14).

Table 20.--Production and value of bituminous coal, Appalachian Region, by State area, surrounding area, and United States, 1950 and 1960

State area	Production [1]			Value [2]	
	1950	1960	Change	1950	1960
	1,000 tons	1,000 tons	Percent	$1,000	$1,000
Pennsylvania [3]	105,870	65,425	-38.2	529,393	345,971
Maryland	648	748	+15.4	3,135	2,799
West Virginia	144,119	118,944	-17.5	753,742	597,222
Kentucky	54,462	36,261	-33.4	306,048	175,746
Virginia	17,553	27,829	+58.5	96,409	122,690
Tennessee	5,070	5,930	+17.0	27,374	21,154
North Carolina	[4]	[4]	--	--	--
Georgia	[5]	4	--	[5]	21
Alabama	14,422	13,011	-9.8	88,407	92,439
Total Appalachia	342,144	268,148	-21.6	1,804,508	1,358,042
Surrounding area	24,147	30,594	+26.7	87,742	106,682
United States [6]	516,311	415,512	-19.5	2,500,374	1,950,425

[1] Exclusive of mines producing less than 1,000 tons and where data are withheld to avoid disclosing an individual company. [2] Value has not been adjusted for price changes. Value is based on price received for coal f.o.b. mine. [3] Does not include approximately 44,077,000 and 18,817,000 tons of anthracite coal produced in the regional part of Pennsylvania in 1950 and 1960, respectively. [4] No coal produced. [5] Data not available. [6] Includes production and value of lignite.

Source: (17), (18).

Table 21.--Output per man-day at bituminous coal mines in the Appalachian Region, by State area, surrounding area, and United States, 1950 and 1960

State area	Man-days worked		Average tons per man per day		Change in average tons per man per day, 1950 to 1960	
	1950	1960	1950	1960	Amount	Rate
	Number	Number	Number	Number	Number	Percent
Pennsylvania	17,791,961	6,125,654	5.95	10.68	+4.73	+79.5
Maryland	148,884	91,028	4.35	8.22	+3.87	+89.0
West Virginia	22,472,153	9,854,768	6.41	12.07	+5.66	+88.3
Kentucky	10,379,315	3,547,888	5.25	10.22	+4.97	+94.7
Virginia	3,161,747	2,803,086	5.55	9.93	+4.38	+78.9
Tennessee	1,084,767	680,840	4.67	8.71	+4.04	+86.5
North Carolina	[1]	[1]	[1]	[1]	--	--
Georgia	[2]	2,291	[2]	1.84	--	--
Alabama	3,345,061	1,502,763	4.31	8.66	+4.35	+100.9
Total Appalachia	58,383,888	24,608,318	5.86	10.90	+5.04	+86.0
Surrounding area	12,309,651	1,277,563	6.39	23.95	+17.56	+274.8
United States	76,240,864	32,384,964	6.77	12.83	+6.06	+89.5

[1] No coal produced. [2] Data not available.

Source: (17), (18).

Table 22.--Employment in mining in the Appalachian Region, by State area,
and surrounding area, 1950 and 1960 1/

State area	1950		1960		Change 1950 to 1960	
	Number employed	Share of civilian labor force	Number employed	Share of civilian labor force	Amount	Rate
	1,000	Percent	1,000	Percent	1,000	Percent
Pennsylvania----------:	188.5	7.8	61.0	2.5	-127.5	-67.6
Maryland--------------:	1.5	2.2	.7	1.0	-.8	-53.3
West Virginia---------:	134.3	20.4	59.1	10.1	-75.2	-56.0
Kentucky--------------:	58.1	20.9	26.8	12.1	-31.3	-53.9
Virginia--------------:	26.4	15.9	16.9	10.5	-9.5	-36.0
Tennessee-------------:	12.8	2.5	7.3	1.3	-5.5	-42.8
North Carolina--------:	1.5	.6	1.9	.7	+.4	+23.6
Georgia---------------:	1.6	.6	1.6	.5	2/	--
Alabama---------------:	26.9	4.4	10.9	1.7	-16.0	-59.5
Total Appalachia 3/-:	451.5	8.6	186.1	3.5	-265.4	-58.8
Surrounding area------:	26.5	.3	26.8	.3	+.9	+3.4

1/ Employment data include total employment in the mineral industry.
2/ Less than 100.
3/ Because of rounding, some totals may not equal the sum of the items listed.

Source: (16).

Table 23.--Employment in all manufacturing industries, Appalachian Region, by State area,
surrounding area, and United States, 1950 and 1960

State area	1950		1960		Change 1950 to 1960	
	Number employed	Share of civilian labor force	Number employed	Share civilian labor force	Amount	Rate
	1,000	Percent	1,000	Percent	1,000	Percent
Pennsylvania----------:	753.2	31.4	809.8	33.1	+56.6	+7.5
Maryland--------------:	20.0	28.6	20.4	28.5	+.4	+2.2
West Virginia---------:	118.5	18.0	125.7	21.4	+7.2	+6.1
Kentucky--------------:	21.9	7.9	28.2	12.8	+6.2	+28.3
Virginia--------------:	30.1	18.1	38.4	23.9	+8.3	+27.7
Tennessee-------------:	127.7	24.7	164.9	29.0	+37.2	+29.1
North Carolina--------:	77.8	29.4	104.7	36.7	+26.9	+34.6
Georgia---------------:	83.4	33.3	115.0	38.8	+31.6	+37.8
Alabama---------------:	147.9	24.1	186.2	28.4	+38.3	+25.9
Total Appalachia 1/-:	1,380.6	26.4	1,593.2	30.1	+212.7	+15.4
Surrounding area------:	1,921.4	24.7	2,285.9	25.9	+364.5	+19.0
United States---------:	14,685.5	24.9	17,513.1	25.7	+2,827.6	+19.3

1/ Because of rounding, some totals may not equal the sum of the items listed.

Source: (16).

Table 24.--Percentage of total Appalachian regional bituminous coal production, employment in mining, unemployment, and net outmigration attributable to counties with as much as 40 percent, 30 to 39.9 percent, and 20 to 29.9 percent of the civilian labor force employed in mining in 1950, 1960, and 1950-60

Item	Share of civilian labor force employed in mining			Total
	40 or more 1/	30 to 39.9 2/	20 to 29.9 3/	
	Percent			
Regional production				
1950------------------------:	39.1	8.2	23.0	70.3
1960------------------------:	42.4	9.4	20.1	71.9
Change, 1950 to 1960-----:	25.0	2.6	33.6	61.2
Regional mining employment :				
1950------------------------:	28.7	5.4	31.6	65.7
1960------------------------:	31.5	6.9	26.4	64.8
Change, 1950 to 1960-----:	26.8	4.4	35.2	66.4
Regional unemployment				
1950------------------------:	4.5	1.2	15.6	21.3
1960------------------------:	5.5	1.5	15.7	22.7
Change, 1950 to 1960-----:	7.8	2.2	15.9	25.9
Net outmigration as a per- : centage of 1950 population:	38.9	32.8	19.9	26.8
Regional net outmigration--:	18.9	4.5	19.2	42.6

1/ Includes the following: Floyd, Harlan, Letcher, Perry, and Pike Counties, Ky.; Buchanan, Dickenson, and Wise Counties, Va.; and Boone, Fayette, Logan, McDowell, Mingo, Raleigh, Webster, and Wyoming Counties, W. Va.

2/ Includes the following: Bell, Knott, Leslie, and Martin Counties, Ky.; Greene County, Pa.; Tazewell County, Va.; and Barbour, Clay, and Nicholas County, W. Va.

3/ Includes the following: Walker County, Ala.; Clay, Johnson, and McCreary Counties, Ky.; Cambria, Clarion, Clearfield, Fayette, Ind.; Luzenne (anthracite), Schuykill (anthracite), and Somerset Counties, Pa.; Campbell and Grundy Counties, Tenn.; Lee and Russell Counties, Va.; Lincoln, Marion, Mercer, Monongalia, and Preston Counties, W. Va.

Source: (13, 16, 17, 18).

Table 25.--Employment in manufacturing, by industry group, Appalachian Region, 1950 and 1960

Industry group	1950		1960		Change 1950 to 1960	
	Number employed	Share of civilian labor force	Number employed	Share of civilian labor force	Amount	Rate
	1,000	Percent	1,000	Percent	1,000	Percent
Furniture, lumber, and wood products------------------	134.3	2.6	118.2	2.2	-16.1	-12.0
Metal industries------------	366.4	7.0	402.5	7.6	+36.1	+9.9
Machinery, except electrical:	60.8	1.2	74.4	1.4	+13.5	+22.2
Electrical machinery--------	70.4	1.4	94.4	1.8	+24.1	+34.2
Motor vehicles and motor vehicle equipment----------	8.3	.2	14.3	.3	+6.0	+72.9
Transportation equipment----	19.0	.4	50.1	1.0	+31.1	+164.1
Other durable goods---------	122.1	2.3	129.2	2.4	+7.1	+5.8
Food and kindred products---	82.0	1.6	113.8	2.2	+31.9	+38.9
Textile mill products-------	195.7	3.8	176.9	3.3	-18.8	-9.6
Apparel and other fabricated textile products-----------	104.4	2.0	148.7	2.8	+44.3	+42.4
Printing and publishing and other allied products------	41.5	.8	57.2	1.1	+15.7	+37.8
Chemical and allied products:	80.7	1.5	104.6	2.0	+23.9	+29.6
Other nondurable goods------	95.0	1.8	108.9	2.1	+13.8	+14.5
Total 1/--------------	1,380.6	26.4	1,593.2	30.1	+212.7	+15.4

1/ Because of rounding, some totals may not equal the sum of the items listed.

Source: (16).

Table 26.--Employment in manufacturing, by industry group, Appalachian portion of Pennsylvania, 1950 and 1960

Industry group	1950		1960		Change 1950 to 1960	
	Number employed	Share of civilian labor force	Number employed	Share of civilian labor force	Amount	Rate
	1,000	Percent	1,000	Percent	1,000	Percent
Furniture, lumber, and wood products------------------	24.2	1.0	22.7	.9	-1.5	-6.3
Metal industries------------	266.6	11.1	272.8	11.1	+6.2	+2.3
Machinery, except electrical:	47.8	2.0	56.3	2.3	+8.5	+17.9
Electrical machinery--------	64.9	2.7	72.8	3.0	+7.9	+12.1
Motor vehicles and motor vehicle equipment----------	4.1	.2	7.6	.3	+3.5	+83.2
Transportation equipment----	13.3	.6	28.1	1.2	+14.7	+110.4
Other durable goods---------	74.9	3.1	73.7	3.0	-1.3	-1.7
Food and kindred products---	48.4	2.0	57.8	2.4	+9.4	+19.5
Textile mill products-------	40.0	1.7	24.7	1.0	-15.3	-38.2
Apparel and other fabricated textile products-----------	71.9	3.0	81.0	3.3	+9.1	+12.7
Printing and publishing and other allied products------	24.3	1.0	32.9	1.4	+8.7	+35.6
Chemical and allied products:	19.1	.8	22.3	.9	+3.2	+17.0
Other nondurable goods------	53.5	2.2	57.0	2.3	+3.4	+6.4
Total 1/--------------	753.2	31.4	809.8	33.1	+56.6	+7.5

1/ Because of rounding, some totals may not equal the sum of the items listed.

Source: (16).

Table 27.--Employment in manufacturing, by industry group,
Appalachian portion of Maryland, 1950 and 1960

Industry group	1950		1960		Change 1950 to 1960	
	Number employed	Share of civilian labor force	Number employed	Share of civilian labor force	Amount	Rate
	1,000	Percent	1,000	Percent	1,000	Percent
Furniture, lumber, and wood products--------------------:	1.4	2.0	1.2	1.7	-.1	-8.4
Metal industries------------:	.3	.4	.4	.6	+.1	+33.6
Machinery, except electrical:	1.2	1.7	1.1	1.5	-.1	-9.0
Electrical machinery--------:	1/	.1	.6	.9	+.6	+1,563.2
Motor vehicles and motor vehicle equipment----------:	1/	.1	1/	2/	1/	-44.4
Transportation equipment----:	3.4	4.8	3.0	4.1	-.4	-11.8
Other durable goods---------:	1.3	1.9	2.1	2.9	+.7	+55.5
Food and kindred products---:	1.3	1.8	1.7	2.4	+.4	+33.4
Textile mill products-------:	1.3	1.8	.6	.8	-.7	-53.2
Apparel and other fabricated textile products-----------:	.9	1.3	1.2	1.8	+.3	+38.4
Printing and publishing and other allied products------:	.6	.9	.9	1.3	+.3	+46.6
Chemical and allied products:	4.6	6.6	3.3	4.7	-1.3	-27.7
Other nondurable goods------:	3.7	5.3	4.2	5.9	+.5	+14.8
Total 3/---------------:	20.0	28.6	20.4	28.6	+.4	+2.2

1/ Less than 100.   2/ Less than one-tenth of 1 percent.   3/ Because of rounding, some totals may not equal the sum of the items listed.

Source: (16).

Table 28.--Employment in manufacturing, by industry group,
Appalachian portion of West Virginia, 1950 and 1960

Industry group	1950		1960		Change 1950 to 1960	
	Number employed	Share of civilian labor force	Number employed	Share of civilian labor force	Amount	Rate
	1,000	Percent	1,000	Percent	1,000	Percent
Furniture, lumber, and wood products--------------------:	13.4	2.0	10.2	1.7	-3.3	-24.4
Metal industries------------:	26.0	3.9	30.6	5.2	+4.6	+17.8
Machinery, except electrical:	3.3	.5	4.0	.7	+.7	+19.9
Electrical machinery--------:	2.5	.4	4.4	.8	+1.9	+74.5
Motor vehicles and motor vehicle equipment----------:	.8	.1	1.0	.2	+.2	+19.2
Transportation equipment----:	.8	.1	1.4	.2	+.5	+59.6
Other durable goods---------:	23.6	3.8	20.6	3.5	-2.9	-12.5
Food and kindred products---:	6.9	1.0	8.9	1.5	+2.0	+29.8
Textile mill products-------:	4.7	.7	3.0	.5	-1.7	-35.9
Apparel and other fabricated textile products-----------:	3.6	.6	4.2	.7	+.6	+16.7
Printing and publishing and other allied products------:	4.2	.6	5.8	1.0	+1.5	+36.5
Chemical and allied products:	21.6	3.3	25.6	4.4	+4.0	+18.4
Other nondurable goods------:	6.9	1.1	6.0	1.0	-.9	-13.0
Total 1/---------------:	118.5	18.0	125.7	21.4	+7.2	+6.1

1/ Because of rounding, some totals may not equal the sum of the items listed.

Source: (16).

Table 29.--Employment in manufacturing, by industry group, Appalachian portion of Kentucky, 1950 and 1960

Industry group	1950		1960		Change 1950 to 1960	
	Number employed	Share of civilian labor force	Number	Share of civilian labor force	Amount	Rate
	1,000	Percent	1,000	Percent	1,000	Percent
Furniture, lumber, and wood products--------------------:	8.3	3.0	6.6	3.0	-1.6	-20.0
Metal industries------------:	3.4	1.2	5.0	2.3	+1.6	+46.5
Machinery, except electrical:	.4	.2	.7	.3	+.3	+75.0
Electrical machinery--------:	.6	.2	1.0	.5	+.4	+71.1
Motor vehicles and motor vehicle equipment----------:	.4	.1	.5	.2	+.1	+36.9
Transportation equipment----:	1/	2/	.2	.1	+.2	+560.0
Other durable goods---------:	1.8	.7	2.4	1.1	+.6	+31.3
Food and kindred products---:	1.7	.6	2.7	1.2	+1.0	+60.3
Textile mill products-------:	.3	.1	.2	.1	-.1	-37.4
Apparel and other fabricated textile products-----------:	1.7	.6	4.0	1.8	+2.3	+134.8
Printing and publishing and other allied products------:	.6	.2	1.0	.4	+.3	+49.6
Chemical and allied products:	.6	.2	.9	.4	+.3	+54.3
Other nondurable goods------:	2.1	.8	2.9	1.3	+.8	+40.1
Total 3/---------------:	21.9	7.9	28.2	12.8	+6.2	+28.3

1/ Less than 100.   2/ Less than one-tenth of 1 percent.   3/ Because of rounding, some totals may not equal the sum of the items listed.
  Source: (16).

Table 30.--Employment in manufacturing, by industry group, Appalachian portion of Virginia, 1950 and 1960

Industry group	1950		1960		Change 1950 to 1960	
	Number employed	Share of civilian labor force	Number employed	Share of civilian labor force	Amount	Rate
	1,000	Percent	1,000	Percent	1,000	Percent
Furniture, lumber, and wood products--------------------:	7.9	4.8	6.7	4.2	-1.2	-14.6
Metal industries------------:	.7	.4	1.4	.9	+.7	+99.6
Machinery, except electrical:	.3	.2	.8	.5	+.5	+170.4
Electrical machinery--------:	.3	.2	.8	.5	+.5	+185.6
Motor vehicles and motor vehicle equipment----------:	.1	1/	.2	.1	+.1	+166.7
Transportation equipment----:	2/	1/	.1	1/	2/	+42.5
Other durable goods---------:	1.5	.9	3.5	2.2	+2.0	+131.0
Food and kindred products---:	1.6	1.0	2.4	1.5	+.8	+47.2
Textile mill products-------:	6.5	3.9	7.2	4.5	+.6	+9.5
Apparel and other fabricated textile products-----------:	2.1	1.3	4.8	3.0	+2.7	+129.7
Printing and publishing and other allied products------:	.7	.4	1.0	.7	+.4	+58.2
Chemical and allied products:	5.4	3.3	6.6	4.1	+1.2	+22.0
Other nondurable goods------:	3.0	1.8	3.0	1.8	2/	-.2
Total 3/--------------- :	30.1	18.1	38.4	23.9	+8.3	+27.7

1/ Less than one-tenth of 1 percent. 2/ Less than 100. 3/ Because of rounding, some totals may not equal the sum of the items listed.
  Source: (16).

Table 31.—Employment in manufacturing, by industry group, Appalachian portion of Tennessee, 1950 and 1960 1/

Industry group	1950		1960		Change 1950 to 1960	
	Number employed	Share of civilian labor force	Number employed	Share of civilian labor force	Amount	Rate
	1,000	Percent	1,000	Percent	1,000	Percent
Furniture, lumber, and wood products------------------:	21.4	4.1	20.5	3.6	-.9	-4.4
Metal industries------------:	17.9	3.5	20.9	3.7	+3.0	+16.7
Machinery, except electrical:	2.6	.5	3.7	.7	+1.1	+43.4
Electrical machinery--------:	1.0	.2	4.4	.8	+3.4	+337.3
Motor vehicles and motor vehicle equipment---------:	.6	.1	.8	.1	+.2	+29.5
Transportation equipment----:	.4	.1	.7	.1	+.3	+80.2
Other durable goods---------:	8.7	1.7	10.9	1.9	+2.2	+25.4
Food and kindred products---:	8.3	1.6	12.4	2.2	+4.1	+49.5
Textile mill products-------:	26.8	5.2	24.1	4.3	-2.6	-9.8
Apparel and other fabricated textile products-----------:	7.2	1.4	20.1	3.5	+12.9	+180.3
Printing and publishing and other allied products------:	4.6	.9	6.5	1.1	+1.9	+41.0
Chemical and allied products:	21.3	4.1	31.7	5.6	+10.3	+48.5
Other nondurable goods------:	7.0	1.4	8.3	1.5	+1.3	+18.6
Total 1/---------------:	127.7	24.7	164.9	29.0	+37.2	+29.1

1/ Because of rounding, some totals may not equal the sum of the items listed.
Source: (16).

Table 32.—Employment in manufacturing, by industry group, Appalachian portion of North Carolina, 1950 and 1960

Industry group	1950		1960		Change 1950 to 1960	
	Number employed	Share of civilian labor force	Number employed	Share of civilian labor force	Amount	Rate
	1,000	Percent	1,000	Percent	1,000	Percent
Furniture, lumber, and wood products------------------:	22.2	8.4	23.7	8.3	+1.5	+6.6
Metal industries------------:	.4	.2	.9	0.3	+.5	+113.8
Machinery, except electrical:	.3	.1	.9	0.3	+.6	+165.9
Electrical machinery--------:	.2	.1	3.6	1.3	+3.4	+1534.7
Motor vehicles and motor vehicle equipment---------:	1/	2/	.1	2/	1/	+50.0
Transportation equipment----:	1/	2/	.6	.2	+.5	+2614.3
Other durable goods---------:	2.1	.8	4.2	1.5	+2.1	+99.2
Food and kindred products---:	2.2	.9	4.1	1.5	+1.9	+84.0
Textile mill products-------:	36.6	13.8	44.3	15.5	+7.7	+21.0
Apparel and other fabricated textile products-----------:	2.9	1.1	6.8	2.4	+3.8	+130.4
Printing and publishing and other allied products------:	1.2	0.4	1.4	.5	+.2	+18.7
Chemical and allied products:	2.9	1.1	4.9	1.7	+1.9	+65.8
Other nondurable goods------:	6.4	2.4	9.1	3.2	+2.7	+42.6
Total 3/---------------:	77.8	29.4	104.7	36.7	+26.9	+34.6

1/ Less than 100.   2/ Less than one-tenth of 1 percent.   3/ Because of rounding, some totals may not equal the sum of the items listed.
Source: (16).

Table 33.--Employment in manufacturing, by industry group, Appalachian portion of Georgia, 1950 and 1960

Industry group	1950		1960		Change 1950 to 1960	
	Number employed	Share of civilian labor force	Number employed	Share of civilian labor force	Amount	Rate
	1,000	Percent	1,000	Percent	1,000	Percent
Furniture, lumber, and wood products	14.6	5.9	10.4	3.5	-4.2	-29.0
Metal industries	2.7	1.1	4.7	1.6	+2.0	+75.0
Machinery, except electrical	1.4	.6	3.0	1.0	+1.6	+117.8
Electrical machinery	.2	.1	2.3	.8	+2.1	+893.9
Motor vehicles and motor vehicle equipment	1.7	.7	3.2	1.1	+1.5	+87.5
Transportation equipment	.1	1/	9.7	3.3	+9.6	+11008.1
Other durable goods	2.5	1.0	4.6	1.5	+2.1	+84.4
Food and kindred products	4.0	1.6	9.1	3.1	+5.0	+124.1
Textile mill products	40.1	16.0	39.9	13.5	-.2	-.5
Apparel and other fabricated textile products	10.9	4.4	16.6	5.6	+5.7	+51.7
Printing and publishing and other allied products	1.2	.5	2.2	.7	+1.0	+78.4
Chemical and allied products	1.4	.6	3.1	1.1	+1.7	+120.7
Other nondurable goods	2.5	1.0	6.2	2.1	+3.8	+151.8
Total 2/	83.4	33.3	115.0	38.8	+31.6	+37.9

1/ Less than one-tenth of 1 percent. 2/ Because of rounding, some totals may not equal the sum of the items listed.
  Source: (16).

Table 34.--Employment in manufacturing, by industry group, Appalachian portion of Alabama, 1950 and 1960

Industry group	1950		1960		Change 1950 to 1960	
	Number employed	Share of civilian labor force	Number employed	Share of civilian labor force	Amount	Rate
	1,000	Percent	1,000	Percent	1,000	Percent
Furniture, lumber, and wood products	20.7	3.4	16.1	2.5	-4.7	-22.6
Metal industries	48.3	7.9	65.8	10.0	+17.5	+36.2
Machinery, except electrical	3.5	.6	3.8	.6	+.3	+8.4
Electrical machinery	.5	.1	4.4	.7	+3.9	+779.1
Motor vehicles and motor vehicle equipment	.4	.1	.9	.1	+.5	+110.9
Transportation equipment	.9	.1	6.6	1.0	+5.7	+639.4
Other durable goods	5.6	.9	7.2	1.1	+1.6	+28.9
Food and kindred products	7.6	1.2	14.7	2.3	+7.2	+94.2
Textile mill products	39.4	6.4	32.9	5.0	-6.5	-16.4
Apparel and other fabricated textile products	3.2	.5	10.0	1.5	+6.8	+212.6
Printing and publishing and other allied products	4.1	.7	5.5	.8	+1.4	+34.6
Chemical and allied products	3.7	.6	6.2	.9	+2.4	+65.4
Other nondurable goods	9.9	1.6	12.1	1.8	+2.1	+21.6
Total 1/	147.9	24.1	186.2	28.4	+38.3	+25.9

1/ Because of rounding, some totals may not equal the sum of the items listed.
  Source: (16).

Table 35.--Counties included in Standard Metropolitan Statistical Areas,
by State area, Appalachian Region

Pennsylvania	West Virginia	North Carolina
Allegheny	(continued)	Buncombe
Beaver	Cabell	
Blair	Hancock	Georgia
Cambria	Kanawha	Cobb
Cumberland	Marshall	Gwinnett
Dauphin	Ohio	Walker
Erie	Wayne	
Lackawanna		Alabama
Luzerne	Kentucky	Etowah
Northampton	Boyd	Jefferson
Somerset		Madison
Washington	Tennessee	Tuscaloosa
Westmoreland	Anderson	
	Blount	
West Virginia	Hamilton	
Brooke	Knox	

Source: (16).

Table 36.--Counties where population of the largest city was 25,000 to 49,999,
by State area, Appalachian Region, 1960

Pennsylvania	West Virginia	Georgia
Lawrence	Harrison	Floyd
Lycoming	Marion	
Mercer	Wood	Alabama
		Calhoun
Maryland	Tennessee	Morgan
Allegany	Sullivan	
Washington	Washington	

Source: (16).

Table 37.--Counties where population of the largest city was 10,000 to 24,999, by State area, Appalachian Region, 1960

Pennsylvania
  Butler
  Centre
  Clearfield
  Clinton
  Columbia
  Crawford
  Fayette
  Franklin
  Indiana
  McKean
  Mifflin
  Northumberland
  Schuylkill
  Venango
  Warren

West Virginia
  Berkley
  Mercer

West Virginia
(continued)
  Monongalia
  Raleigh

Kentucky
  Bell
  Madison

Virginia
  Alleghany
  Pulaski
  Washington

Tennessee
  Bradley
  Carter
  Coffee
  Greene
  Hamblen

Tennessee
(continued)
  McMinn

North Carolina
  Caldwell
  Cleveland

Georgia
  Carroll
  Hall
  Whitfield

Alabama
  Colbert
  Cullman
  Talladega
  Tallapoosa
  Walker

Source: (16).

Table 38.--Counties where population of the largest city was 5,000 to 9,999, by State area, Appalachian Region, 1960

Pennsylvania
  Armstrong
  Bradford
  Carbon
  Elk
  Greene
  Huntingdon
  Jefferson
  Monroe
  Montour
  Union
  Wayne

West Virginia
  Lewis
  McDowell
  Mason
  Mineral
  Mingo
  Randolph
  Taylor
  Summers

West Virginia
(continued)
  Upshur
  Wetzel

Kentucky
  Perry
  Pulaski
  Whitley

Virginia
  Carroll
  Smyth
  Wise
  Wythe

Tennessee
  Campbell
  Cocke
  Putnam
  Roane
  Warren

North Carolina
  Burke
  Haywood
  Henderson
  Rutherford
  Surry

Georgia
  Barrow
  Barton
  Polk
  Stephens

Alabama
  Chambers
  Chilton
  DeKalb
  Franklin
  Jackson
  Limestone
  Marshall
  Randolph

Source: (16).

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Table 39.--Counties where population of the largest city was less than 5,000, by State area, Appalachian Region, 1960

Pennsylvania	Kentucky	Virginia	North Carolina
Bedford	Adair	(continued)	(continued)
Cameron	Bath	Russell	Mitchell
Clarion	Breathitt	Scott	Polk
Forest	Carter	Tazewell	Stokes
Fulton	Casey		Swain
Juniata	Clay	Tennessee	Transylvania
Perry	Clinton	Bledsoe	Watauga
Pike	Cumberland	Claiborne	Wilkes
Potter	Elliott	Clay	Yancey
Snyder	Estill	Cumberland	
Sullivan	Floyd	DeKalb	Georgia
Susquehanna	Garrard	Fentress	Banks
Tioga	Greenup	Franklin	Catoosa
Wyoming	Harlan	Grainger	Chatooga
	Jackson	Greenup	Cherokee
Maryland	Johnson	Hancock	Dade
Garrett	Knott	Hawkins	Dawson
	Knox	Jackson	Douglas
West Virginia	Laurel	Jefferson	Fannin
Barbour	Lawrence	Johnson	Forsyth
Boone	Lee	Loudon	Franklin
Braxton	Leslie	Macon	Gilmer
Calhoun	Letcher	Marion	Gordon
Clay	Lewis	Meigs	Habersham
Doddridge	Lincoln	Monroe	Haralson
Fayette	McCreary	Morgan	Heard
Gilmer	Magoffin	Overton	Jackson
Grant	Martin	Pickett	Lumpkin
Greenbrier	Menifee	Polk	Madison
Hampshire	Morgan	Rhea	Murray
Hardy	Owsley	Scott	Paulding
Jackson	Pike	Sequatchie	Pickens
Jefferson	Powell	Sevier	Rabun
Lincoln	Rickcastle	Smith	Towns
Logan	Rowan	Unicoi	Union
Monroe	Russell	Union	White
Morgan	Wayne	VanBurean	
Nicholas	Wolfe	White	Alabama
Pendleton			Bibb
Pleasants	Virginia	North Carolina	Blount
Pocahontas	Bath	Alexander	Cherokee
Preston	Bland	Alleghany	Clay
Putnam	Botetourt	Ashe	Cleburne
Ritchie	Buchannan	Avery	Coosa
Roane	Craig	Cherokee	Elmore
Tucker	Dickenson	Clay	Fayette
Tyler	Floyd	Graham	Lawrence
Webster	Giles	Jackson	Marion
Wirt	Grayson	McDowell	St. Clair
Wyoming	Highland	Macon	Shelby
	Lee	Madison	Winston

1/ Source: (16).

Table 40.--Employment in manufacturing for all counties by size of largest city
in Appalachian Region, 1960

City size	1950		1960		Change 1950 to 1960		
	Number employed	Share 1/	Number employed	Share 1/	Amount	Share 1/	Rate
	1,000	Percent	1,000	Percent	1,000	Percent	Percent
Standard Metropolitan Statistical Area--------:	740.0	53.6	797.8	50.1	+57.8	27.2	+7.8
25,000 to 49,999---------:	128.4	9.3	140.1	8.8	+11.7	5.5	+9.1
10,000 to 24,999---------:	217.0	15.7	264.5	16.6	+47.5	22.3	+21.9
5,000 to 9,999-----------:	134.3	9.7	169.6	10.7	+35.3	16.6	+26.3
Less than 5,000----------:	161.0	11.7	221.3	13.9	+60.4	28.4	+37.5
Total 2/------------:	1,380.6	100.0	1,593.2	100.0	+212.7	100.0	+15.4

1/ Percentage of regional manufacturing employment.
2/ Because of rounding, some totals may not equal the sum of the items listed.

Source: (16).

Table 41.--Employment in manufacturing for all counties included in Standard Metropolitan
Statistical Areas, by State area, Appalachian Region, 1950 and 1960

State area	1950		1960		Change 1950 to 1960	
	Number employed	Share of civilian labor force	Number employed	Share of civilian labor force	Amount	Rate
	1,000	Percent	1,000	Percent	1,000	Percent
Pennsylvania----------:	512.3	33.0	532.3	33.6	+20.1	+3.9
West Virginia---------:	60.5	29.5	59.2	29.0	-1.4	-2.3
Kentucky--------------:	4.7	27.9	5.8	32.0	+1.1	+24.2
Tennessee-------------:	58.6	28.7	65.8	29.1	+7.3	+12.4
North Carolina--------:	10.1	21.3	13.8	27.3	+3.7	+36.8
Georgia---------------:	16.1	32.7	29.1	38.0	+13.0	+80.8
Alabama---------------:	77.8	25.7	91.8	26.8	+14.0	+18.0
Total 1/----------:	740.0	31.2	797.8	31.9	+57.8	+7.8

1/ Because of rounding, some totals may not equal the sum of the items listed.

Source: (16).

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Table 42.--Employment in manufacturing for all counties where the 1960 population of the largest city was 25,000 to 49,999 by State area, Appalachian Region, 1950 and 1960

State area	1950		1960		Change 1950 to 1960	
	Number employed	Share of civilian labor force	Number employed	Share of civilian labor force	Amount	Rate
	1,000	Percent	1,000	Percent	1,000	Percent
Pennsylvania--------:	49.9	40.9	52.4	39.9	+2.5	+5.1
Maryland------------:	19.2	30.2	19.4	29.8	+.2	+1.1
West Virginia-------:	19.2	23.5	21.4	27.2	+2.2	+11.3
Tennessee-----------:	17.6	31.7	21.0	32.3	+3.4	+19.3
Georgia-------------:	9.3	37.4	9.6	34.7	+.3	+2.9
Alabama-------------:	13.1	28.5	16.3	29.6	+3.1	+23.8
Total 1/----------:	128.4	32.6	140.1	33.1	+11.7	+9.1

1/ Because of rounding, some totals may not equal the sum of the items listed.

Source: (16).

Table 43.--Employment in manufacturing for all counties where the 1960 population of the largest city was 10,000 to 24,999, by State area, Appalachian Region, 1950 and 1960

State area	1950		1960		Change 1950 to 1960	
	Number employed	Share of civilian labor force	Number employed	Share of civilian labor force	Amount	Rate
	1,000	Percent	1,000	Percent	1,000	Percent
Pennsylvania--------:	121.1	26.0	144.4	31.1	+23.3	+19.3
West Virginia-------:	10.0	11.6	10.8	14.5	+.9	+8.6
Kentucky------------:	1.8	7.8	2.6	12.5	+.7	+40.7
Virginia------------:	12.1	29.0	14.4	33.0	+2.3	+19.1
Tennessee-----------:	18.9	27.4	25.9	32.5	+7.0	+37.3
North Carolina------:	16.7	41.5	20.5	45.3	+3.8	+23.1
Georgia-------------:	15.4	36.0	20.6	41.3	+5.2	+33.8
Alabama-------------:	21.0	25.3	25.2	30.2	+4.2	+20.0
Total 1/----------:	217.0	25.4	264.5	30.7	+47.5	+21.9

1/ Because of rounding, some totals may not equal the sum of the items listed.

Source: (16).

Table 44.--Employment in manufacturing for all counties where the 1960 population of the largest city was 5,000 to 9,999, by State area, Appalachian Region, 1950 and 1960

State area	1950		1960		Change 1950 to 1960	
	Number employed	Share of civilian labor force	Number employed	Share of civilian labor force	Amount	Rate
	1,000	Percent	1,000	Percent	1,000	Percent
Pennsylvania--------:	47.8	28.9	52.5	31.9	+4.7	+9.7
West Virginia-------:	9.2	9.6	10.8	14.5	+1.6	+17.6
Kentucky------------:	2.2	6.7	2.6	10.5	+.4	+16.9
Virginia------------:	7.1	17.0	10.2	24.9	+3.2	+44.9
Tennessee-----------:	8.5	19.5	14.3	29.4	+5.8	+67.4
North Carolina------:	28.2	37.9	36.7	42.9	+8.5	+30.0
Georgia-------------:	11.8	35.5	13.6	38.9	+1.8	+15.4
Alabama-------------:	19.4	20.7	28.8	31.1	+9.4	+48.4
Total 1/----------:	134.3	23.1	169.6	29.9	+35.3	+26.3

1/ Because of rounding, some totals may not equal the sum of the items listed.

Source: (16).

Table 45.--Employment in manufacturing for all counties where the 1960 population of the largest city was less than 5,000, by State area, Appalachian Region, 1950 and 1960

State area	1950		1960		Change 1950 to 1960	
	Number employed	Share of civilian labor force	Number employed	Share of civilian labor force	Amount	Rate
	1,000	Percent	1,000	Percent	1,000	Percent
Pennsylvania--------:	22.2	22.5	28.2	27.2	+6.0	+27.1
Maryland------------:	.8	12.6	1.0	15.6	+.2	+28.4
West Virginia-------:	19.6	10.2	23.6	15.2	+4.0	+20.2
Kentucky------------:	13.2	6.5	17.2	10.9	+4.0	+29.9
Virginia------------:	10.9	13.2	13.7	18.0	+2.8	+25.8
Tennessee-----------:	24.2	16.6	37.9	25.5	+13.7	+56.6
North Carolina------:	22.7	22.2	33.6	32.4	+10.9	+47.7
Georgia-------------:	30.8	30.6	42.0	39.3	+11.3	+36.6
Alabama-------------:	16.5	18.6	24.1	28.6	+7.6	+46.0
Total 1/----------:	161.0	15.8	221.3	23.5	+60.4	+37.5

1/ Because of rounding, some totals may not equal the sum of the items listed.

Source: (16).

Table 46.--Employment in construction in the Appalachian Region, by State area, surrounding area, and United States, 1950 and 1960

State area	1950		1960		Change, 1950 to 1960	
	Number employed	Share of civilian labor force	Number employed	Share of civilian labor force	Amount	Rate
	1,000	Percent	1,000	Percent	1,000	Percent
Pennsylvania--------:	116.5	4.8	113.4	4.6	-3.0	-2.6
Maryland------------:	3.5	5.0	4.1	5.7	+.6	+17.1
West Virginia-------:	32.2	4.9	29.3	5.0	-2.9	-8.9
Kentucky------------:	12.0	4.3	12.0	5.4	1/	1/
Virginia------------:	9.0	5.4	8.6	5.4	-.3	-3.7
Tennessee-----------:	35.4	6.8	36.1	6.3	+.6	+1.8
North Carolina------:	15.5	5.9	17.7	6.2	+2.3	+14.5
Georgia-------------:	14.5	5.8	20.3	6.9	+5.8	+40.1
Alabama-------------:	30.8	5.0	41.8	6.3	+11.0	+35.6
Total Appalachia 2/:	269.3	5.2	283.3	5.3	+14.0	+5.2
Surrounding area----:	476.6	6.1	513.9	5.8	+37.3	+7.8
United States-------:	3,458.0	5.9	3,815.9	5.6	+357.9	+10.3

1/ No change.
2/ Because of rounding, some totals may not equal the sum of the items listed.

Source: (16).

Table 47.--Employment in all trade and service industries in the Appalachian Region, by State area, surrounding area, and United States, 1950 and 1960

State area	1950		1960		Change, 1950 to 1960	
	Number employed	Share of civilian labor force	Number employed	Share of civilian labor force	Amount	Rate
	1,000	Percent	1,000	Percent	1,000	Percent
Pennsylvania--------:	1,089.5	45.4	1,211.1	49.5	+121.5	+11.2
Maryland------------:	34.0	48.6	37.1	51.9	+3.1	+9.3
West Virginia-------:	281.4	42.7	300.3	51.1	+18.9	+6.7
Kentucky------------:	90.7	32.6	98.0	44.4	+7.4	+8.2
Virginia------------:	57.7	34.8	66.7	41.5	+9.1	+15.7
Tennessee-----------:	216.8	41.8	270.8	47.7	+53.9	+24.9
North Carolina------:	95.2	36.0	115.8	40.6	+20.6	+21.6
Georgia-------------:	86.7	34.6	123.5	41.7	+36.9	+42.5
Alabama------------ :	261.7	42.6	331.7	50.5	+70.1	+26.8
Total Appalachia 1/:	2,213.6	42.4	2,555.0	48.2	+341.4	+15.4
Surrounding area----:	3,857.9	49.5	4,928.2	55.8	+1,070.3	+27.7
United States-------:	30,327.3	51.3	38,306.3	56.2	+7,979.0	+26.3

1/ Because of rounding, some totals may not equal the sum of the items listed.

Source: (16).

Table 48.--Employment in trades and services, by industry group, Appalachian Region, 1950 and 1960

Industry group	1950		1960		Change, 1950 to 1960	
	Number employed	Share of civilian labor force	Number employed	Share of civilian labor force	Amount	Rate
	1,000	Percent	1,000	Percent	1,000	Percent
Public utilities------------:	382.3	7.3	343.2	6.5	-39.0	-10.2
Wholesale trade------------:	114.0	2.2	126.3	2.4	+12.2	+10.7
Retail trade----------------:	653.2	12.5	699.2	13.2	+46.0	+7.0
Finance, insurance, and real estate-------------- :	96.9	1.8	133.1	2.5	+36.3	+37.4
Professional and related services-------------------:	359.5	6.9	528.9	10.0	+169.8	+47.1
Public administration-------:	153.9	3.0	184.8	3.5	+31.0	+20.1
Other services-------------:	382.7	7.3	392.9	7.4	+10.2	+2.7
Industry not reported-------:	71.1	1.4	146.5	2.8	+75.4	+106.1
Total 1/------------------:	2,213.6	42.4	2,555.0	48.2	+341.4	+15.4

1/ Because of rounding, some totals may not equal the sum of the items listed.

Source: (16).

Table 49.--Employment in trades and services, by industry group, Appalachian portion of Pennsylvania, 1950 and 1960

Industry group	1950		1960		Change, 1950 to 1960	
	Number employed	Share of civilian labor force	Number employed	Share of civilian labor force	Amount	Rate
	1,000	Percent	1,000	Percent	1,000	Percent
Public utilities------------:	207.0	8.6	173.7	7.1	-33.3	-16.1
Wholesale trade------------:	57.4	2.4	61.3	2.5	+3.9	+6.8
Retail trade----------------:	322.1	3.4	324.6	13.3	+2.6	+.8
Finance, insurance and real estate----------------:	53.8	2.2	68.6	2.8	+14.8	+27.5
Professional and related services-------------------:	177.0	7.4	256.8	10.5	+79.8	+45.1
Public administration-------:	81.5	3.4	97.5	4.0	+16.0	+19.6
Other services-------------:	163.7	6.8	156.5	6.4	-7.2	-4.4
Industry not reported-------:	27.0	1.1	72.0	2.9	+45.0	+166.6
Total 1/------------------:	1,089.5	45.4	1,211.0	49.5	+121.5	+11.2

1/ Because of rounding, some totals may not equal the sum of the items listed.

Source: (16).

Table 50.--Employment in trades and services, by industry group, Appalachian portion of Maryland, 1950 and 1960

Industry group	1950		1960		Change, 1950 to 1960	
	Number employed	Share of civilian labor force	Number employed	Share of civilian labor force	Amount	Rate
	1,000	Percent	1,000	Percent	1,000	Percent
Public utilities------------:	8.9	12.7	7.7	10.7	-1.2	-13.6
Wholesale trade-------------:	1.6	2.3	1.7	2.4	+.1	+4.2
Retail trade----------------:	9.9	14.1	10.2	14.2	+.3	+3.4
Finance, insurance and real estate----------------:	1.3	1.8	1.5	2.1	+.2	+19.6
Professional and related services-------------------:	4.5	6.5	6.7	9.4	+2.2	+48.0
Public administration-------:	1.7	2.4	2.1	3.0	+.5	+28.9
Other services-------------:	5.3	7.6	4.8	6.8	+.5	+9.0
Industry not reported-------:	.1	1.2	2.4	3.3	+1.5	+182.6
Total 1/-------------------:	34.0	48.6	37.1	51.9	+3.1	+9.3

1/ Because of rounding, some totals may not equal the sum of the items listed.

Source: (16).

Table 51.--Employment in trades and services, by industry group, Appalachian portion of West Virginia, 1950 and 1960

Industry group	1950		1960		Change, 1950 to 1960	
	Number employed	Share of civilian labor force	Number employed	Share of civilian labor force	Amount	Rate
	1,000	Percent	1,000	Percent	1,000	Percent
Public utilities------------:	53.3	8.1	47.3	8.1	-6.0	-11.2
Wholesale trade-------------:	14.9	2.3	14.4	2.5	-.4	-3.0
Retail trade----------------:	82.6	12.5	82.7	14.1	+.1	+.1
Finance, insurance and real estate----------------:	10.0	1.5	12.4	2.1	+2.5	+24.6
Professional and related services-------------------:	47.5	7.2	65.3	11.1	+17.7	+37.4
Public administration-------:	16.6	2.5	19.0	3.2	+2.4	+14.6
Other services-------------:	46.5	7.1	41.7	7.1	-4.8	-10.3
Industry not reported-------:	10.0	1.5	17.3	3.0	+7.4	+74.0
Total 1/-------------------:	281.4	42.7	300.3	51.1	+18.9	+6.7

1/ Because of rounding, some totals may not equal the sum of the items listed.

Source: (16).

Table 52.--Employment in trades and services, by industry group, Appalachian portion of Kentucky, 1950 and 1960

| Industry group | 1950 | | 1960 | | Change, 1950 to 1960 | |
	Number employed	Share of civilian labor force	Number employed	Share of civilian labor force	Amount	Rate
	1,000	Percent	1,000	Percent	1,000	Percent
Public utilities------------:	18.4	6.6	14.3	6.5	-4.2	-22.7
Wholesale trade-------------:	3.8	1.4	3.5	1.6	-.3	-8.6
Retail trade----------------:	25.4	9.1	27.6	12.5	+2.2	+8.7
Finance, insurance and real estate----------------:	2.2	.8	3.0	1.3	+.7	+33.6
Professional and related services-------------------:	14.0	5.1	21.7	9.9	+7.7	+54.9
Public administration-------:	6.3	2.2	6.9	3.1	+.7	+10.6
Other services-------------:	15.5	5.6	15.4	7.0	-.2	-1.0
Industry not reported-------:	5.0	1.8	5.7	2.6	+.7	+14.9
Total 1/-------------------:	90.7	32.6	98.0	44.4	+7.4	+8.2

1/ Because of rounding, some totals may not equal the sum of the items listed.

Source: (16).

Table 53.--Employment in trades and services, by industry group, Appalachian portion of Virginia, 1950 and 1960

| Industry group | 1950 | | 1960 | | Change, 1950 to 1960 | |
	Number employed	Share of civilian labor force	Number employed	Share of civilian labor force	Amount	Rate
	1,000	Percent	1,000	Percent	1,000	Percent
Public utilities------------:	10.6	6.4	9.1	5.7	-1.4	-13.5
Wholesale trade-------------:	2.2	1.4	2.6	1.6	+4.1	+18.2
Retail trade----------------:	17.0	10.2	20.1	12.5	+3.2	+19.0
Finance, insurance and real estate----------------:	1.7	1.0	2.3	1.4	+.6	+36.3
Professional and related services-------------------:	8.8	5.3	13.7	8.6	+4.9	+55.7
Public administration-------:	3.5	2.1	3.9	2.5	+.4	+12.7
Other services-------------:	10.7	6.4	11.5	7.1	+.8	+7.5
Industry not reported-------:	3.3	2.0	3.4	2.1	+1.2	+3.5
Total 1/-------------------:	57.7	34.8	66.7	41.5	+9.1	+15.7

1/ Because of rounding, some totals may not equal the sum of the items listed.

Source: (16).

Table 54.--Employment in trades and services, by industry group, Appalachian portion of Tennessee, 1950 and 1960

Industry group	1950		1960		Change 1950 to 1960	
	Number employed	Share of civilian labor force	Number employed	Share of civilian labor force	Amount	Rate
	1,000	Percent	1,000	Percent	1,000	Percent
Public utilities-------:	29.7	5.7	30.0	5.3	+.3	+1.1
Wholesale trade--------:	11.6	2.2	13.8	2.4	+2.2	+18.9
Retail trade-----------:	65.3	12.6	74.7	13.2	+9.5	+14.5
Finance, insurance and real estate-----------:	8.7	1.7	13.9	2.4	+5.2	+60.0
Professional and related services------:	35.8	6.9	55.1	9.7	+19.3	+54.1
Public administration--:	14.7	2.8	16.2	2.9	+1.5	+10.5
Other services---------:	41.6	8.0	48.0	8.4	+6.4	+15.4
Industry not reported--:	9.6	1.9	19.1	3.4	+9.5	+98.2
Total 1/----------:	216.8	41.8	270.8	47.7	+53.9	+24.9

1/ Because of rounding, some totals may not equal the sum of the items listed.

Source: (16).

Table 55.--Employment in trades and services, by industry group, Appalachian portion of North Carolina, 1950 and 1960

Industry group	1950		1960		Change 1950 to 1960	
	Number employed	Share of civilian labor force	Number employed	Share of civilian labor force	Amount	Rate
	1,000	Percent	1,000	Percent	1,000	Percent
Public utilities-------:	9.9	3.7	10.2	3.6	+.3	+3.4
Wholesale trade--------:	4.0	1.5	5.2	1.8	+1.2	+30.2
Retail trade-----------:	28.4	10.8	33.5	11.8	+5.1	+17.8
Finance, insurance and real estate-----------:	2.8	1.1	4.8	1.7	+2.1	+74.0
Professional and related services------:	18.2	6.9	25.6	9.0	+7.4	+40.8
Public administration--:	6.0	2.3	6.5	2.3	+.5	+9.0
Other services---------:	21.6	8.2	22.3	7.8	+.7	+3.2
Industry not reported--:	4.3	1.6	7.6	2.7	+3.3	+75.4
Total 1/----------:	95.2	36.0	115.8	40.6	+20.6	+21.6

1/ Because of rounding, some totals may not equal the sum of the items listed.

Source: (16).

Table 56.--Employment in trades and services, by industry group, Appalachian portion of Georgia, 1950 and 1960

Industry group	1950		1960		Change 1950 to 1960	
	Number employed	Share of civilian labor force	Number employed	Share of civilian labor force	Amount	Rate
	1,000	Percent	1,000	Percent	1,000	Percent
Public utilities-------:	10.1	4.0	13.7	4.6	+3.5	+35.0
Wholesale trade--------:	4.1	1.6	6.7	2.3	+2.7	+65.1
Retail trade-----------:	27.5	11.0	36.8	12.5	+9.4	+34.0
Finance, insurance and real estate-----------:	3.4	1.4	7.3	2.5	+3.9	+115.9
Professional and related services------:	13.9	5.5	21.7	7.3	+7.8	+56.6
Public administration--:	5.9	2.4	7.9	2.7	+2.0	+34.6
Other services---------:	18.3	7.3	24.7	8.3	+6.3	+34.7
Industry not reported--:	3.6	1.4	4.7	1.6	+1.2	+32.7
Total 1/----------:	86.7	34.6	123.5	41.7	+36.9	+42.5

1/ Because of rounding, some totals may not equal the sum of the items listed.

Source: (16).

Table 57.--Employment in trades and services, by industry group, Appalachian portion of Alabama, 1950 and 1960

Industry group	1950		1960		Change 1950 to 1960	
	Number employed	Share of civilian labor force	Number employed	Share of civilian labor force	Amount	Rate
	1,000	Percent	1,000	Percent	1,000	Percent
Public utilities-------:	34.4	5.6	37.3	5.7	+2.9	+8.4
Wholesale trade--------:	14.4	2.3	17.0	2.6	+2.6	+17.8
Retail trade-----------:	75.2	12.2	88.9	13.5	+13.8	+18.3
Finance, insurance and real estate-----------:	13.1	2.1	19.3	2.9	+6.2	+47.5
Professional and related services------:	39.8	6.5	62.3	9.5	+22.4	+56.3
Public administration--:	17.8	2.9	24.6	3.8	+6.8	+38.4
Other services---------:	59.5	9.7	68.1	10.4	+8.6	+14.5
Industry not reported--:	7.4	1.2	14.2	2.2	+6.7	+90.6
Total 1/----------:	261.7	42.6	331.7	50.5	+70.1	+26.8

1/ Because of rounding, some totals may not equal the sum of the items listed.

Source: (16).

Table 58.--Employment in all trade and service industries for all counties by size of largest city, Appalachian Region, 1950 and 1960

City size	1950		1960		Change 1950 to 1960		
	Number employed	Share 1/	Number employed	Share 1/	Amount	Share 1/	Rate
	1,000	Percent	1,000	Percent	1,000	Percent	Percent
Standard Metropolitan Statistical Area--------	1,170.3	52.9	1,332.4	52.1	+162.1	47.5	+13.9
25,000 to 49,999---------	178.4	8.1	208.8	8.1	+30.5	8.9	+17.0
10,000 to 24,999---------	344.9	15.6	397.6	15.6	+52.7	15.4	+15.3
5,000 to 9,999-----------	207.3	9.4	241.7	9.5	+34.4	10.1	+16.6
Less than 5,000----------	312.8	14.1	374.8	14.7	+62.1	18.2	+19.8
Total 2/-----------	2,213.6	100.0	2,555.0	100.0	+341.4	100.0	+15.4

1/ Percentage of region's total employment in trade and services.
2/ Because of rounding, some totals may not equal the sum of the items listed.

Source: (16).

Table 59.--Employment in all trade and service industries for all counties included in Standard Metropolitan Statistical Areas, by State area, Appalachian Region, 1950 and 1960

State area	1950		1960		Change 1950 to 1960	
	Number employed	Share of civilian labor force	Number employed	Share of civilian labor force	Amount	Rate
	1,000	Percent	1,000	Percent	1,000	Percent
Pennsylvania-----------	742.7	47.9	818.3	51.6	+75.6	+10.2
West Virginia---------	103.1	50.4	113.5	55.6	+10.4	+10.1
Kentucky--------------	9.0	53.9	9.2	50.7	+.2	+1.7
Tennessee-------------	108.6	53.2	129.3	57.1	+20.7	+19.1
North Carolina--------	27.9	58.8	29.3	57.9	+1.4	+5.2
Georgia---------------	21.0	42.7	36.0	47.0	+15.0	+71.4
Alabama---------------	158.0	52.2	196.9	57.5	+38.8	+24.6
Total 1/---------	1,170.3	49.3	1,332.4	53.2	+162.1	+13.9

1/ Because of rounding, some totals may not equal the sum of the items listed.

Source: (16).

Table 60.--Employment in all trade and service industries for all counties where the 1960
population of the largest city was 25,000 to 49,999, by State area, Appalachian Region,
1950 and 1960

State area	1950		1960		Change 1950 to 1960	
	Number employed	Share of civilian labor force	Number employed	Share of civilian labor force	Amount	Rate
	1,000	Percent	1,000	Percent	1,000	Percent
Pennsylvania----------:	52.2	42.8	60.0	45.6	+7.8	+14.9
Maryland--------------:	31.7	49.9	34.5	52.9	+2.8	+8.8
West Virginia---------:	38.0	46.5	40.4	51.4	+2.5	+6.5
Tennessee-------------:	24.7	44.6	31.9	49.2	+7.2	+29.1
North Carolina--------:	1/	1/	1/	1/	1/	1/
Georgia---------------:	10.9	43.8	14.1	50.9	+3.1	+28.8
Alabama---------------:	20.8	45.1	27.9	50.8	+7.1	+34.1
Total 1/---------:	178.4	45.3	208.8	49.4	+30.5	+17.0

1/ Because of rounding, some totals may not equal the sum of the items listed.

Source: (16).

Table 61.--Employment in all trade and service industries for all counties where the 1960
population of the largest city was 10,000 to 24,999, by State area, Appalachian Region,
1950 and 1960

State area	1950		1960		Change 1950 to 1960	
	Number employed	Share of civilian labor force	Number employed	Share of civilian labor force	Amount	Rate
	1,000	Percent	1,000	Percent	1,000	Percent
Pennsylvania----------:	193.0	41.5	215.0	46.4	+21.8	+11.3
West Virginia---------:	38.6	45.0	41.5	55.6	+2.9	+7.6
Kentucky--------------:	11.5	48.6	11.9	57.8	+.5	+4.1
Virginia--------------:	19.1	45.8	20.9	47.9	+1.8	+9.4
Tennessee-------------:	25.0	36.3	34.0	42.5	+8.9	+35.7
North Carolina--------:	12.6	31.3	17.2	38.0	+4.7	+37.2
Georgia---------------:	15.3	35.9	20.1	40.3	+4.8	+31.2
Alabama---------------:	29.6	35.5	37.0	44.4	+7.4	+25.0
Total 1/---------:	344.9	40.5	397.6	46.2	+52.7	+15.3

1/ Because of rounding, some totals may not equal the sum of the items listed.

Source: (16).

Table 62.--Employment in all trade and service industries for all counties where the 1960
population of the largest city was 5,000 to 9,999, by State area,
Appalachian Region, 1950 and 1960

State area	1950		1960		Change 1950 to 1960	
	Number employed	Share of civilian labor force	Number employed	Share of civilian labor force	Amount	Rate
	1,000	Percent	1,000	Percent	1,000	Percent
Pennsylvania---------:	63.0	38.1	71.4	43.3	+8.4	+13.3
West Virginia--------:	38.4	40.2	37.0	49.8	-1.4	-3.6
Kentucky-------------:	11.7	35.4	12.3	49.5	+.6	+4.8
Virginia-------------:	14.7	35.5	17.3	42.3	+2.6	+17.9
Tennessee------------:	15.8	36.0	20.8	42.8	+5.0	+31.6
North Carolina-------:	24.9	33.4	31.7	37.1	+6.8	+27.5
Georgia--------------:	11.6	34.7	14.5	41.5	+3.0	+25.7
Alabama--------------:	27.2	29.1	36.6	39.5	+9.4	+34.5
Total 1/---------:	207.3	35.7	241.7	42.6	+34.4	+16.6

1/ Because of rounding, some totals may not equal the sum of the items listed.

Source: (16).

Table 63.--Employment in all trade and service industries for all counties where the 1960
population of the largest city was less than 5,000, by State area,
Appalachian Region, 1950 and 1960

State area	1950		1960		Change 1950 to 1960	
	Number employed	Share of civilian labor force	Number employed	Share of civilian labor force	Amount	Rate
	1,000	Percent	1,000	Percent	1,000	Percent
Pennsylvania---------:	38.4	39.0	46.4	44.7	+8.0	+21.0
Maryland-------------:	2.3	36.2	2.7	42.0	+.4	+18.8
West Virginia--------:	63.2	33.0	67.8	43.6	+4.6	+7.2
Kentucky-------------:	58.5	28.6	64.7	41.1	+6.2	+10.6
Virginia-------------:	23.9	28.8	28.5	37.5	+4.7	+19.5
Tennessee------------:	42.7	29.3	54.9	37.0	+12.2	+28.5
North Carolina-------:	29.9	29.3	37.5	36.2	+7.6	+25.5
Georgia--------------:	27.8	27.7	38.8	36.3	+11.0	+39.6
Alabama--------------:	26.0	29.3	33.4	39.6	+7.4	+28.3
Total 1/---------:	312.8	30.6	374.8	39.8	+62.1	+19.8

1/ Because of rounding, some totals may not equal the sum of the items listed.

Source: (16).

Table 64.--Population change in the Appalachian Region, by State area, surrounding area, and United States, 1950 to 1960

State area	1960 population	Change 1950 to 1960		Net civilian migration, 1950 to 1960	
		Amount	Rate	Amount	Rate
	1,000	1,000	Percent	1,000	Percent
Pennsylvania----------------:	6,565	+227.4	+3.6	-494.6	-7.8
Maryland-------------------:	196	+6.1	+3.2	-13.9	-7.3
West Virginia-------------:	1,860	-145.1	-7.3	-427.0	-21.3
Kentucky-------------------:	854	-150.2	-15.0	-324.9	-32.4
Virginia-------------------:	510	-31.0	-5.7	-114.7	-21.2
Tennessee------------------:	1,599	+78.6	+5.2	-160.4	-10.6
North Carolina-----------:	777	+15.0	+2.0	-100.9	-13.2
Georgia--------------------:	789	+107.6	+15.8	-20.2	-3.0
Alabama--------------------:	1,883	+115.4	+6.5	-184.9	-10.5
Total Appalachia 1/----:	15,033	+223.8	+1.5	-1,841.5	-12.4
Surrounding area---------:	23,585	+3,424.9	+17.0	-225.5	-1.1
United States------------:	179,326	+28,628.3	+18.5		

1/ Because of rounding, some totals may not equal the sum of the items listed.

Source: (13, 16).

Table 65.--Population by age group for the Applachian Region, by State area, surrounding area, and United States, 1950 and 1960

State area	Less than 18 years		18 to 64 years		Over 64 years	
	1950	1960	1950	1960	1950	1960
	----------------------1,000----------------------					
Pennsylvania----------------:	1,911	2,235	3,890	3,658	537	672
Maryland-------------------:	62	67	112	109	16	20
West Virginia-------------:	740	707	1,127	986	138	167
Kentucky-------------------:	442	358	503	421	59	75
Virginia-------------------:	221	200	287	268	33	42
Tennessee------------------:	566	594	856	874	98	131
North Carolina-----------:	294	289	418	420	50	68
Georgia--------------------:	261	305	375	424	46	60
Alabama--------------------:	656	722	1,001	1,010	110	151
Total Appalachia 1/----:	5,153	5,477	8,569	8,170	1,087	1,385
Surrounding area---------:	6,757	8,691	11,974	12,992	1,430	1,902
United States------------:	46,716	64,199	91,624	98,629	12,357	16,498

1/ Because of rounding, some totals may not equal the sum of the items listed.

Source: (16).

Table 66.--Distribution of the population by age group for the Appalachian Region, by State area, surrounding area, and United States, 1950 and 1960

State area	Less than 18 years		18 to 64 years		Over 64 years	
	1950	1960	1950	1960	1950	1960
	Percent					
Pennsylvania	30.1	34.0	61.4	55.7	8.5	10.2
Maryland	32.6	34.4	59.1	55.6	8.4	10.0
West Virginia	36.9	38.0	56.2	53.0	6.9	9.0
Kentucky	44.0	42.0	50.1	49.3	5.9	8.7
Virginia	40.8	39.2	53.0	52.6	6.2	8.2
Tennessee	37.2	37.1	56.3	54.7	6.5	8.2
North Carolina	38.6	37.2	54.9	54.1	6.6	8.7
Georgia	38.3	38.7	55.0	53.8	6.7	7.6
Alabama	37.1	38.3	56.6	53.6	6.2	8.0
Total Appalachia	34.8	36.4	57.9	54.3	7.3	9.2
Surrounding area	33.5	36.8	59.4	55.1	7.1	8.1
United States	31.0	35.8	60.8	55.0	8.2	9.2

Source: (16).

Table 67.--Civilian labor force change in the Appalachian Region, by State area, surrounding area, and United States, 1950 to 1960

State area	1960 civilian labor force	Change 1950 to 1960	
		Amount	Rate
	1,000	1,000	Percent
Pennsylvania	2,448.9	+46.9	+2.0
Maryland	71.6	+1.8	+2.6
West Virginia	587.3	-72.3	-11.0
Kentucky	220.7	-57.0	-20.5
Virginia	160.7	-5.2	-3.1
Tennessee	568.1	+49.8	+9.6
North Carolina	285.2	+20.6	+7.8
Georgia	296.1	+45.5	+18.2
Alabama	656.6	+42.0	+6.8
Total Appalachia 1/	5,294.9	+71.8	+1.4
Surrounding area	8,828.9	+1,038.2	+13.3
United States	68,144.1	+9,072.4	+15.4

1/ Because of rounding, some totals may not equal the sum of the items listed.

Source: (16).

Table 68.--Civilian labor force as a percentage of the total population for the Appalachian Region, by State area, surrounding area, and United States, 1950 and 1960

State area	1950	1960
	Percent	Percent
Pennsylvania	37.9	37.3
Maryland	36.8	36.6
West Virginia	32.9	31.6
Kentucky	27.7	25.9
Virginia	30.7	31.5
Tennessee	34.1	35.5
North Carolina	34.7	36.7
Georgia	36.8	37.5
Alabama	34.8	34.9
Total Appalachia	35.3	35.2
Surrounding area	38.6	37.5
United States	39.2	38.0

Source: (16).

Table 69.--Unemployment in the Appalachian Region, by State area, the surrounding area, and United States, 1950 and 1960

State area	Number unemployed		Share of civilian labor force	
	1950	1960	1950	1960
	1,000	1,000	Percent	Percent
Pennsylvania	142.2	181.9	5.9	7.4
Maryland	5.6	5.6	8.0	7.8
West Virginia	31.5	49.0	4.8	8.3
Kentucky	10.3	19.9	3.7	9.0
Virginia	6.6	11.1	4.0	6.9
Tennessee	23.1	34.3	4.5	6.0
North Carolina	8.2	13.6	3.1	4.8
Georgia	9.7	14.0	3.9	4.7
Alabama	26.8	38.6	4.4	5.9
Total Appalachia 1/	263.9	368.0	5.1	7.0
Surrounding area	305.5	399.1	3.9	4.5
United States	2,832.2	3,504.8	4.8	5.1

1/ Because of rounding, some totals may not equal the sum of the items listed.

Source: (16).

Table 70.--Total and per capita income for the Appalachian Region,
by State area, surrounding area, and United States, 1960

State area	Total	Per capita
	Million dollars	Dollars
Pennsylvania------------------:	11,259	1,715
Maryland---------------------:	310	1,582
West Virginia----------------:	2,564	1,378
Kentucky---------------------:	719	842
Virginia---------------------:	531	1,041
Tennessee--------------------:	2,024	1,266
North Carolina---------------:	908	1,168
Georgia----------------------:	1,007	1,276
Alabama----------------------:	2,498	1,326
Total Appalachia 1/-----:	21,819	1,451
Surrounding area----------:	38,140	1,617
United States-------------:	331,697	1,850

1/ Because of rounding, some totals may not equal the sum of the items listed.

Source: (16).