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A Study of Public School Finance in the Southern Appalachian Region

Archie Reece Dykes
University of Tennessee - Knoxville

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To the Graduate Council:

I am submitting herewith a thesis written by Archie Reece Dykes entitled "A Study of Public School Finance in the Southern Appalachian Region." I have examined the final electronic copy of this thesis for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Education, with a major in Educational Administration.

Dr. Orin B. Graff, Major Professor

We have read this thesis and recommend its acceptance:

Dr. Galen N. Drewry, Dr. John W. Gilliland, Dr. E. Ohmer Milton, & Professor Ira N. Chiles

Accepted for the Council:

Carolyn R. Hodges

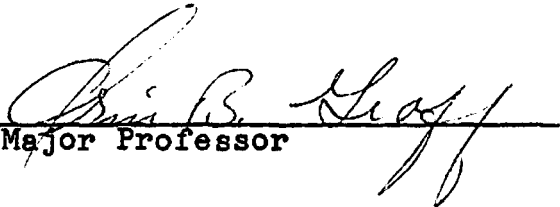
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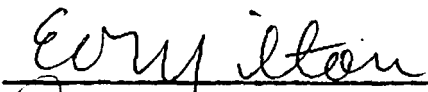

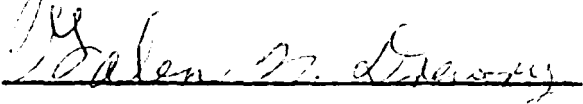

October 5, 1959

To the Graduate Council:

I am submitting herewith a thesis written by Archie Reece Dykes entitled "A Study of Public School Finance in the Southern Appalachian Region." I recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Education, with a major in Educational Administration and Supervision.


Major Professor

We have read this thesis and
recommend its acceptance:

Accepted for the Council:


Dean of the Graduate School

A STUDY OF PUBLIC SCHOOL FINANCE IN THE
SOUTHERN APPALACHIAN REGION

A THESIS

Submitted to
The Graduate Council
of
The University of Tennessee
in
Partial Fulfillment of the Requirements
for the degree of
Doctor of Education

by
Archie Reece Dykes

December 1959

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FOREWORD

The area called the Southern Appalachians includes parts of seven southern states. It is more than 600 miles long, reaching from northern Alabama in the southwest to West Virginia in the northeast, and more than 250 miles wide at its widest point. The Region has a total land area in excess of 80,000 square miles and a population of almost six million.

Despite the importance of the Region from a physiographic and demographic standpoint, only one study of any consequence related exclusively to the Region had been made prior to 1958. This study was a survey of the economic and social problems and conditions of the Region by the United States Department of Agriculture with the cooperation of the Department of the Interior. It was completed during the years 1932 to 1935. In 1958 a series of studies known as the Southern Appalachian Studies was begun. The studies were region-wide in scope, embracing the religious, economic, educational, social, and cultural aspects of the Region. Their purpose was to supply a comprehensive body of information for use by agencies working for the improvement of the Region.

The idea for the studies originated at a conference of delegates from religious denominations meeting at Berea College in 1956 when the delegates discovered that accurate up-to-date information on economic and social conditions in the Region was not available. A committee was organized to direct

the studies and the Ford Foundation placed \$250,000 in the custody of Berea College for the financial support of the project. Dr. W. D. Weatherford of Berea College was named Director of Administration for the studies and Dr. Thomas R. Ford of the University of Kentucky was named Director of Research.

Colleges and universities in the Region actively supported the studies, and research in sixteen areas was undertaken. The research areas and the institutions in which the research was centered were as follows:

Agriculture	University of Georgia
Attitudes	University of North Carolina and University of Kentucky
Education	University of Tennessee
Extractive Industries	West Virginia University
Folk Culture	Berea College and Wesleyan College (Macon, Georgia)
Health	North Carolina State College
Industrialization	University of Virginia
Local Government	University of North Carolina
Migrants to Industrial Cities	Berea College
Migration	University of Kentucky
Population	University of Georgia
Regions	University of North Carolina

Religion

Emory University

Social Work and

Social Agencies

University of Tennessee

Tourism

University of Oklahoma

One of the research areas, that of Planning and Planning Agencies, was conducted under auspices of the Tennessee Valley Authority.

In conjunction with the general study of education, centered at the University of Tennessee under the direction of Dr. Orin B. Graff, a number of related theses were undertaken on specific aspects of education in the Region. The over-all study of education and the related theses, of which this volume is one, were the first studies devoted exclusively to education that had ever been undertaken on a region-wide basis. It was hoped that they might be of value to those in the Region charged with the serious responsibility of developing and directing educational programs in the light of new conditions.

CHAPTER I

INTRODUCTION

One of the major problems facing the United States as it entered the last half of the twentieth century was the problem of financing the public schools. It was not so much a problem of ability as that of determining who was to do the financing and how it was to be done. Few would argue that a nation with the wealth and productive capacity of the United States was incapable of providing an adequate program of education for its citizens. Yet, the fact remained that for millions of our people the system of education to which they had been exposed was sadly lacking in some of the basic ingredients of an adequate educational program. It did not solve the problem to point out that the Nation was quite able to support the needed educational program when in reality the program was deficient in so many respects. Serious consideration was needed by all citizens of ways and means through which the problem might be overcome.

Too many people for too long had looked upon the public education system as the "free public schools." There was nothing "free" in the operation of schools, and an adequate educational program represented the investment of a large sum of money. This was true of the Nation as a whole, the individual states in the union, the local governmental units,

and geographic areas of the Nation such as the Southern Appalachian Region.

One important aspect of the problem of financing the schools related to technological and social change. These changes had increased in tempo since the 1930's over the entire Nation, but particularly in the area commonly referred to as the Southern Appalachian Region, and had created a very different way of life. Mass communication media had brought the inhabitants of formerly isolated mountain communities into daily contact with the rest of the Nation and the world. A global war and improved means of transportation had mingled large numbers of mountain people with those of other regions. Industrial development and changes in agricultural practices had resulted in an improved economy for the Region and changed the problems and ways of living of the people. Concurrent with the economic changes had been a migratory movement northward and cityward in which large numbers of the mountain people had been involved.

It was in such a setting of rapid change that the schools of the Region operated. Since the schools are institutions of society, they are affected by changes and pressures in the social environment of which they are a part. Public school finance is therefore related to all aspects of the economic, social, demographic, and political structure of the society.

Statement of the Problem

This study was directed toward an investigation and analysis of various aspects of public school finance in the Southern Appalachian Region with emphasis on trends in public school revenues and expenditures as they related to the changing setting in which the schools operated.

Sub-problems

In order to achieve the purpose of the study, the following steps were undertaken:

1. To review in broad outline the general demographic and economic trends of the Southern Appalachian Region.

2. To assay recent developments in school finance in the Region toward the end of determining trends in school revenues and expenditures. Attention was focused on:

- a. Changes in local, state, and federal contributions to public school revenues since 1939-40 as indicated by selected years.

- b. Changes in expenditures for budget items of instruction, capital outlay, and current expense in the public schools since 1939-40 as indicated by selected years.

3. To analyze efforts to support education as indicated by public school revenues in terms of the economic ability of the Region as measured by personal income for selected years.

4. To analyze the level of school support in metropolitan public school systems, public school systems with increasing school populations, public school systems with static school populations, and public school systems with decreasing school populations in terms of per capita school revenues, and expenditures per child in average daily attendance for selected years.

5. To draw conclusions and state implications for the administration of education in the Southern Appalachian Region.

Basic Assumptions

Underlying the study were the following basic assumptions:

1. There is a significant relationship between societal changes and public school finance.

2. There are trends in public school revenues and expenditures which can be identified, analyzed, and appraised.

3. Efforts to support education can be measured by public school revenues in terms of the economic ability of the Region as measured by personal income.

4. The level of school support can be measured by expenditures per pupil in average daily attendance.

5. There is a significant relationship between funds available for and expended on public schools and the adequacy of the educational program.

Need for the Study

The area called the Southern Appalachians includes parts of seven southern states (See Figure 1, page 6). It is more than 600 miles long, reaching from northern Alabama in the southwest to West Virginia in the northeast, and more than 250 miles wide at its widest point. The Region has a total land area almost exactly equal to that of the state of Minnesota, more than 80,000 square miles. Only thirteen states cover larger land areas and in 1950, only seven states, New York, Pennsylvania, Ohio, Illinois, Texas, Michigan, and California, had populations exceeding the Region's population of 5,833,263. Texas was the only state in the South with a larger land area or greater population than this Region.¹

The Region includes about 27 per cent of the total land area of the seven southern states which together make up the Region. The proportion of states included ranges from a low of 8 per cent for Alabama to a high of 86 per cent for West Virginia. In between are Georgia with 11 per cent, North Carolina with 19, Kentucky with 28, and Tennessee and Virginia with 36 per cent each.²

¹James S. Brown, "Migration Within, To, and From the Southern Appalachians, 1935-58: Extent, Directions, and Social Effects" (University of Kentucky, 1958), p. 3. (Mimeographed)

²Loc. cit.

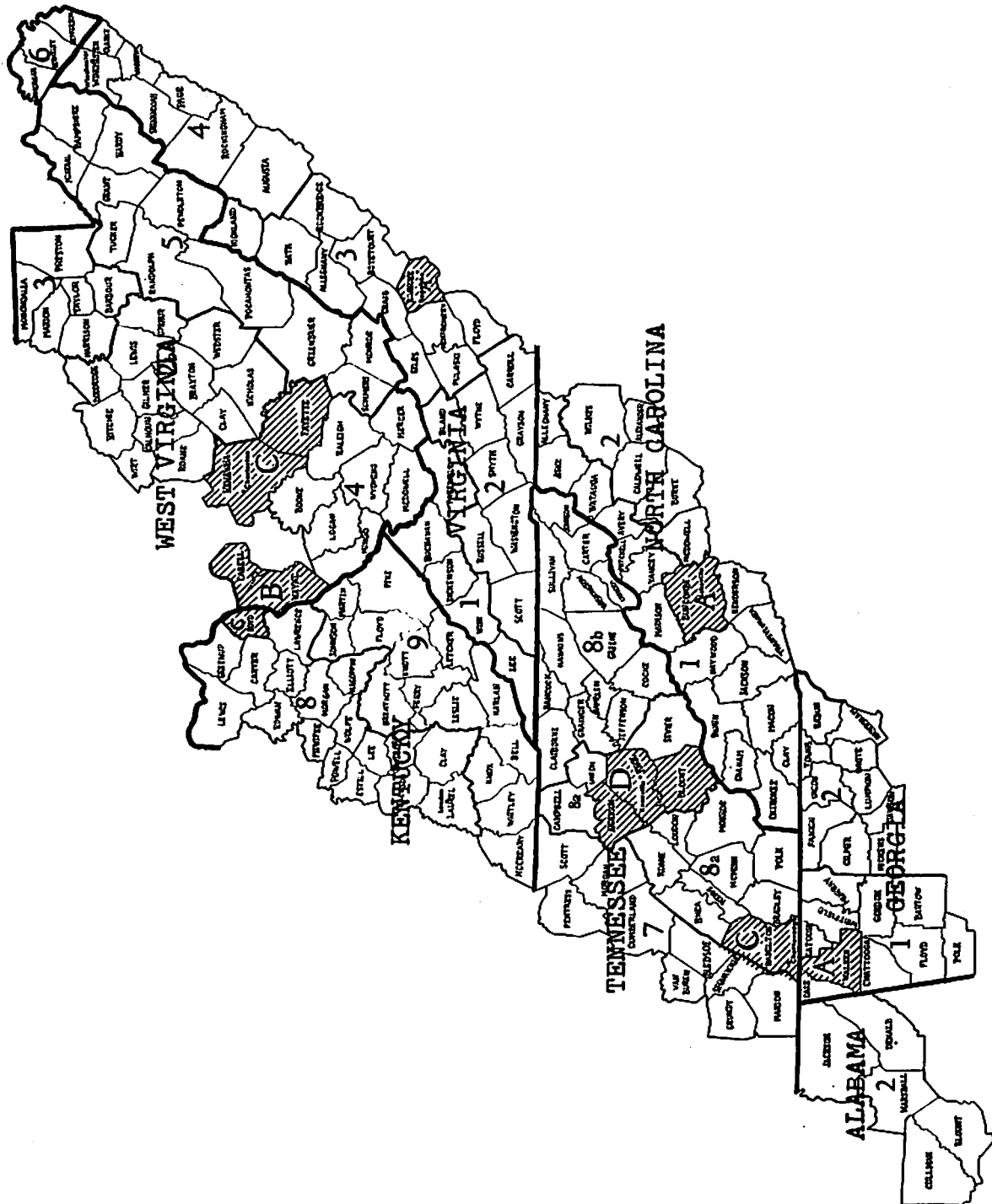


Figure 1. The Southern Appalachian Region by States, Economic and Metropolitan Areas, and Counties.

Also included in the Region was about the same percentage, 26 per cent, of the total population of the seven states, with a range extending from a high of 82 per cent in West Virginia to a low of 7 per cent in Alabama. In between were Georgia with 10 per cent of its total population in the Region, North Carolina with 14, Kentucky with 27, Virginia with 28, and Tennessee with 40 per cent. About 30 per cent of the rural and 19 per cent of the urban population of these states was included in the Region.³

In spite of the Region's importance in size, both in land area and in population, relatively little material pertinent to education in the area as a whole has been available. Data for the whole Region have often, therefore, been available only by compiling data for almost 200 counties in seven states. The need for data and information on a region-wide basis is one of the needs which the general survey of education, of which this study is a part, will fill.

Beyond the limited fulfillment of needs which any individual study can have lies the over-all value of a group of studies which bring a much more comprehensive body of information to bear on a problem. The series of studies of education in the Southern Appalachians will present data more complete and more valuable than either of the individual

³Ibid., p. 4.

studies could hope to do. However, there is a distinct need in the over-all study and in education in the Region generally for the unique contributions made by the individual studies.

It is presumed that this study may fill a number of specific needs of education in the Region. It shows the expenditures in the region for major aspects of the school budget and, at the same time, demonstrates existing inequalities in expenditures and the direction of change in recent years. It also gives attention to school revenues, changes in sources and trends. These factors become particularly significant in view of the fact that certain social and economic changes may be expected to alter radically present concepts about public school finance in the Region. Regardless of the nature of these changes, pressing and complex problems must be solved despite the lack, at present, of any comprehensive body of information needed for wise decisions. This investigation supplies certain basic data essential for intelligent decision-making in this area, and presents a source of factual information related to specific problems as they arise. In addition, as part of the larger studies, this study provides a portion of a meaningful analysis of public education in the Region in terms of its status and future changes.

Delimitations of the Study

In view of the nature of the problem and the purpose of the study, this investigation was limited to:

1. A selected sample of metropolitan public school systems, public school systems with increasing school populations, public school systems with decreasing school populations, and public school systems with static school populations in the Southern Appalachian Region.

2. Revenues for public elementary and secondary schools, including kindergartens and junior colleges when these were integral parts of the public school system.

3. Expenditures for budget items of instruction, current expense, and capital outlay for public schools.

4. Selected years covering the period of time from 1939-40 to the 1957-58 school year.

Procedures for Conducting the Study

In order to secure comparable data in the educational phase of the Southern Appalachian Studies the same sample counties were used for the several individual studies when feasible. In making the selection of counties in the sample, the following procedure was used.

First, maps were secured which had the Region dissected according to state economic areas as used by the

Census Bureau. The state economic areas themselves were delineated by a complex process involving a number of governmental agencies, and the process will not be discussed here except to point out that the areas are relatively homogeneous subdivisions of states, consisting of single counties or groups of counties which have similar economic and social characteristics based on approximately ninety criteria deemed appropriate by experts.

Second, the school enrollment in each of the 190 counties from 1945 to 1957 was secured and the per cent of change in enrollment was computed for three-year intervals covering the twelve-year span. The counties were then classified according to economic area and per cent of annual change in the school enrollment. Five counties were then selected from each of the classifications; counties with increasing school enrollments, counties with decreasing school enrollments, and counties with static school enrollments. However, one of the counties selected for the decreasing classification withdrew, leaving only four counties in that classification. An effort was made, using all information available, to select counties which appeared to be most representative of their classifications. Since there were only six metropolitan areas in the Region, four areas were selected which seemed to be most typical and which were not in close geographical proximity. In this manner, a directed sample of

fifteen counties and three metropolitan areas, representing each state in the Region, was singled out for intensive study and analysis.

The emphasis in this study was directed toward determining trends in public school finance in the Region from the 1939-40 school year to 1957-58. The latter year was determined as the termination date for the period covered since it was the last school year for which statistical data could be secured. The 1949-50 year was included so as to make possible certain inferences regarding the rate of change, and because school statistics become more meaningful when measured against certain kinds of census data. However, the years marking the beginning and termination of the period received the major emphasis throughout the study.

Since the county was the basic unit of school districts in each of the seven states of the Region, the statistics used in this study were aggregate totals of all city or special districts within the county. It was felt the data gathered and the analyses made would be more meaningful and more valuable if this procedure was consistently followed throughout the investigation. However, in interpreting the findings of the study, the fact that this procedure was followed should be kept in mind.

Procedures Used in Reviewing the General Demographic and Economic Trends

In reviewing the general economic and demographic changes and trends in the Southern Appalachian Region, which constituted the first step toward the achievement of the purpose of the study, data on population and economic changes were collected, analyzed, and organized in tabular form. The goal here was to provide a setting and background information which would contribute to an understanding of public school finance in relation to the social and economic forces of the Region. In developing this portion of the study, a great deal of assistance was received from persons involved in other phases of the Southern Appalachian Studies related to social and economic changes. Data and information provided by these persons were current and reflected the best thinking of experts in the various fields. In addition, valuable data were found in the work of economists and sociologists, census reports, and publications of governmental agencies. Historical research methods were used in this part of this study.

Procedures Used in Investigating Developments in School Finance and Trends in Revenues and Expenditures

The second step in achieving the purpose of the study, that of assaying recent developments in school finance in the Region toward the end of determining trends in school revenues and expenditures, was accomplished through the

normative-survey method of research. In order to show trends in local, state, and federal contributions to public school revenues, it was necessary to separate state, federal, and local funds for each of the years used in the study. Trends were then established as indicated by changes in the amount of school revenue received from each of the three governmental units. The data used here were secured from the annual and biennial reports and records of the state departments of education in the seven states making up the Region.

To determine changes in expenditures for budget items of instruction, capital outlay, and current expense the procedure outlined above was used. However, the following limitations need to be understood in this phase of step two.

1. Current expense figures in this study do not include expenditures for state departments of education, certain lunchroom expenditures, and specific items related to vocational education.

2. Variations in accounting procedures and differences in definitions of budget items, especially in current expense, tend to make comparisons among the parts of the Region in different states less valid. However, these differences cause only slight variations when expenditures are reduced to a per pupil basis and affect only slightly the general value of the data.

3. In some states it was difficult to differentiate

between local and state sources of revenues since the state collected the taxes but returned the funds to the local units in which they originated. When it was clear that such a procedure was followed, the funds were considered local school revenues.

Procedures Used in Analyzing Efforts to Support Education

Since the economic ability of the Region to support public education was measured by personal income, it was necessary to secure data on income which was comparable for the selected years and which was available by counties. Census data were available for 1940 and 1950 but not for 1957-58. In addition, the income data for 1940 and 1950 were not exactly comparable because of certain differences in the data gathered. The only federal figure on income which gave data by counties was the number of persons filing an income tax report, and this was of no value to this study. Since no federal figures were available for income data, the only source of comparable income data by counties for the three selected years was found to be Sales Management, a magazine which publishes an annual survey of buying power. Not only is this source of data widely used by advertising and commercial firms for various kinds of information, but several state foundation programs, such as those of Florida and Georgia, include effective buying income and retail sales

data from Sales Management in their indices of local economic ability.⁴

The income used throughout this study as an indicator of economic ability to support education is effective buying income. This term is defined by Sales Management as follows:

"Personal income" excludes the profits of business enterprises from national income in order to emphasize the distribution of income among individuals receiving either wages, salaries, profits or property income. Then, in order to indicate how much of this income is available for the purchase of goods and services produced by these factors of production, we deduct all tax payments to federal, state, and local governments. The Government calls the result "disposable personal income." Our own concept of "Net Effective Buying Income" is nothing more than the disposable income available for spending in the various states.⁵

In order to arrive at per capita income, census population data for 1940 and 1950 and population estimates for 1958 from Sales Management were used to reduce effective buying income to per capita income for the three years. To compute income per child in average daily attendance, the average daily attendance figures reported by state departments of education were used.

Although Sales Management is widely used and accepted by both private and public organizations, certain limitations

⁴Galen N. Drewry, "Public School Revenue Trends, 1940-1952" (Unpublished Ed. D. thesis, George Peabody College for Teachers, Nashville, Tennessee, 1953), p. 26.

⁵"Survey of Buying Power," Sales Management, 78:20, 1957.

of this source of income figures should be kept in mind. First, the procedures used in computing income for counties within a state provide only estimates of income at the local level. Second, this measure, as well as most others, cannot accurately calculate the value of farm products consumed at home, and hence, real income for farmers and farm families cannot be measured precisely. However, Sales Management seems to be the only reliable source of income data on the county level currently available and is the source of income data for this study.

Procedures Used in Analyzing the Level of Support

In order to accomplish step four in achieving the purpose of the study, that of analyzing the level of school support in terms of expenditures per pupil, it was necessary to resort again to records and reports of state departments of education. Total expenditures on the county level were reduced to a per pupil cost through division by the number of pupils in average daily attendance. Since the definition of enrollment varied among the states in the region, it was felt this figure would not be as consistent a measure of educational load as would average daily attendance, the definition of which was the same for all the states. In addition, the average daily attendance is a commonly accepted measure and has been used in many other studies. It is not a perfect measure of expenditures, especially when applied to counties

with small numbers of pupils, but for the purposes of this study it seemed to be quite adequate.

Procedures Used in Analysis of Data

Various kinds of analyses, involving elementary statistical techniques, were used in attempting to measure certain relationships existing among the factors of public school finance. Means, medians, ranges, and rank order correlations were employed. In addition, ratios, percentages, and unit differences were used to make the analyses more meaningful and comparable and to give as complete a picture as possible. However, dollar differences and increases were not adjusted to offset the effects of inflation.

Procedures Used in Drawing Conclusions and Implications

In order to accomplish the final step in achieving the purpose of the study, that of drawing conclusions and stating implications for educational administration, a review and summation of each of the previous steps was attempted. In doing this a synthesis of trends was undertaken. The implications for educational administration in the Region, as indicated by the findings, were then drawn together and presented.

Definitions

For the purpose of this study, the following terms have the meanings indicated.

1. Southern Appalachian Region: an area consisting of 190 counties in seven states, namely: Alabama, Georgia, Kentucky, North Carolina, Tennessee, Virginia, and West Virginia. The Region is more than 600 miles long and about 250 miles wide at its widest point. It has a land area of nearly 80,000 square miles and in 1950 had a population of nearly six million.⁶

2. Metropolitan public school systems: public school systems which are contained in standard metropolitan areas as defined by the United States Bureau of Census. The Census Bureau definition for a metropolitan area is as follows:

Except in New England, a standard metropolitan area is a county or group of contiguous counties which contain at least one city of 50,000 inhabitants or more. In addition to the county, or counties, containing such a city, or cities, contiguous counties are included in a standard metropolitan area if according to certain criteria they are essentially metropolitan in character and socially and economically integrated with the central city.⁷

3. Systems with increasing school populations: public school systems in which the over-all school enrollment grades 1-12 showed an annual increase of 1 per cent or more from 1945 to 1957.

⁶James S. Brown, Basic Population Data for the Southern Appalachians (Social Research Service, The University of Kentucky, August, 1958), p. 1.

⁷United States Bureau of the Census, 1950 Population Report P-B, Vol. II (Washington: Government Printing Office, 1952), p. v.

4. Systems with static school populations: public school systems in which the over-all school enrollment grades 1-12 did not show an annual increase or decrease in excess of 1 per cent for the period of time from 1945 to 1957.

5. Systems with decreasing school populations: public school systems in which the over-all school enrollment grades 1-12 showed an annual decrease of 1 per cent or more for the period of time from 1945 to 1957.

6. Instruction: a standard school budget item which includes salaries of teachers, principals, and clerks and expenditures for instructional supplies. Under instruction is listed all expenditures incurred for services and materials directly connected with the teaching activities of the school system.

7. Current expense: the sum of the standard school budget items of general control, instruction, school plant (including supervision of school plant, operation, maintenance, transportation, and fixed charges), and auxiliary services.

8. Capital outlay: a standard school budget item which includes expenditures for buildings and relatively permanent equipment.

9. Public school revenues: any addition to cash or other assets that can be used by the local school systems in financing a program of public education grades 1-12, including

kindergartens and junior colleges when they are integral parts of the public school system. Revenues are to be distinguished from non-revenue receipts, the latter being funds received from such items as sales of property, proceeds of insurance adjustments, bond sales, or loans.

10. Public school expenditures: any monetary outlay made in the interest of maintaining a program of public education grades 1-12, including kindergarten and junior colleges when they are part of the public school system.

Review of Related Literature

Since every phase, unit, and level of educational activity has its financial implications, the amount of literature related to school finance is enormous. In 1950 it was estimated that the American catalogued literature on school finance totaled approximately 10,000 titles.⁸ The large amount of literature makes it almost impossible to review any significant portion. Instead of attempting to review all the pertinent literature it has become rather common to categorize the literature into various classifications and give a review of specific pieces of literature which are representative of each classification. Classifying or categorizing literature

⁸Walter S. Monroe (editor), Encyclopedia of Educational Research (Revised ed.; New York: The Macmillan Company, 1950), p. 448.

on school finance is not easy, since much of it is broad enough to fit, in part, into several different classifications. However, since it is rather obvious that all the literature on school finance could not be relevant to public school finance in the Southern Appalachian Region and for the sake of order and clarity, the following discussion has been arranged around these classifications:

1. Studies of a general survey nature at the national level.

2. Studies related to the financing of equal educational opportunity among and within states.

3. Studies of a general survey nature relating to the Southern Appalachian Region and to areas within the Region.

4. Publications of state departments of education and studies conducted in individual states.

5. Special studies related to local ability to support public schools and to the relationship existing between the educational program and school finance.

Studies of a General Survey Nature at the National Level

While this category is not limited entirely to studies designed for the purpose of showing comparisons and trends among the states, most of the literature reviewed here is of that classification. The National Education Association and the United States Office of Education have been especially active in this kind of research and the research divisions of

both organizations have produced a number of publications related to this aspect of public school finance.

Illustrative of studies of this type is The Forty-Eight State School Systems⁹ which, in addition to being a comprehensive survey of organization and administration of public education grades 1-12, gives rather complete coverage to public school finance in the forty-eight states. The study places major emphasis on the current situation as revealed in data for the school year 1947-48 but comparison is made for certain purposes with data for the school years of 1937-38, 1941-42, and 1945-46.

Trends in Significant Facts on School Finance¹⁰ presents tabular information on school finance on the national level and certain other related items necessary for interpretation of school finance data. Information is reported for all school years from 1929-30 to 1956-57 where possible. Charts are included with each tabulation to show trends in data through the period covered. A number of charts portray changes which have occurred in terms of dollars or number of persons, while others are based on analyses as represented by per cents and other ratios. The entire study is centered

⁹Council of State Governments, The Forty-Eight State School Systems (Chicago: The Council, 1949).

¹⁰U. S. Office of Education, Trends in Significant Facts on School Finance (Washington: Government Printing Office, 1957).

around seven separate headings: (1) Population, Income, and State Taxes; (2) School Revenue; (3) Federal Aid for Education; (4) School Personnel and Districts; (5) Total Expenditures for Schools; (6) Current Expenditures for Schools; and (7) Capital Outlay and Debt Service.

Chapter II of the Biennial Survey of Education in the United States¹¹ presents data on the organization, staffing, enrollment, and financing of public elementary and secondary schools in the United States. Included in the report are total expenditures for each budget item in each state and per pupil expenditure in average daily attendance for current expense. Amounts of revenues by sources are also given.

A United States Office of Education publication, Public School Finance Programs of the Forty-Eight States,¹² offers a rather complete description of the state finance programs and the sources of public school revenues for the 1949-50 school year. There is also an analysis of state school finance programs, including expenditures for various items.

¹¹U. S. Office of Education, "Statistics of State School Systems, 1953-54," Biennial Survey of Education in the United States, 1952-54 (Washington: Government Printing Office, 1956).

¹²Edgar L. Morphet and Erick L. Lindman, Public School Finance Programs of the Forty-Eight States, U. S. Office of Education, Circular No. 274 (Washington: Government Printing Office, 1953).

In addition to the work in this area by the United States Office of Education, the National Education Association, through its Research Division, has made a number of studies in public school finance. Among those which could be properly placed in this classification is a study¹³ which provides fairly comprehensive coverage of statistics which can be used as indicators of educational quality. Among these are expenditures per pupil enrolled for 1956-57, per cent of public school revenue receipts from state sources for 1957-58, expenditures for education from state and local sources as a per cent of personal income payments for 1956-57, and personal income payments per pupil enrolled in public schools for 1956-57. All these figures are by state, but those for 1957-58 are estimated.

Another study¹⁴ published in August, 1958, reviews the status and trends of American education and gives current statistics and forecasts related to public school finance on the national level. Of particular significance is the treatment of costs of public education per student enrolled from 1890 to 1958.

¹³National Education Association, Research Division, Rankings of the States (Washington: National Education Association, 1957).

¹⁴National Education Association, Research Division, Status and Trends (Washington: National Education Association, 1958).

A study¹⁵ of less statistical nature than those previously mentioned was conducted by the Research Division in 1953 toward the end of reviewing indices of local economic ability in state school finance programs. It treats the origin and development of ability indices, points out their advantages over property valuation and assessment as measures of local ability, and describes several combinations which may be used in indices of ability.

"Recent Trends in School Revenues"¹⁶ gives a general non-statistical treatment of trends in school revenues on the national level with a prediction as to what can be expected in the future. Points of emphasis are sources of school revenue, state and local finance, property assessments, and local non-property taxes.

Studies Related to the Financing of Equal Educational Opportunity Among and Within States

The pioneer study¹⁷ in this classification was published in 1905 by Cubberley. This publication showed that

¹⁵National Education Association, Committee on Tax Education and School Finance, The Index of Local Economic Ability in State School Finance Programs (Washington: National Education Association, 1953).

¹⁶Clayton D. Hutchins, "Recent Trends in School Revenues," The American School Board Journal, 136:30-32, January 1958.

¹⁷Elwood Cubberley, School Funds and Their Apportionment (New York: Teachers College, Columbia University, 1905).

wealth per child is greatest where total wealth is greatest and pointed out the need for state equalization programs in providing equal educational opportunities. As a result of the study, Cubberley maintained that local taxation as the sole basis of school support presents tremendous difficulties to educational progress. Since local burdens of educational effort are borne primarily for the common good, the study pointed out that for equitable purposes, if no other, they ought to be shared by state participation.

The Research Division of the National Education Association devoted a portion of Research Bulletin XXXVI¹⁸ to studies relating to improvement of the property tax in state equalization programs. Particular emphasis was given to problems of assessment, equalization trends, and comparison of tax valuation of property and market value.

A study¹⁹ published in 1953 under auspices of the U. S. Office of Education showed wide variations in expenditures for education among and within states. The study included practically all the school districts in the United States and was very comprehensive from that standpoint.

¹⁸National Education Association, Research Division, "Improving the Property Tax," Research Bulletin XXXVI, No. 1 (Washington: National Education Association, 1958), pp. 23-24.

¹⁹Clayton D. Hutchins and Albert R. Munse, Expenditures for Education at the Midcentury (Washington: Government Printing Office, 1953).

The American Association of School Administrators presented data²⁰ on differences in educational opportunity between states, regions, urban-rural communities, and social classes which resulted from differences in school finance. The data were presented in the mid-forties and emphasized inequalities of financial support at that time.

"Trends in State Support of Public Education"²¹ provides some interesting information on how the states are financing public education and gives comparisons at certain points to show relationships among the states. Emphasis was on the supplying of funds for the foundation program by both the state and the local districts.

Studies of a General Survey Nature Relating to the Southern Appalachian Region and to Areas Within the Region

Studies which could be properly placed in this classification are extremely limited. The one study²² which deals with school finance on a region-wide basis in the Southern

²⁰American Association of School Administrators, "Some Emerging Truths in School Finance," Twenty-third Yearbook, Paths to Better Schools (Washington: National Education Association, 1945), pp. 209-233.

²¹Fred Swalls, "Trends in State Support of Public Education," The Teachers College Journal, 30:38-39, December 1958.

²²United States Department of Agriculture, Economic and Social Problems and Conditions of the Southern Appalachians, Misc. Number 205 (Washington: Government Printing Office, 1935), pp. 110-113.

Appalachian Region is the study published in 1935 under auspices of the United States Department of Agriculture. While the over-all study was concerned primarily with economic and social problems and conditions in the Region, a portion was devoted to educational conditions of which school finance was a part. Although this study is almost totally lacking in those ingredients considered important today in research dealing with public school finance, it nevertheless stands as the one study which treats school finance in the Southern Appalachians on a region-wide basis and, for this reason, has relevance here. The study presents data on the amount of taxable wealth per teacher employed in the public schools, current public school expenditures for the school year 1929-30, the value of public school property, and the amount of public school funds contributed by state and federal sources. The emphasis of the study, however, is on the inequalities in educational opportunities existing in the Region in the early thirties as revealed through inequities in financing the schools.

In addition to this single study treating public school finance in the Southern Appalachians on a region-wide basis, several studies have been made of segments, primarily counties, within the Region. Representative of these studies are surveys by colleges and state universities in the Region, U. S. Office of Education reports, and special surveys by

other organizations. Statistics of Public School Systems in 101 of the Most Rural Counties²³ is a statistical report of the U. S. Office of Education which includes a number of counties in the Southern Appalachian Region. The report reveals several significant financial facts pertinent to the public schools in the counties included. Among these are the sources of school revenue, ability to support education, expenditures for instruction, administration, operation, maintenance of the physical plant, fixed charges, and other school services, and current annual expenditures per pupil.

The Public School Systems of Scott County and Oneida, Tennessee,²⁴ a survey by the College of Education at the University of Tennessee, is an example of studies carried on by the colleges and universities in the Region. While surveys of this type are generally concerned with the educational program in its entirety, they usually present data relating to school finances in the local districts.

²³U. S. Office of Education, Statistics of Public School Systems in 101 of the Most Rural Counties (Washington: Government Printing Office, 1958).

²⁴College of Education, University of Tennessee, The Public School Systems of Scott County and Oneida, Tennessee (Knoxville: University of Tennessee, 1958), pp. 64-109.

Publications of State Departments of Education and Studies
Conducted in Individual States

Representative of studies conducted in individual states is "Public Education in Tennessee--Grades 1-12,"²⁵ a comprehensive survey of the entire program of public education in Tennessee organized into six major divisions of which one was public school finances. Under the finance division of the study attention was given to practically every aspect of public school finance in the state. The data gathered were not only treated statistically but were also carefully interpreted and analyzed. Among the items receiving major attention were sources of revenues for education, trends in revenues and expenditures, recent developments in school finance in the state, local support of education, and the minimum foundation program.

A second type of related literature in this classification includes annual or biennial reports published by the departments of education in the states. While containing a large amount of valuable information, the data are usually presented in tabular form with little or no analysis or interpretation. Generally included among the data presented are sources of public school revenues, expenditures for

²⁵James E. Gibbs, "Public Education in Tennessee--Grades 1-12," A report to the Tennessee Legislative Council, Nashville, Tennessee, 1957.

various types of budget items, and a brief financial statement for each local district.

Special Studies Related to Local Ability to Support Public Schools and to the Relationship Existing Between the Quality of the Educational Program and School Finance

A summary of the findings of studies which have been carried on and work which has been done in determining ability of local school units to support public education is presented by R. L. Johns and Herbert Meyer in an article²⁶ in Nation's Schools. The article points out the necessity for an accurate and equitable estimate of taxpaying ability of each local administrative unit for a successful and efficient partnership finance program. Emphasis was given in the article to four methods of estimating taxpaying ability. These were (1) local assessments, (2) state supervised assessments, (3) state tax commissions, and (4) index of taxpaying ability. Of these methods, the last received the major portion of attention.

Burke, in an article²⁷ in Teachers College Record, points out that what a local school district will spend for

²⁶R. L. Johns and Herbert A. Meyer, "Distributing State Funds--How to Estimate Taxpaying Ability of Local School Units," Nation's Schools, 40:49-50, February 1952.

²⁷Arvid J. Burke, "Cost of Education in a Locality and Its Property Valuation," Teachers College Record, 55:20-23, October 1953.

public schools depends as much upon demand as upon ability to pay. According to the article, demand involves values, understandings, and a large number of additional factors, whereas ability to pay involves productivity, knowledge, skill, income, and other complex economic factors. The property tax receives considerable attention in the report, and it is pointed out that the property tax is the only tax with a large yield that has been collected successfully on the local level. Emphasis is given the following points with reference to property taxation: (1) the varying economic classes of property; (2) variance in assessments; (3) inaccuracies of existing equalization rates; and (4) improvements possible in the concepts and administration of the tax.

A comprehensive report²⁸ by Johns in 1952 reviewed studies made to that date and noted increasing emphasis on perfecting measures of local ability. The report pointed out that, while some states have centered major attention on improving assessment practices, most states seem to consider the equalization of assessment in all local districts as something difficult to attain for the present. As a result, many states have begun to use an index of taxpaying ability

²⁸R. L. Johns, "Local Ability and Effort to Support Schools," Problems and Issues in Public School Finance, National Conference of Professors of Educational Administration (New York: Teachers College, Columbia University, 1952), pp. 219-242.

to determine local ability to support education.

In the second category of studies in this classification, those dealing with the relationship existing between the quality of the educational program and school finance, several studies have particular significance. A study²⁹ by Grimm showed that broad educational programs of desirable quality and high expenditure levels tend to go together in the absence of unsatisfactory local district structure or other disturbing factors when groups of schools are compared. However, this was not found to be true in all cases. High quality was usually accompanied by high expenditures, but the study showed that large expenditures are not always accompanied by high quality.

Mort,³⁰ in 1952, made a comprehensive analysis of all major studies which had been made with reference to the relationship between educational expenditures and the quality of the educational program. His report pointed out that when due allowance was made for extraneous factors, the quality of the educational program is closely related to expenditures for education.

²⁹L. R. Grimm, Our Children's Opportunities in Relation to School Costs (Springfield, Illinois: Illinois Education Association, 1948).

³⁰Paul R. Mort, "Cost-Quality Relationship in Education," Problems and Issues in Public School Finance, National Conference of Professors of Educational Administration (New York: Teachers College, Columbia University, 1952), pp. 9-64.

In a study³¹ which utilized the masses of data gathered by the armed forces through their testing program during World War II, Remmers and Davenport found that, in general, the more that was spent on education in a state, both for capital outlay and current expenses, the higher the achievement of the draftees of the state on the tests administered them. The correlation between the state mean scores on the tests and average current per pupil cost was found to be 0.80, using Fisher's Product Moment method in computing the correlation. This, along with several other significant findings, led the authors to conclude that one of the most important factors in equalizing educational opportunity was the equalization of financial bases for the educational program.

A study³² by Anderson and Bowman, which consisted of a careful analysis of statistical data relative to the educational programs in the various states, indicated that non-economic factors have important contributions to make to the quality of the educational program. While there were no indications from the study that adequate financial support was not necessary for high quality educational programs, there

³¹H. H. Remmers and K. S. Davenport, "Educational Achievement as Compared with Money Spent on Schools," School and Society, 61:333-335, May 1945.

³²C. Arnold Anderson and Mary Jean Bowman, "Can Money Alone Improve Our Schools," The School Executive, 74:82-84, March 1955.

was evidence that emphasis on finance alone as the determinant of educational quality may not be an entirely satisfactory arrangement.

Organization of the Study

The results of this study and the basic data are presented in five chapters and an appendix.

Chapter I gives a general introduction, statement of the problem, need for the study, procedures for conducting the study, review of related literature, and organization of the study.

Chapter II deals with trends in the demographic and economic development of the Southern Appalachian Region.

Chapter III presents recent developments in public school finance in the Region and attempts to determine trends in school revenues and expenditures.

Chapter IV deals with efforts to support education as indicated by public school revenues in terms of the economic ability of the Region.

Chapter V is devoted to an analysis of the level of school support in terms of school revenues per capita and expenditures per pupil in average daily attendance.

Chapter VI gives a summary of findings and implications for the administration of education in the Southern Appalachian Region.

CHAPTER II

GENERAL DEMOGRAPHIC AND ECONOMIC TRENDS OF THE SOUTHERN APPALACHIAN REGION

In order to provide the setting and background information necessary for the over-all study, this chapter is devoted to a review of the general demographic and economic changes and trends in the Southern Appalachians during the past half century with particular attention to the period from 1940 to 1958. Relevant data for the years preceding this period have been utilized, particularly those which seem to be indicative of long-term and continuing demographic and economic changes. However, one thing which should be kept in mind in discussing the demographic and economic changes of the Southern Appalachians is the great diversity among the sections of the Region. While the different parts of the Region have enough similarities among themselves and enough differences from areas outside the Region to warrant considering them a region, the Region itself cannot be regarded as a homogeneous area.

This chapter will first deal with changes in the population of the Southern Appalachians with particular emphasis on trends in population growth, migration, changes in rural, rural farm, and rural non-farm population, urbanization, distribution of population, racial composition, fertility ratio, nativity, age composition, and educational characteristics.

Consideration will then be given to the economic changes in the Appalachian Region with attention directed toward the natural resources of the Region and the utilization of these resources as indicated by the occupational status of the population. The character of industry in the Region will be analyzed and the volume of business, transportation, agriculture, and income will receive the attention necessary for an adequate overview of the entire economy. At the close of the chapter, the relationships existing between school finance and demographic and economic forces will be given consideration.

Characteristics and Growth of the Population

Changes in characteristics and distribution of the population in a given region over a number of years present important clues regarding the economic resources and other assets or liabilities of the region. Without a clear understanding of the major characteristics of the population of a region, it is unlikely that a basic understanding of the economy of the region will be gained. Changes in the population are reflected in economic changes. Not only is the total sum of population of importance but the relationships between the total population and land area, wealth, and natural resources are also of considerable importance in understanding economic growth. In addition, such population

factors as age composition, educational characteristics, migratory tendencies, and fertility ratio must receive consideration. As contrasted to other regions of the Nation there were a number of characteristics which seemed to be especially important to an understanding of the Southern Appalachians.

Among these were the following:

1. The population was primarily rural, but was becoming more urban.
2. The population was predominantly white.
3. The population had an extremely high fertility ratio.
4. The population was rapidly becoming top-heavy with aged people.
5. The population was predominantly native born.
6. Population density was very uneven and becoming more so.

While it is a truism that the greatest resource of a region is its people, it is also true that certain characteristics of the population often become serious handicaps. The increasingly large number of aged people in the population of the Southern Appalachians combined with the high fertility ratio created a disproportionate number of dependents to productive age groups and served to depress the living standards of the total population. The heavy dependence of the large rural population on a subsistence type of agriculture also

contributed to the problem of low living standards and made it difficult for the region as a whole to share equitably in the prosperity of the Nation.

In spite of heavy out-migration from the Region, the total population of the Southern Appalachians had increased steadily. Starting from a population of slightly less than three million at the turn of the century, the population of the Region had increased to 5,833,263 by 1950 and an estimated 5,905,845 by 1956.¹ Table I, pages 40-41, shows the growth of the population for the entire Region, for states in the Region, and for economic and metropolitan areas from 1930 to 1950 with estimates for 1956 and in some instances 1957. The growth of the population for the period covered varied by state and economic area. The Tennessee portion, with an increase of 336,277 from 1930 to 1950, reflected the greatest numerical increase, but the parts of the Region in all seven states showed substantial increases during these years. There was even greater variability in population growth when considered from the standpoint of economic areas. Here the range was from a slight increase of only 267 for the years 1930 to 1950 in Economic Area 2b in West Virginia to an increase of 103,447 for the same period of time in Economic

¹James S. Brown, Basic Population Data for the Southern Appalachians (Social Research Service, The University of Kentucky, August, 1958), pp. 7-14.

TABLE I

TOTAL POPULATION, SOUTHERN APPALACHIANS, 1930, 1940,
AND 1950, ESTIMATED 1956 BY STATES, ECONOMIC
AREAS AND METROPOLITAN AREAS^a

State and Area	1930	1940	1950	1956
Southern Appalachians	4,771,813	5,408,886	5,833,263	5,905,845
Alabama	185,858	204,105	207,157	196,850
Economic Area 2	185,858	204,105	207,157	196,850
Georgia	275,471	318,432	353,525	376,300
Metropolitan Area A(1)	26,206	31,024	38,198	42,900
Economic Area 1(A)	175,015	202,203	228,982	245,800
Economic Area 2	74,250	85,205	86,345	87,600
Kentucky	711,613	820,115	795,016	700,894 ^b
Metropolitan Area C(8)	43,849	45,938	49,949	51,061 ^b
Economic Area 8(C)	232,050	266,221	234,619	220,127 ^b
Economic Area 9	435,714	507,956	510,448	429,706 ^b
North Carolina	460,161	533,155	572,776	601,493 ^b
Metropolitan Area A(1)	97,937	108,755	124,403	135,749 ^b
Economic Area 1(A)	235,378	270,537	273,986	276,481 ^b
Economic Area 2	126,846	153,863	174,387	189,263 ^b
Tennessee	984,402	1,131,120	1,320,679	1,439,828 ^b
Metropolitan Area C(8a)	159,497	180,478	208,255	228,393 ^b
Metropolitan Area D(8a)	209,613	246,088	337,105	379,238 ^b
Economic Area 7	92,116	109,240	118,192	124,758 ^b
Economic Area 8a (C, D)	209,910	232,858	246,331	257,828 ^b
Economic Area 8b	313,266	362,456	410,796	449,611 ^b

TABLE I (continued)

TOTAL POPULATION, SOUTHERN APPALACHIANS, 1930, 1940
AND 1950, ESTIMATED 1956 BY STATES, ECONOMIC
AREAS AND METROPOLITAN AREAS

State and Area	1930	1940	1950	1956
Virginia	761,175	855,631	934,336	959,320
Metropolitan Area				
A(3)	104,495	112,184	133,407	151,663
Economic Area 1	146,966	186,104	199,095	190,022
Economic Area 2	186,846	207,714	215,972	216,508
Economic Area 3(A)	154,512	165,715	183,961	182,673
Economic Area 4	168,356	183,914	201,901	218,454
West Virginia	1,393,133	1,546,328	1,649,774	1,631,160
Metropolitan Area				
B(2A)	121,992	133,025	146,731	145,081
C(4)	229,717	276,247	322,072	318,448
Economic Area 2b	183,769	197,720	184,036	181,955
Economic Area 3	262,090	273,050	287,180	283,932
Economic Area 4(C)	362,239	416,213	465,686	460,437
Economic Area 5	181,110	195,535	188,250	186,120
Economic Area 6	52,216	54,521	55,819	55,187

^aSource: James S. Brown, Basic Population Data for the Southern Appalachians (Social Research Service, University of Kentucky, August 1958).

^bJuly 1, 1957.

Area 4(C) in the same state. However, the greatest numerical growth for the period of time from 1930 to 1950 in the Region was the increase of 127,492 in Metropolitan Area D (8a) in Tennessee which reflects the over-all growth of the metropolitan areas. These figures indicate that the variability in the density of the population in the various parts of the Region was becoming greater at a rapid pace. Generally speaking, those areas showing only slight increases were sparsely populated areas originally while those areas with rapid increases in population were more densely settled.

From the standpoint of percentage of change in the total population, it can be seen from Table II, pages 43-44, that from 1900 to 1950 there has been a 96.7 per cent increase which means the population of the Region had almost doubled during a span of fifty years. However, as in numerical change, the percentage of change in the population within the Region had been irregular. Table II shows the great variations in change by economic and metropolitan areas. For example, Economic Area 4(C), in West Virginia, showed an increase in population of 422.7 per cent between 1900 and 1950, while Economic Area 2 in Georgia, showed an increase of only 5.4 per cent. It is interesting to note that no area in the Region showed a decrease in population for the fifty-year period, but when the decade 1940 to 1950 was considered exclusively, several areas registered a percentage decrease.

TABLE II

PER CENT CHANGE IN TOTAL POPULATION BY DECADES 1900 TO
1950, SOUTHERN APPALACHIANS, BY STATES, ECONOMIC
AREAS, AND METROPOLITAN AREAS^a

State and Area	1900- 1910	1910- 1920	1920- 1930	1930- 1940	1940 1950	1900- 1950
Southern Appalachians	18.5	15.7	17.4	13.4	7.8	96.7
Alabama	17.9	15.8	15.1	9.8	1.5	75.1
Economic Area 2	17.9	15.8	15.1	9.8	1.5	75.1
Georgia	4.4	3.4	11.0	15.6	11.0	53.7
Metropolitan Area						
A(1)	19.4	25.0	12.1	18.4	23.1	143.9
Economic Area 1(A)	12.4	3.3	13.8	15.5	13.2	73.0
Economic Area 2	-11.4	-2.1	4.4	14.8	1.3	5.4
Kentucky	19.3	23.1	21.0	15.2	-3.1	98.6
Metropolitan Area						
C(8)	24.5	24.9	49.8	4.8	8.7	165.2
Economic Area 8(C)	8.8	2.5	-0.3	14.7	-11.9	12.4
Economic Area 9	31.5	43.5	33.6	16.6	0.5	195.2
North Carolina	11.0	12.7	20.1	15.9	7.4	87.1
Metropolitan Area						
A(1)	12.4	28.8	52.7	11.0	14.4	180.9
Economic Area 1(A)	8.2	11.1	10.0	14.9	1.3	53.8
Economic Area 2	16.2	7.7	20.9	21.3	13.3	108.1
Tennessee	14.3	11.5	17.5	14.9	16.8	100.9
Metropolitan Area						
C(8a)	40.8	22.7	37.6	13.2	15.4	210.4
D(8a)	19.4	20.6	31.0	17.4	37.0	203.3
Economic Area 7	11.5	7.6	4.9	18.6	8.2	61.4
Economic Area 8a						
(C, D)	10.9	6.2	3.3	10.9	5.8	42.8
Economic Area 8b	7.5	7.8	15.8	15.7	13.3	76.0

TABLE II (continued)

PER CENT CHANGE IN TOTAL POPULATION BY DECADES 1900 TO
1950, SOUTHERN APPALACHIANS, BY STATES, ECONOMIC
AREAS, AND METROPOLITAN AREAS

State and Area	1900- 1910	1910- 1920	1920- 1930	1930- 1940	1940- 1950	1900 -1950
Virginia	14.0	8.7	12.2	12.4	9.1	70.6
Metropolitan Area						
A(3)	46.0	34.4	42.7	7.4	18.9	257.4
Economic Area 1	30.1	23.1	14.3	26.6	7.0	147.8
Economic Area 2	12.8	3.8	4.0	11.2	4.0	40.7
Economic Area 3(A)	7.4	0.2	7.8	7.3	11.0	38.1
Economic Area 4	4.1	3.1	9.5	9.2	9.8	40.9
West Virginia	33.3	24.1	19.4	11.0	6.7	133.8
Metropolitan Area						
B(2a)	33.8	29.7	32.9	9.0	10.3	177.5
C(4)	53.8	35.0	27.6	20.3	16.6	271.6
Economic Area 2b	9.4	2.1	0.4	7.6	-6.9	12.3
Economic Area 3	33.0	30.7	15.1	4.2	5.2	119.1
Economic Area 4(C)	86.9	55.3	40.1	14.9	11.9	422.7
Economic Area 5	22.3	3.8	2.4	8.0	-3.7	35.1
Economic Area 6	7.1	6.3	7.4	4.4	2.4	30.7

^aSource: James S. Brown, Basic Population Data for the Southern Appalachians (Social Research Service, University of Kentucky, August 1958), p. 9.

The largest of these decreases was that for Economic Area 8(C) in Kentucky which had a drop in population of 11.9 per cent between 1940 and 1950. The metropolitan areas registered the largest over-all percentage of increase. This would seem to be indicative of the growing urbanization of the Region.

This uneven growth in the population of the Region had been paralleled by an uneven growth in economic development. Since there was no indication that the uneven rate of growth among the sections of the Region would slacken in the near future, the problem of variations in economic development may be expected to become more acute in the years to come, with accompanying progressively increasing variations in population growth. This will almost certainly result in altered economic requirements and productivity in the different parts of the region.

Migration

Although the total population of the Southern Appalachian Region had steadily increased since the turn of the century, net loss through migration had been characteristic of the Region for decades. However, because of the very high birth rate, the tremendous effect of migration on the total population tended to be obscured. When the per cent of increase by decade from 1900 to 1950 (19 per cent from 1900 to 1910, 16 per cent from 1910 to 1920, 17 per cent from 1920 to

1930, 13 per cent from 1930 to 1940, and 8 per cent from 1940 to 1950)² was considered, it could be observed that as net migration losses became higher the rate of increase, in general, steadily declined. The increase of 8 per cent from 1940 to 1950 was the lowest of the whole period and probably the lowest in the Region's entire history. When this increase is compared with the national increase of 15 per cent during the decade of 1940 to 1950, the loss by out-migration can be clearly seen.

From Table III, pages 47-48, it is readily observable that the Region as a whole had a net migration loss of 703,566 from 1940 to 1950. Expressed as a net migration rate, this was a loss equivalent to 13 per cent of the total population of the Region in 1940. The Southern Appalachian Region had a higher percentage of out-migration in the decade 1940-50 than any other region in the country with the exception of the South Central and Southwest Plains Region.³ The out-migration reached such proportions that it offset a 20.1 rate of reproductive change which was considerably higher than the rate, 12.6, for the United States as a whole and higher than the rate for any other economic region in the country.⁴

²James S. Brown, "Migration Within, To, and From the Southern Appalachians, 1935-55: Extent, Directions, and Social Effects" (University of Kentucky, 1958), p. 6. (Mimeographed)

³Ibid., p. 7.

⁴Loc. cit.

TABLE III

NET MIGRATION AND RATE OF REPRODUCTIVE CHANGE, SOUTHERN
APPALACHIANS, BY STATES, ECONOMIC AND
METROPOLITAN AREAS, 1940-50^a

State and Area	Net Migration	Migration Rate	Reproductive Rate
Southern Appalachians	-703,536	-13.0	20.1
Alabama	-42,114	-20.7	22.2
Economic Area 2	-42,114	-20.7	22.2
Georgia	-34,647	-10.9	20.6
Metropolitan Area A(1)	-45	-0.1	21.4
Economic Area 1(A)	-16,134	-8.0	20.0
Economic Area 2	-18,468	-21.4	21.7
Kentucky	-229,394	-28.0	24.9
Metropolitan Area C(8)	-4,179	-9.1	17.4
Economic Area 8(c)	-89,410	-33.6	23.2
Economic Area 9	-135,805	-26.8	27.5
North Carolina	-71,446	-13.4	19.9
Metropolitan Area A(1)	-475	-0.4	14.1
Economic Area 1(A)	-58,149	-21.4	21.9
Economic Area 2	-12,822	-8.4	20.6
Tennessee	-58,434	-8.4	20.1
Metropolitan Area C(8a)	-2,534	-1.4	16.0
Metropolitan Area D(8a)	34,240	13.7	18.1
Economic Area 7	-22,324	-20.6	28.2
Economic Area 8a(C, D)	-39,376	-17.0	22.5
Economic Area 8b	-28,440	-7.9	20.0
Virginia	-73,119	-8.6	17.7
Metropolitan Area A(3)	6,982	6.3	12.3
Economic Area 1	-34,621	-18.8	25.6
Economic Area 2	-31,185	-15.1	19.1
Economic Area 3(A)	-15,230	-9.0	16.8
Economic Area 4	935	0.5	12.6

TABLE III (continued)

NET MIGRATION AND RATE OF REPRODUCTIVE CHANGE, SOUTHERN
APPALACHIANS, BY STATES, ECONOMIC AND
METROPOLITAN AREAS, 1940-50

State and Area	Net Migration	Migration Rate	Reproductive Rate
West Virginia	-194,382	-12.5	18.3
Metropolitan Area B(2a)	-7,493	-5.6	14.5
Metropolitan C(4)	-15,978	-5.8	20.4
Economic Area 2b	-42,112	-21.3	14.9
Economic Area 3	-29,170	-10.5	14.1
Economic Area 4(C)	-56,515	-13.6	24.1
Economic Area 5	-37,725	-19.4	16.3
Economic Area 6	-5,389	-9.9	11.8

^aSource: Donald J. Bogue, Components of Population Change, 1940-50 (Oxford, Ohio: Scripps Foundation, 1957), p. 45.

As shown in Table III, pages 47-48, the migration rate varied widely among the metropolitan and economic areas in the Region. The metropolitan areas of the Region increased in population about 20 per cent during the decade 1940-50. This compares with the average percentage of increase for all metropolitan areas in the United States of 22 per cent.⁵ In eight of the thirteen economic regions of the country, the percentage of increase for metropolitan areas was greater than that of the Southern Appalachians and in five of the thirteen the rate of increase was less.⁶ The non-metropolitan areas of the Region increased in population by 4.8 per cent from 1940 to 1950 compared with a national increase of 14.6 per cent for all non-metropolitan areas. The rate of increase for the Region was the smallest for any economic region in the country.⁷ These facts dramatize the effect of heavy out-migration when it is remembered that the Region had the highest birth rate of any area in the country.

The migration rates of the metropolitan areas ranged from -9.1 in Metropolitan Area C(8) in Kentucky, the Ashland, Kentucky area, to 13.7 in Metropolitan Area D(8a), the Knoxville, Tennessee area. The rate for the economic areas within

⁵Ibid., p. 8.

⁶Loc. cit.

⁷Loc. cit.

the Region ranged from -33.6 for Economic Area 8(c) in Kentucky to 0.5 in Economic Area 4 in Virginia.

It has been estimated that from 1940 to 1950 the net loss in rural-farm population due to migration in the Southern Appalachians totaled 596,000. However, in the preceding decade, 1930 to 1940, the total net loss of rural-farm population due to migration was only about 102,000, considerably less than one-fifth of the loss from 1940 to 1950.⁸ This is not surprising in view of the different economic and social conditions of the two periods.

One important question which may be raised in reference to migration in the Southern Appalachians is this: Is the great movement out of the Region continuing? While there is no conclusive evidence at the present time relative to this question, indications were that the population of the Region was apparently staying about the same or growing only slightly. Since there was no reason to suspect that the heavy birth rate in the Region had lessened, this would tend to indicate that heavy out-migration was continuing unabated.

Consideration of the area including the Kentucky counties in Economic Areas 8 and 9 and Metropolitan Area C,

⁸Gladys K. Bowles, Farm Population: Net Migration from the Rural-Farm Population, 1940-50 (Washington: U. S. Department of Agriculture, Statistical Bulletin 176, June, 1956), p. 25.

for which population estimates were available for July 1, 1957, revealed that heavy out-migration in all three of these areas was continuing.⁹ In Metropolitan Area C and Economic Area 9 it seemed quite probable that the annual rate of loss through net migration was even heavier from 1950 to 1957 than from 1940 to 1950. However, indications were that the annual rate of loss might be a little less for Economic Area 8 during the latter period.

A discussion of migration in the Southern Appalachians would not be complete without some consideration of in-migration. While in-migration was an important aspect of migration in the Southern Appalachians, it did not have nearly as great an impact on the Region as did out-migration. The in-migration movement differed radically from the out-migration in several respects. Two of the most important differences were (1) that in-migration was not general to the entire region but was concentrated in specific localities, and (2) that a large percentage of the in-migrants were people skilled in some vocation or profession. An example that exemplified both of the differences was Oak Ridge, Tennessee, a city which grew up rapidly during and after the World War II as a center of atomic research. A sizeable proportion of

⁹Thomas R. Ford, "Population Estimates for Kentucky Counties and Economic Areas, July 1, 1957" (Progress report 66, Agricultural Experiment Station, University of Kentucky, August 1958), p. 64.

the people who came to Oak Ridge were highly skilled technicians and professional people from all over the country whose presence had a favorable effect on the Region. In-migrants, generally speaking, tended to provide a reservoir of highly skilled and professional manpower and to serve as a source of leadership for the Region.

The socio-economic effects of the out-migration movement in the Southern Appalachian Region have been generally conceded to be of a depressive nature. As has been pointed out previously, migration from the Region was heaviest among the age group which is most productive. This resulted in the Region having a disproportionate percentage of dependent persons, the very young and the very old, in the total population. Not only did out-migration involve those who were at the age of greatest productivity but it also took a considerable number of the better trained and better educated from the Region, leaving those who possessed less potential. However, it should be pointed out that, generally speaking, the in-migration and out-migration of professional and semi-professional workers, and the proprietors, managers, and officials tended to balance out.

Changes in Rural, Rural Non-Farm, and Rural Farm Population

The rural population of the Southern Appalachians stood at 4,272,366 in 1950, a change of 56.9 per cent since

1900. As can be seen in Table IV, pages 54-55, the rural population had been steadily increasing since the turn of the century. Percentage-wise, as shown in Table V, pages 56-57, the rural population increased most in the decade of 1900-10, 13.7 per cent, followed closely by the decade of 1930-40, 13.5 per cent. The decade 1940-50 had the smallest per cent of increase, 3.1 per cent, a fact which was indicative of growing urbanization of the Region.

Table IV shows that the total increase of 623,037 in rural population between 1930 and 1950 was not evenly distributed over the Region. The growth in rural population by state ranged from a decrease of 2008 in Alabama to an increase of 232,492 in Tennessee. By economic areas the range was from a decrease of 3,862 in Economic Area 2b in West Virginia to an increase of 63,926 in Economic Area 8b in Tennessee. The range in the metropolitan areas was from a high increase of 100,929 in Metropolitan Area D(8a) in Tennessee to a low increase of 4,188 in Metropolitan Area A(3) in Virginia.

Since raw figures are sometimes misleading, attention will be given the percentage of change in the different subdivisions of the region for the decade 1940-50. As shown in Table V, pages 56-57, the rural population of the entire Region for the period of time from 1940 to 1950 increased 3.1 per cent. However, as in the case of raw figures, the

TABLE IV

RURAL POPULATION, SOUTHERN APPALACHIANS, BY STATES, ECONOMIC
AREAS, AND METROPOLITAN AREAS, 1930, 1940, AND 1950^a

State and Area	1930	1940	1950
Southern Appalachians	3,649,329	4,142,144	4,272,366
Alabama	174,155	183,724	172,147
Economic Area 2	174,155	183,724	172,147
Georgia	219,500	248,970	264,611
Metropolitan Area A(1)	20,165	23,977	25,660
Economic Area 1(A)	125,085	139,788	152,606
Economic Area 2	74,250	85,205	86,345
Kentucky	626,093	728,590	669,597
Metropolitan Area C(8)	9,750	11,877	14,068
Economic Area 8(C)	228,410	262,590	224,832
Economic Area 9	387,933	454,123	430,697
North Carolina	383,580	440,176	470,543
Metropolitan Area A(1)	47,744	57,445	71,403
Economic Area 1(A)	225,191	254,118	250,801
Economic Area 2	110,645	128,613	148,339
Tennessee	635,135	743,109	867,627
Metropolitan Area C(8a)	39,699	49,376	67,569
Metropolitan Area D(8a)	93,598	121,007	194,527
Economic Area 7	92,116	109,240	115,619
Economic Area 8a(C, D)	173,009	187,621	189,273
Economic Area 8b	236,713	275,865	300,639
Virginia	567,277	641,091	651,917
Metropolitan Area A(3)	26,846	33,705	31,034
Economic Area 1	132,480	168,213	177,832
Economic Area 2	162,138	179,113	174,888
Economic Area 3(A)	119,986	128,923	134,043
Economic Area 4	125,827	131,137	134,120

TABLE IV (continued)

RURAL POPULATION, SOUTHERN APPALACHIANS, BY STATES, ECONOMIC AREAS, AND METROPOLITAN AREAS, 1930, 1940, AND 1950

State and Area	1930	1940	1950
West Virginia	1,043,589	1,156,484	1,175,924
Metropolitan Area B(2a)	42,740	50,287	56,058
Metropolitan C(4)	153,056	180,687	196,131
Economic Area 2b	165,029	179,951	161,167
Economic Area 3	177,136	186,687	177,469
Economic Area 4(C)	307,406	349,547	386,142
Economic Area 5	160,863	172,733	161,794
Economic Area 6	37,359	36,532	37,163

^aSource: James S. Brown, Basic Population Data for the Southern Appalachians (Social Research Service, University of Kentucky, August 1958).

TABLE V

PER CENT CHANGE IN RURAL POPULATION BY DECADES 1900 TO
1950, SOUTHERN APPALACHIANS, BY STATES, ECONOMIC
AREAS, AND METROPOLITAN AREAS^a

State and Area	1900- 1910	1910- 1920	1920- 1930	1930- 1940	1940- 1950	1900- 1950
Southern Appalachians	13.7	7.4	9.8	13.5	3.1	56.9
Alabama	17.9	15.8	7.8	5.5	-6.3	45.5
Economic Area 2	17.9	15.8	7.8	5.5	-6.3	45.5
Georgia	1.2	2.9	-0.9	13.4	6.3	24.6
Metropolitan Area						
A(1)	19.4	25.0	-13.7	18.9	7.0	63.8
Economic Area 1(A)	7.8	2.5	-1.4	11.8	9.2	32.9
Economic Area 2	-11.4	-2.1	4.4	14.8	1.3	5.4
Kentucky	18.0	18.6	15.8	16.4	-8.1	73.3
Metropolitan Area						
C(8)	25.5	-7.7	-6.0	21.8	18.4	57.1
Economic Area 8(C)	8.8	1.3	-0.7	15.0	-14.4	7.7
Economic Area 9	28.9	38.0	29.3	17.1	-5.2	155.2
North Carolina	7.1	9.4	12.3	14.8	6.9	61.4
Metropolitan Area						
A(1)	4.9	14.8	33.9	20.3	24.3	141.3
Economic Area 1(A)	6.6	9.4	8.4	12.8	-1.3	40.8
Economic Area 2	9.0	7.7	12.5	16.2	15.3	77.0
Tennessee	9.7	-2.9	4.4	17.0	16.8	51.8
Metropolitan Area						
C(8a)	35.0	-6.9	-14.5	24.4	36.8	82.9
D(8a)	16.2	-17.7	24.7	29.3	60.8	147.8
Economic Area 7	11.5	4.3	8.1	18.6	5.8	57.9
Economic Area 8a						
(C, D)	6.5	1.6	-1.5	8.4	0.9	16.6
Economic Area 8b	4.9	-2.2	4.6	16.5	9.0	36.4

TABLE V (continued)

PER CENT CHANGE IN RURAL POPULATION BY DECADES 1900 TO
1950, SOUTHERN APPALACHIANS, BY STATES, ECONOMIC
AREAS, AND METROPOLITAN AREAS

State and Area	1900- 1910	1910- 1920	1920- 1930	1930- 1940	1940- 1950	1900- 1950
Virginia	9.1	1.9	4.9	13.0	1.7	34.1
Metropolitan Area						
A(3)	27.0	-2.0	73.7	25.5	-7.9	149.8
Economic Area 1	30.1	12.2	13.0	27.0	5.7	121.4
Economic Area 2	10.4	1.9	-1.3	10.5	-2.4	19.8
Economic Area 3(A)	0.2	-2.6	4.4	7.4	4.0	13.9
Economic Area 4	1.0	-1.9	-2.3	4.2	2.3	3.2
West Virginia	24.4	11.6	14.6	10.8	1.7	79.3
Metropolitan Area						
B(2a)	-3.3	5.0	2.8	17.7	11.5	36.9
C(4)	46.0	21.4	14.3	18.1	8.5	159.5
Economic Area 2b	9.3	-3.9	-2.5	9.0	-10.4	-0.1
Economic Area 3	15.7	6.6	14.4	5.4	-5.0	41.5
Economic Area 4(C)	76.1	47.8	39.9	13.7	10.5	357.2
Economic Area 5	22.6	-3.5	2.2	7.4	-6.3	21.6
Economic Area 6	-7.8	3.8	11.2	-2.2	1.7	5.8

^aSource: James S. Brown, Basic Population Data for the Southern Appalachians (Social Research Service, University of Kentucky, August 1958).

percentage varied widely among areas within the Region. By state, the change ranged from a decrease of 8.1 per cent in the rural population of Kentucky to an increase of 16.8 per cent in Tennessee. By economic area, the range in the decade was from a decrease of 14.4 per cent for Economic Area 8(C) in Kentucky to an increase of 10.5 per cent in Economic Area 4(C) in West Virginia. The change in the metropolitan areas ranged from an increase of 60.8 per cent in Metropolitan Area D(8a) in Tennessee to a decrease of 7.9 per cent in Metropolitan Area A(3) in Virginia. The Virginia Metropolitan Area A(3) was the only metropolitan area which had a decrease in rural population during the decade. However, a number of the economic areas had a decrease for the period. This is another indication of the immensity of the population movement from rural to urban areas.

One of the great movements in the Southern Appalachian Region in the period from 1930 to 1950 was the movement of people from the farms. This phenomenon was characteristic of the Region as a whole and of all the areas within the Region. After a steady increase in the rural farm population to a peak of 2,244,254 in 1940, there was a sudden decline to 1,777,044 in 1950, a decrease of 467,210, or 21 per cent. Table VI, pages 59-60, gives rural farm population by states, economic areas, and metropolitan areas, and Table VII, pages 61-62, shows the per cent of change in rural farm population

TABLE VI

RURAL FARM POPULATION, SOUTHERN APPALACHIANS, BY STATES,
ECONOMIC AREAS, AND METROPOLITAN AREAS, 1930 TO 1950^a

State and Area	1930	1940	1950
Southern Appalachians	1,967,288	2,244,254	1,777,044
Alabama	148,637	152,952	130,653
Economic Area 2	148,637	152,952	130,653
Georgia	148,620	155,665	122,469
Metropolitan Area A(1)	11,771	12,707	9,600
Economic Area 1(A)	84,715	83,955	65,548
Economic Area 2	52,134	59,003	47,321
Kentucky	350,052	423,655	318,428
Metropolitan Area C(8)	4,634	4,205	4,203
Economic Area 8(C)	172,077	191,471	139,322
Economic Area 9	173,341	227,979	174,903
North Carolina	250,148	286,718	233,586
Metropolitan Area A(1)	21,251	26,818	19,761
Economic Area 1(A)	158,921	183,467	152,665
Economic Area 2	69,976	76,433	61,160
Tennessee	392,915	450,774	369,646
Metropolitan Area C(8a)	13,950	14,093	11,285
Metropolitan Area D(8a)	45,646	57,958	45,538
Economic Area 7	43,318	57,342	54,611
Economic Area 8a(C, D)	111,733	121,157	95,752
Economic Area 8b	178,268	200,224	162,640
Virginia	317,003	342,149	267,781
Metropolitan Area A(3)	9,350	8,335	6,342
Economic Area 1	60,563	68,360	58,560
Economic Area 2	112,265	122,093	98,577
Economic Area 3(A)	65,152	70,067	51,007
Economic Area 4	69,673	73,294	53,295

TABLE VI (continued)

RURAL FARM POPULATION, SOUTHERN APPALACHIANS, BY STATES,
ECONOMIC AREAS, AND METROPOLITAN AREAS, 1930 TO 1950

State and Area	1930	1940	1950
West Virginia	359,913	432,341	334,481
Metropolitan Area B(2a)	26,816	30,549	25,695
Metropolitan Area C(4)	24,089	31,989	22,322
Economic Area 2b	103,391	119,923	91,814
Economic Area 3	53,938	61,886	54,769
Economic Area 4(C)	51,844	78,220	57,122
Economic Area 5	85,021	94,486	71,421
Economic Area 6	14,814	15,288	11,338

^aSource: James S. Brown, Basic Population Data for the Southern Appalachians (Social Research Service, University of Kentucky, August 1958).

TABLE VII

PER CENT CHANGE IN RURAL FARM POPULATION, BY DECADES 1930-1940, 1940-1950, SOUTHERN APPALACHIANS, BY STATES, METROPOLITAN AND ECONOMIC AREAS^a

State and Area	1930-1940	1940-1950
Southern Appalachians	14.1	-21.0
Alabama	2.9	-14.6
Economic Area 2	2.9	-14.6
Georgia	4.7	-21.3
Metropolitan Area A(1)	8.0	-24.5
Economic Area 1(A)	-0.9	-21.9
Economic Area 2	13.2	-19.8
Kentucky	21.0	-24.8
Metropolitan Area C(8)	-9.3	-0.0
Economic Area 8(C)	11.3	-27.2
Economic Area 9	31.5	-23.3
North Carolina	14.6	-18.5
Metropolitan Area A(1)	26.2	-26.3
Economic Area 1(A)	15.4	-16.8
Economic Area 2	9.2	-20.0
Tennessee	14.7	-18.0
Metropolitan Area C(8a)	1.0	-19.9
Metropolitan Area D(8a)	27.0	-21.4
Economic Area 7	32.4	-4.8
Economic Area 8a(C, D)	8.4	-21.0
Economic Area 8b	12.3	-18.9
Virginia	7.9	-21.7
Metropolitan Area A(3)	-10.9	-23.9
Economic Area 1	12.9	-14.3
Economic Area 2	8.8	-19.3
Economic Area 3(A)	7.5	-27.2
Economic Area 4	5.2	-27.3

TABLE VII (continued)

PER CENT CHANGE IN RURAL FARM POPULATION, BY DECADES 1930-1940, 1940-1950, SOUTHERN APPALACHIANS, BY STATES, METROPOLITAN AND ECONOMIC AREAS

State and Area	1930- 1940	1940- 1950
West Virginia	20.1	-22.6
Metropolitan Area B(2a)	13.9	-15.9
Metropolitan Area C(4)	32.8	-30.2
Economic Area 2b	16.0	-23.4
Economic Area 3	14.7	-11.5
Economic Area 4(C)	50.9	-27.0
Economic Area 5	11.1	-24.4
Economic Area 6	3.2	-25.8

^aSource: James S. Brown, Basic Population Data for the Southern Appalachians (Social Research Service, University of Kentucky, August 1958).

in the decades of 1930-40 and 1940-50 by states, economic areas, and metropolitan areas. From both tables, it can be observed that all states, all economic areas, and all metropolitan areas in the Region suffered a decline in rural farm population during the decade 1940-50. However, the rate of loss varied from state to state and from area to area within the Region. While the decrease from 1940 to 1950 for the Region in its entirety was 21.0 per cent, the range by state was from 14.6 per cent in Alabama to 24.8 per cent in Kentucky. From the standpoint of economic areas, the range was from a decrease of 27.3 per cent in Economic Area 4 in Virginia to 4.8 per cent in Economic Area 7 in Tennessee.

Table VIII, page 64, shows the rate of migration for rural farm population for the decade 1940-50 by state economic areas. Differentiation was also made between rate of migration for whites and non-whites. It can be seen from the table that while the rate of migration was consistently heavy for all economic areas in the Region, it was considerably heavier for some than for others. Of particular significance was the extremely heavy rate of out-migration for the non-whites. Proportionately a much higher percentage of the Negro population than the white was involved in rural farm out-migration. This was probably due to a number of factors including greater economic opportunity and greater opportunity for cultural equality.

TABLE VIII

NET CHANGE IN RURAL FARM POPULATION DUE TO MIGRATION, 1940 TO 1950, SOUTHERN APPALACHIANS, BY STATE ECONOMIC AREAS^a

State and Area	White	Non-white	Total
Alabama	-28.8		
Economic Area 2	-28.8	-43.0	-29.0
Georgia			
Economic Area 1(A)	-26.2	-33.7	-26.9
Economic Area 2	-28.9	---	-29.1
Kentucky			
Economic Area 8(C)	-38.3	---	-38.3
Economic Area 9	-34.9	-77.6	-35.2
North Carolina			
Economic Area 1(A)	-25.9	-39.0	-26.2
Economic Area 2	-23.4	-37.7	-24.1
Tennessee			
Economic Area 7	-16.6	---	-17.1
Economic Area 8a(C, D)	-26.9	-43.2	-27.2
Economic Area 8b	-25.8	-43.3	-26.0
Virginia			
Economic Area 1	-24.6	---	-24.7
Economic Area 2	-25.5	---	-25.7
Economic Area 3(A)	-27.8	-52.9	-28.8
Economic Area 4	-27.6	-40.6	-27.9
West Virginia			
Economic Area 2b	-29.6	---	-29.6
Economic Area 3	-11.8	---	-11.8
Economic Area 4(C)	-34.1	-49.9	-34.4
Economic Area 5	-29.7	---	-29.7
Economic Area 6	-30.3	---	-30.2

^aSource: Gladys K. Bowles, Farm Population--Net Migration from the Rural-Farm Population, 1940-1950, U. S. Department of Agriculture, Statistical Bulletin No. 176, June 1956.

While the rural farm population of the Southern Appalachian Region was declining at a rapid rate beginning about 1940, the rural non-farm population, by contrast, was increasing at an equally rapid rate, and by 1950 had become the largest group in the total population. As shown in Table IX, pages 66-67, the rural non-farm population had increased to 2,495,322 by 1950. The state in the region with the largest rural non-farm population in 1950 was West Virginia with 841,443.

Table X, pages 68-69, which shows the per cent of change in rural non-farm population for the decades of 1930-40 and 1940-50 by states and areas in the Region, reflects the variability between states and areas within the Region in the growth of rural non-farm population. As can be seen from the table, the increase for the Region as a whole during the decade of 1940-50 was 31.5 per cent. This is in sharp contrast to the preceding decade when the percentage of increase in the rural non-farm population was only 12.8 per cent. Tennessee led all states with an increase of 70.3 per cent, and Kentucky, with an increase of 15.2 per cent, had the lowest percentage increase. Only Economic Area 3 in West Virginia showed a slight decrease, 1.7 per cent, in rural non-farm population. Metropolitan Area A(3) in Virginia also had a slight decrease in rural non-farm population from 1940 to 1950, 2.7 per cent, and was the only metropolitan area in the

TABLE IX

RURAL NONFARM POPULATION, SOUTHERN APPALACHIANS, BY STATES,
ECONOMIC AREAS, AND METROPOLITAN AREAS, 1930 TO 1950^a

State and Area	1930	1940	1950
Southern Appalachians	1,682,041	1,897,890	2,495,322
Alabama	25,518	30,772	41,494
Economic Area 2	25,518	30,772	41,494
Georgia	70,880	93,305	142,142
Metropolitan Area A(1)	8,394	11,270	16,060
Economic Area 1(A)	40,370	33,833	87,058
Economic Area 2	22,116	26,202	39,024
Kentucky	276,041	304,935	351,169
Metropolitan Area C(8)	5,116	7,672	9,865
Economic Area 8(C)	56,333	71,119	85,510
Economic Area 9	214,592	226,144	255,794
North Carolina	133,432	153,458	236,957
Metropolitan Area A(1)	26,493	30,627	51,642
Economic Area 1(A)	66,270	70,651	98,136
Economic Area 2	40,669	52,180	87,179
Tennessee	242,220	292,335	497,981
Metropolitan Area C(8a)	25,749	35,283	56,284
Metropolitan Area D(8a)	47,952	63,049	148,989
Economic Area 7	48,798	51,898	61,008
Economic Area 8a(C, D)	61,276	66,464	93,521
Economic Area 8b	58,445	75,641	138,179
Virginia	250,274	298,942	384,136
Metropolitan Area A(3)	17,496	25,370	24,692
Economic Area 1	71,917	99,853	119,272
Economic Area 2	49,873	57,020	76,311
Economic Area 3(A)	54,834	58,856	83,036
Economic Area 4	56,154	57,843	80,825

TABLE IX (continued)

RURAL NONFARM POPULATION, SOUTHERN APPALACHIANS, BY STATES,
ECONOMIC AREAS, AND METROPOLITAN AREAS, 1930 TO 1950

State and Area	1930	1940	1950
West Virginia	683,676	724,143	841,443
Metropolitan Area B(2a)	15,924	19,738	30,363
Metropolitan Area C(4)	128,967	148,698	173,809
Economic Area 2b	61,638	60,028	69,353
Economic Area 3	123,198	124,861	122,700
Economic Area 4(C)	255,562	271,327	329,020
Economic Area 5	75,842	78,247	90,373
Economic Area 6	22,545	21,244	25,825

^aSource: James S. Brown, Basic Population Data for the Southern Appalachians (Social Research Service, University of Kentucky, August 1958).

TABLE X

PER CENT CHANGE IN RURAL NONFARM POPULATION, 1930-1940,
1940-1950 SOUTHERN APPALACHIANS, BY STATES,
METROPOLITAN AND ECONOMIC AREAS^a

State and Area	1930-1940	1940-1950
Southern Appalachians	12.8	31.5
Alabama	20.6	34.8
Economic Area 2	20.6	34.8
Georgia	31.6	52.3
Metropolitan Area A(1)	34.3	42.5
Economic Area 1(A)	38.3	55.9
Economic Area 2	18.5	48.9
Kentucky	10.5	15.2
Metropolitan Area C(8)	50.0	28.6
Economic Area 8(C)	26.2	20.2
Economic Area 9	5.4	13.1
North Carolina	15.0	54.4
Metropolitan Area A(1)	15.6	68.6
Economic Area 1(A)	6.6	38.9
Economic Area 2	28.3	67.1
Tennessee	20.7	70.3
Metropolitan Area C(8a)	37.0	59.5
Metropolitan Area D(8a)	31.5	136.3
Economic Area 7	6.4	17.6
Economic Area 8a(C, D)	8.5	40.7
Economic Area 8b	29.4	82.7
Virginia	19.4	28.5
Metropolitan Area A(3)	45.0	-2.7
Economic Area 1	38.8	19.4
Economic Area 2	14.3	33.8
Economic Area 3(A)	7.3	41.1
Economic Area 4	3.0	39.7

TABLE X (continued)

PER CENT CHANGE IN RURAL NONFARM POPULATION, 1930-1940,
1940-1950 SOUTHERN APPALACHIANS, BY STATES,
METROPOLITAN AND ECONOMIC AREAS

State and Area	1930-1940	1940-1950
West Virginia	5.9	16.2
Metropolitan Area B(2a)	24.0	53.8
Metropolitan Area C(4)	15.3	16.9
Economic Area 2b	-2.6	15.5
Economic Area 3	1.3	-1.7
Economic Area 4(C)	6.2	21.3
Economic Area 5	3.2	15.5
Economic Area 6	-5.8	21.6

^aSource: James S. Brown, Basic Population Data for the Southern Appalachians (Social Research Service, University of Kentucky, August 1958).

Region which did not have an increase. The per cent of change by area ranged from -2.7 per cent for Metropolitan Area A(3) to a high of 136.3 per cent in Metropolitan Area D (8a) in Tennessee.

By way of summing up the changes during the decade of 1940-50, the rural population increased 3.1 per cent, rural farm population decreased 21 per cent, and rural non-farm population increased 31.5 per cent. In 1940 the rural non-farm population was 35.1 per cent of the total population; in 1950, 42.8 per cent of the total population was rural non-farm. In 1940 the rural farm population was 41.5 per cent of the total population; in 1950 it was 30.4 per cent. The actual numbers, as shown in Table XI, page 71, portray the population changes even more vividly.

Urbanization

In addition to the great movement of people out of the Southern Appalachian Region, there was a second great migratory movement within the Region itself; the movement of people from the farms to the towns and cities of the Region. The immensity of this movement is reflected in Tables XII, pages 72-73, and XIII, pages 74-75. Since 1900, the urban population of the region had increased from 243,236 to 1,560,897 by 1950, a percentage increase of 541.7 per cent. Tables XII and XIII show an increase in urbanization in every

TABLE XI

POPULATION CHANGES BY CLASSIFICATION IN THE SOUTHERN
APPALACHIANS FROM 1940 to 1950^a

Classification	Population	
	1940	1950
Rural	4,142,144	4,272,366
Rural Farm	2,244,254	1,777,044
Rural Non-Farm	1,897,890	2,495,322
Urban	<u>1,266,742</u>	<u>1,560,897</u>
Total	5,408,886	5,833,263

^aSource: James S. Brown, "Migration Within, To, and From the Southern Appalachians, 1935-55: Extent, Directions, and Social Effects," University of Kentucky, 1958. (Mimeo-graphed)

TABLE XII

URBAN POPULATION*, SOUTHERN APPALACHIANS, BY STATES, ECONOMIC AREAS, AND METROPOLITAN AREAS, 1930, 1940, 1950^a

State and Area	1930	1940	1950
Southern Appalachians	1,122,484	1,266,742	1,560,897
Alabama	11,703	20,381	35,010
Economic Area 2	11,703	20,381	35,010
Georgia	55,971	69,462	88,914
Metropolitan Area A(1)	6,041	7,047	12,538
Economic Area 1(A)	49,930	62,415	76,376
Economic Area 2	---	---	---
Kentucky	85,520	91,525	125,419
Metropolitan Area C(8)	34,099	34,061	35,881
Economic Area 8(C)	3,640	3,631	9,787
Economic Area 9	47,781	53,833	79,751
North Carolina	76,581	92,979	102,233
Metropolitan Area A(1)	50,193	51,310	53,000
Economic Area 1(A)	10,187	16,419	23,185
Economic Area 2	16,201	25,250	26,048
Tennessee	349,267	388,011	453,052
Metropolitan Area C(8a)	119,798	131,102	140,686
Metropolitan Area D(8a)	116,015	125,081	142,578
Economic Area 7	---	---	2,573
Economic Area 8a (C, D)	36,901	45,237	57,058
Economic Area 8b	76,553	86,591	110,157
Virginia	193,898	214,540	282,419
Metropolitan Area A(3)	77,649	78,479	102,373
Economic Area 1	14,486	17,891	21,263
Economic Area 2	24,708	28,601	41,084
Economic Area 3(A)	34,526	36,792	49,918
Economic Area 4	42,529	52,777	67,781

TABLE XII (continued)

URBAN POPULATION, SOUTHERN APPALACHIANS, BY STATES, ECONOMIC
AREAS, AND METROPOLITAN AREAS, 1930, 1940, 1950

State and Area	1930	1940	1950
West Virginia	349,544	389,844	473,850
Metropolitan Area B(2a)	79,252	82,738	90,673
Metropolitan Area C(4)	76,661	95,560	125,941
Economic Area 2b	18,740	17,769	22,869
Economic Area 3	84,954	86,303	109,711
Economic Area 4(C)	54,833	66,683	79,544
Economic Area 5	20,247	22,802	26,456
Economic Area 6	14,857	17,989	18,656

*The old definition of "urban" followed in the 1940 Census was used.

^aSource: James S. Brown, Basic Population Data for the Southern Appalachians (Social Research Service, University of Kentucky, August 1958).

TABLE XIII

PER CENT CHANGE IN URBAN POPULATION, BY DECADES 1900-
1950 SOUTHERN APPALACHIANS, BY STATES,
METROPOLITAN AND ECONOMIC AREAS^a

State and Area	1900- 1910	1910- 1920	1920- 1930	1930- 1940	1940- 1950	1900- 1950
Southern Appalachians	71.7	77.1	51.8	12.9	23.2	541.7
Alabama	---	---	---	74.2	71.8	---
Economic Area 2	---	---	---	74.2	71.8	---
Georgia	42.6	7.3	108.2	24.1	28.0	406.2
Metropolitan Area	---	---	---	16.7	77.9	---
A(1)	---	---	---	16.7	77.9	---
Economic Area 1(A)	42.6	7.3	85.8	25.0	22.4	334.8
Economic Area 2	---	---	---	---	---	---
Kentucky	57.4	115.7	79.4	7.0	37.0	793.1
Metropolitan Area	---	---	---	---	---	---
C(8)	23.6	54.9	80.3	-0.1	5.3	263.1
Economic Area 8(C)	---	---	34.6	-0.2	169.5	---
Economic Area 9	137.7	163.4	83.4	12.7	48.1	1816.2
North Carolina	88.2	49.7	85.0	21.4	10.0	595.7
Metropolitan Area	---	---	---	---	---	---
A(1)	27.7	51.9	76.1	2.2	3.3	260.7
Economic Area 1(A)	---	123.7	61.6	61.2	41.2	---
Economic Area 2	---	8.4	146.0	55.9	3.2	---
Tennessee	44.6	84.3	52.5	11.1	16.8	427.5
Metropolitan Area	---	---	---	---	---	---
C(8a)	47.9	55.9	72.3	9.4	7.3	366.6
D(8a)	27.1	104.8	36.6	7.8	14.0	336.9
Economic Area 7	---	---	---	---	---	---
Economic Area 8a	---	---	---	---	---	---
(C, D)	81.2	49.1	33.9	22.6	26.1	459.4
Economic Area 8b	52.5	125.4	72.8	13.1	27.2	754.7
Virginia	52.9	47.3	40.4	10.6	31.6	360.6
Metropolitan Area	---	---	---	---	---	---
A(3)	55.5	49.2	34.4	1.1	30.4	311.0

TABLE XIII (continued)

PER CENT CHANGE IN URBAN POPULATION, BY DECADES 1900-
1950 SOUTHERN APPALACHIANS, BY STATES,
METROPOLITAN AND ECONOMIC AREAS

State and Area	1900- 1910	1910- 1920	1920- 1930	1930- 1940	1940- 1950	1900- 1950
Virginia (continued)						
Economic Area 1	---	---	26.8	23.5	18.8	---
Economic Area 2	58.6	28.5	59.8	15.8	43.6	441.9
Economic Area 3(A)	62.1	13.2	21.2	6.6	35.7	221.6
Economic Area 4	34.0	40.1	70.3	24.1	28.4	409.4
West Virginia	150.9	105.4	36.4	11.5	21.5	852.7
Metropolitan Area						
B(2a)	161.4	61.0	57.9	4.4	9.6	660.5
C(4)	107.2	100.4	66.4	24.7	31.8	1034.7
Economic Area 2b	19.6	351.4	35.6	-5.2	28.7	793.3
Economic Area 3	415.0	150.7	16.4	1.6	27.1	1841.8
Economic Area 4(C)	282.7	117.7	41.7	21.6	19.3	1612.8
Economic Area 5	16.9	165.4	3.6	12.6	16.0	320.0
Economic Area 6	76.6	12.6	-1.2	21.1	3.7	146.6

^aSource: James S. Brown, Basic Population Data for the Southern Appalachians (Social Research Service, University of Kentucky, August 1958).

state and in every area in the Region, with the exception of two economic areas which have no urban population, in every decade since 1900. The rate of urbanization by state since 1900 ranged from a low of 360.6 per cent in Virginia to a high of 852.7 per cent in West Virginia. Some of the economic areas reflected almost unbelievable rapidity in growth of urbanization between 1900 and 1950 with three of the areas having a rate of change exceeding 1000 per cent. From 1940 to 1950, urban population increased 23.2 per cent and the per cent of urban population in the total population moved from 23.4 per cent in 1940 to 26.8 per cent in 1950. Even during the period 1930-40, the decade of the depression, urbanization continued, although at a slower rate, despite the pressures to return to the farm.

Of particular importance in the urbanization of any region is the growth of its metropolitan areas. The metropolitan areas of the Southern Appalachians had a population increase of about 20 per cent during the decade of 1940-50 compared with an average increase for all metropolitan areas in the United States of 22 per cent. The metropolitan areas in eight of the thirteen economic regions of the Nation increased at a greater rate than did those in the Southern Appalachian Region and in five increased less.¹⁰ From these

¹⁰Brown, "Migration Within, To, and From the Southern Appalachians, 1935-55: Extent, Directions, and Social Effects," op. cit., p. 8.

comparisons, it can be seen that the movement of people from farms to towns and cities was not a movement peculiar to the Southern Appalachians but was characteristic of the Nation as a whole. This fact did not diminish in any way the importance of the movement in the Appalachian Region and the impact it was making on the way of life and the economy of the Region.

Another interesting comparison is that of the migration rate of the Southern Appalachian metropolitan areas and the rate for all the metropolitan areas in the United States as a whole. The net migration rate of the region's metropolitan areas for the decade of 1940-50 was 0.9 per cent whereas the rate for the total of metropolitan areas in the United States was 9.2 per cent. The migration rate for the metropolitan areas in the Southern Appalachians was lower than the rate for any of the Nation's thirteen economic regions except one, the Eastern Great Lakes and New England Upland.¹¹ However, as a compensation for the very low migration rate, the metropolitan areas in the Region had a rate of reproductive change between 1940 and 1950 of 17.0 per cent compared with 11.0 per cent for the Nation's metropolitan areas as a whole.¹² Only the metropolitan areas in one economic region, the Rocky Mountain and Intermountain Region, had a higher rate.

¹¹Loc. cit.

¹²Loc. cit.

Distribution of Population

Table XIV, pages 79-80, shows the percentage distribution of the population in the classifications of urban, rural, rural non-farm, and rural farm by states, metropolitan areas, and economic areas as of 1950. For the entire Region, the distribution was 26.8 per cent urban and 73.2 per cent rural; with the rural percentage divided as follows: 42.8 per cent rural non-farm and 30.4 per cent rural farm. The most urban state in the Region in 1950 was Tennessee, with a percentage of 34.3 of urban population, followed by Virginia and West Virginia with percentages of 30.2 and 28.7 of urban population, respectively. The state with the least urban population distribution in the Region was Kentucky with 15.8 per cent of its population being classified as urban. The metropolitan areas, in distribution of urban population, ranged from a high of 76.7 per cent in Metropolitan Area A(3) in Virginia to a low of 32.8 per cent in the Georgia Metropolitan Area A(1). The metropolitan areas had the highest percentage of urban population, the lowest percentage of rural population, and the lowest percentage of rural farm population. The economic areas, on the other hand, generally had a low percentage of urban and a high percentage of rural population. Economic Area 2 in Georgia with 100 per cent rural population was the most rural area in the Region. However, the area was closely followed by others with 90

TABLE XIV

PERCENTAGE DISTRIBUTION OF THE POPULATION OF THE SOUTHERN
 APPALACHIANS--URBAN, RURAL, RURAL NONFARM, RURAL FARM--
 BY STATES, METROPOLITAN AREAS AND ECONOMIC AREAS, 1950^a

State and Area	Urban	Rural	Rural Nonfarm	Rural Farm
Southern Appalachians	26.8	73.2	42.8	30.4
Alabama	16.9	83.1	20.0	63.1
Economic Area 2	16.9	83.1	20.0	63.1
Georgia	25.2	74.8	40.2	34.6
Metropolitan Area A(1)	32.8	67.2	42.0	25.2
Economic Area 1(A)	33.4	66.6	38.0	28.6
Economic Area 2	---	100.0	45.2	54.8
Kentucky	15.8	84.2	44.2	40.0
Metropolitan Area C(8)	71.8	28.2	19.8	8.4
Economic Area 8(C)	4.2	95.8	36.4	59.4
Economic Area 9	15.6	84.4	50.1	34.3
North Carolina	17.8	82.2	41.4	40.8
Metropolitan Area A(1)	42.6	57.4	41.5	15.9
Economic Area 1(A)	8.5	91.5	35.8	55.7
Economic Area 2	14.9	85.1	50.0	35.1
Tennessee	34.3	65.7	37.7	28.0
Metropolitan Area C(8a)	67.6	32.4	27.0	5.4
Metropolitan Area D(8a)	42.3	57.7	44.2	13.5
Economic Area 7	2.2	97.8	46.2	51.6
Economic Area 8a	23.2	76.8	38.0	38.8
Economic Area 8b	26.8	73.2	33.6	39.6
Virginia	30.2	69.8	41.1	28.7
Metropolitan Area A(3)	76.7	23.3	18.5	4.8
Economic Area 1	10.7	89.3	29.4	59.9
Economic Area 2	19.0	81.0	45.6	35.4
Economic Area 3(A)	27.1	72.9	27.7	45.2
Economic Area 4	33.6	66.4	40.0	26.4

TABLE XIV (continued)

PERCENTAGE DISTRIBUTION OF THE POPULATION OF THE SOUTHERN
 APPALACHIANS--URBAN, RURAL, RURAL NONFARM, RURAL FARM--
 BY STATES, METROPOLITAN AREAS AND ECONOMIC AREAS, 1950^a

State and Area	Urban	Rural	Rural Nonfarm	Rural Farm
West Virginia	28.7	71.3	51.0	20.3
Metropolitan Area B(2a)	61.8	38.2	20.7	17.5
Metropolitan Area C(4)	39.1	60.9	54.0	6.9
Economic Area 2b	12.4	87.6	37.7	49.9
Economic Area 3	38.2	61.8	42.7	19.1
Economic Area 4(C)	17.1	82.9	70.7	12.2
Economic Area 5	14.1	85.9	48.0	37.9
Economic Area 6	33.4	66.6	46.3	20.3

^aSource: James S. Brown, Basic Population Data for the Southern Appalachians (Social Research Service, University of Kentucky, August 1958).

per cent or more of their population classified as rural. Only six areas had 50 per cent or more of their population classified as rural farm. This was further evidence of the steady decline of the rural farm population.

Racial Composition of the Population

Unlike other areas of the South, the Southern Appalachian Region had a small incidence of non-whites in its population, 5.8 per cent in 1950 compared to about 24 per cent for the remainder of the South. Non-whites in this area were largely Negroes. The percentage of non-whites in the Region was less than the percentage for any of the states that geographically make up the Region. Table XV, pages 82-83, shows there were only 338,158 non-whites in the entire Region in 1950. West Virginia and Tennessee had the largest numbers of non-whites, 108,229 and 91,121, respectively; but measured in terms of per cent of total state populations Georgia was highest (7.8 per cent) and Tennessee was again second (6.9 per cent). As can be observed from Table XVI, pages 84-85, the non-white population of the Region was concentrated fairly heavily in the metropolitan areas. The highest percentage, 20.4, of non-white population in any area in the Region was in Metropolitan Area D(8a) in Tennessee. Kentucky had the lowest incidence of non-whites of any state in the Region with a percentage of only 1.9.

TABLE XV

TOTAL POPULATION BY COLOR, 1950, SOUTHERN APPALACHIANS, BY
STATES, ECONOMIC AREAS AND METROPOLITAN AREAS^a

State and Area	White	Nonwhite	Total
Southern Appalachians	5,495,105	338,158	5,833,263
Alabama	201,659	5,498	207,157
Economic Area 2	201,659	5,498	207,157
Georgia	326,103	27,422	353,525
Metropolitan Area A(1)	35,874	2,324	38,198
Economic Area 1	205,584	23,398	228,982
Economic Area 2	84,645	1,700	86,345
Kentucky	780,064	14,952	795,016
Metropolitan Area C(8)	49,025	924	49,949
Economic Area 8(C)	233,221	1,398	234,619
Economic Area 9	497,818	12,630	510,448
North Carolina	536,864	35,912	572,776
Metropolitan Area A(1)	109,126	15,277	124,403
Economic Area 1(A)	264,947	9,039	273,986
Economic Area 2	162,791	11,596	174,387
Tennessee	1,229,558	91,121	1,320,679
Metropolitan Area C(8a)	165,699	42,556	208,255
Metropolitan Area D(8a)	310,926	26,179	337,105
Economic Area 7	115,917	2,275	118,192
Economic Area 8(8a and 8b, total)	637,016	20,111	657,127
Virginia	879,912	54,424	934,336
Metropolitan Area A(3)	115,299	18,108	133,407
Economic Area 1	193,117	5,978	199,095
Economic Area 2	209,637	6,335	215,972
Economic Area 3(A)	171,117	12,844	183,961
Economic Area 4	190,742	11,159	201,901

TABLE XV (continued)

TOTAL POPULATION BY COLOR, 1950, SOUTHERN APPALACHIANS, BY
STATES, ECONOMIC AREAS AND METROPOLITAN AREAS

State and Area	White	Nonwhite	Total
West Virginia	1,540,945	108,829	1,649,774
Metropolitan Area B(2a)	142,118	4,613	146,731
Metropolitan Area C(4)	294,944	27,128	322,072
Economic Area 2b	183,563	473	184,036
Economic Area 3	278,707	8,473	287,180
Economic Area 4(C)	407,695	57,991	465,686
Economic Area 5	182,159	6,091	188,250
Economic Area 6	51,759	4,060	55,819

^aSource: James S. Brown, Basic Population Data for the Southern Appalachians (Social Research Service, University of Kentucky, August 1958).

TABLE XVI

PER CENT DISTRIBUTION OF THE POPULATION BY COLOR, SOUTHERN
APPALACHIANS BY METROPOLITAN AREAS AND
STATE ECONOMIC AREAS, 1950a

State and Area	White	Nonwhite
Southern Appalachians	94.2	5.8
Alabama	97.3	2.7
Economic Area 2	97.3	2.7
Georgia	92.2	7.8
Metropolitan Area A(1)	93.9	6.1
Economic Area 1(A)	89.8	10.2
Economic Area 2	98.0	2.0
Kentucky	98.1	1.9
Metropolitan Area C(8)	98.2	1.8
Economic Area 8(C)	99.4	.6
Economic Area 9	97.5	2.5
North Carolina	93.7	6.3
Metropolitan Area A(1)	87.7	12.3
Economic Area 1(A)	96.7	3.3
Economic Area 2	93.4	6.6
Tennessee	93.1	6.9
Metropolitan Area C(8a)	79.6	20.4
Metropolitan Area D(8a)	92.2	7.8
Economic Area 7	98.1	1.9
Economic Area (8a and 8b total)	96.9	3.1
Virginia	94.2	5.8
Metropolitan Area A(3)	86.4	13.6
Economic Area 1	97.0	3.0
Economic Area 2	97.1	2.9
Economic Area 3(A)	93.0	7.0
Economic Area 4	94.5	5.5

TABLE XVI (continued)

PER CENT DISTRIBUTION OF THE POPULATION BY COLOR, SOUTHERN
 APPALACHIANS BY METROPOLITAN AREAS AND
 STATE ECONOMIC AREAS, 1950

State and Area	White	Nonwhite
West Virginia	93.4	6.6
Metropolitan Area B(2a)	96.9	3.1
Metropolitan Area C(4)	91.6	8.4
Economic Area 2b	99.7	.3
Economic Area 3	97.0	3.0
Economic Area 4(C)	87.5	12.5
Economic Area 5	96.8	3.2
Economic Area 6	92.7	7.3

^aSource: James S. Brown, Basic Population Data for the Southern Appalachians (Social Research Service, University of Kentucky, August 1958).

Because of the small proportion of non-whites in the Region and in view of the fact that the economic and cultural setting of the Region was not conducive to in-migration, it seemed probable that the proportion of non-whites in the population of the region would become even smaller. The rate of increase of non-whites in the region was lower than that of whites and without some migration from without the existing ratio was not likely to be maintained. As a result of the very small number of non-whites in the region, the economic and social problems of a mixed population had not been so great in the Southern Appalachians.

Fertility Ratios

As has been pointed out previously, the Southern Appalachian Region from 1940 to 1950 had the highest rate of reproductive change of any economic region in the United States. This high rate of natural increase, measured by the number of births minus the number of deaths, was attributable to the extremely high birth rate in the region. Further reflection of the high birth rate is given in Table XVII, pages 87-88, which shows fertility ratios, the number of children under five years of age per 1,000 women fifteen to forty-four years old. The fertility ratio in 1950 for the Southern Appalachians as a whole was 546, one of the highest in the Nation. This figure was a sharp increase over the 1940 figure

TABLE XVII

FERTILITY RATIOS^a, SOUTHERN APPALACHIANS BY STATES, ECONOMIC
AREAS AND METROPOLITAN AREAS, 1930-1950^b

State and Area	1930	1940	1950
Southern Appalachians	563	456	546
Alabama	622	495	555
Economic Area 2	622	495	555
Kentucky	715	605	680
Metropolitan Area C(8)	509	401	496
Economic Area 8(c)	711	622	672
Economic Area 9	741	617	703
Georgia	554	452	528
Metropolitan Area A(1)	531	433	531
Economic Area 1	526	423	504
Economic Area 2	636	527	600
North Carolina	565	469	534
Metropolitan Area A(1)	393	328	445
Economic Area 1(A)	630	526	571
Economic Area 2	612	485	547
Tennessee	487	423	509
Metropolitan Area C(8a)	352	300	443
Metropolitan Area D(8a)	424	366	467
Economic Area 7	658	570	685
Economic Area 8a (C, D)	578	496	561
Economic Area 8b	512	451	509
Virginia	540	346	518
Metropolitan Area A(3)	382	262	411
Economic Area 1	694	596	653
Economic Area 2	599	490	535
Economic Area 3 (A)	535	419	497
Economic Area 4	470	396	467

TABLE XVII (continued)

FERTILITY RATIOS, SOUTHERN APPALACHIANS BY STATES, ECONOMIC
AREAS AND METROPOLITAN AREAS, 1930-1950

State and Area	1930	1940	1950
West Virginia	521	449	542
Metropolitan Area B (2a)	460	371	452
Metropolitan Area C (4)	524	419	514
Economic Area 2b	593	505	591
Economic Area 3	488	384	480
Economic Area 4 (C)	642	510	617
Economic Area 5	568	476	545
Economic Area 6	455	391	494

^aThe number of children under five years of age per
1,000 women fifteen to forty-four years old.

^bSource: James S. Brown: Basic Population Data for
the Southern Appalachians (Social Research Service, University
of Kentucky, August 1958).

but was not as high as the ratio in 1930. Without exception, the economic and metropolitan areas show an increase in the fertility ratio from 1940 to 1950 and a decrease from 1930 to 1940. The thirties cannot be considered a normal period and the decrease in the fertility ratio for this period must be viewed with that fact in mind.

Generally speaking, the metropolitan areas of the Region had a smaller fertility ratio than the economic areas. This characteristic was not peculiar to the Southern Appalachians but was general to the Nation as a whole. Urban areas almost invariably have a smaller fertility ratio than do rural areas. The growing urbanization of the Region may have an important and negative effect on the fertility ratio of the Region in the future.

Nativity of the Population

The population of the Southern Appalachian Region was predominantly native-born. While nativity of population was a characteristic of the South as a whole, it was even more characteristic of the Appalachian Region partly because of the lag in economic development, a prime factor in attracting immigrants. The influx of foreign-born people had been almost completely nil and the immigration of people from other areas of the country had been little larger. Nativity of population had been a characteristic of the Southern

Appalachians since the Region was settled and there was no indication that there may be a change in this over-all characteristic in the near future despite changes in specific localities such as Oak Ridge.

Age Composition of the Population

The importance of the age composition of the population becomes rather obvious when considered from the standpoint of productivity and reproduction. Certain age groups, the very young and the very old, are regarded as society's natural dependents. However, the degree to which persons in these age groups are dependent varies with the economic and cultural complexity of the society. In this country, it is generally accepted that those persons below ages fifteen and those above age sixty-five are, for the most part, dependent upon someone else or upon society for their support. In our society these groups are supported mainly by those members of the family who are of productive age or by the state through various procedures designed to care for dependents. Whichever happens to be the case, the existence of a dependent age group tends to be a depressive force in the economy. When the number of persons in the dependent group becomes sufficiently large, certain ill effects result.

Tables XVIII and XIX, pages 91-92 and 93-94, relate to the age composition of the Southern Appalachian people

TABLE XVIII

PER CENT DISTRIBUTION OF THE POPULATION BY AGE, SOUTHERN
APPALACHIANS, BY STATE AND METROPOLITAN AND
ECONOMIC AREAS, 1950^a

State and Area	13 and Under	14-24	25-34	35-64	65 and Over
Southern Appalachians	31.3	18.6	14.8	29.0	6.3
Alabama	32.1	19.1	13.8	28.7	6.3
Economic Area 2	32.1	19.1	13.8	28.7	6.3
Georgia	31.1	18.8	15.0	28.8	6.3
Metropolitan Area A(1)	30.6	17.8	15.7	29.8	6.1
Economic Area 1(A)	30.5	18.8	15.5	29.3	5.9
Economic Area 2	32.9	19.3	13.5	27.2	7.1
Kentucky	36.6	19.7	13.2	25.1	5.4
Metropolitan Area C(8)	28.3	17.6	15.7	31.7	6.7
Economic Area 8(C)	35.3	19.5	12.1	26.0	7.1
Economic Area 9	38.0	20.0	13.4	24.1	4.5
North Carolina	30.9	18.6	14.8	29.0	6.7
Metropolitan Area A(1)	26.4	16.7	16.3	33.5	7.1
Economic Area 1(A)	32.2	18.9	13.7	28.1	7.1
Economic Area 2	32.3	19.3	15.2	27.3	5.9
Tennessee	30.1	18.3	15.4	30.0	6.2
Metropolitan Area C(8a)	26.4	16.8	16.5	34.0	6.3
Metropolitan Area D(8a)	28.4	17.8	17.1	31.0	5.7
Economic Area 7	35.9	18.7	12.7	26.3	6.4
Economic Area 8	31.2	18.9	14.8	28.7	6.4
Virginia	29.8	18.9	14.9	29.6	6.8
Metropolitan Area A(3)	23.6	16.5	17.0	35.7	7.2
Economic Area 1	36.8	19.6	14.0	24.9	4.7
Economic Area 2	31.4	19.3	14.0	28.3	7.0
Economic Area 3(A)	28.5	20.3	15.0	29.3	6.8
Economic Area 4	27.0	17.7	15.2	31.7	8.4

TABLE XVIII (continued)

PER CENT DISTRIBUTION OF THE POPULATION BY AGE, SOUTHERN
APPALACHIANS, BY STATE AND METROPOLITAN AND
ECONOMIC AREAS, 1950

State and Area	13 and Under	14-24	25-34	35-64	65 and Over
West Virginia	30.5	18.4	15.1	29.5	6.5
Metropolitan Area B(2a)	27.0	17.9	15.6	32.1	7.4
Metropolitan Area C(4)	30.2	17.9	16.6	30.2	5.1
Economic Area 2b	30.9	18.2	12.6	29.2	9.1
Economic Area 3	27.3	18.1	15.3	30.8	8.5
Economic Area 4(C)	34.4	19.3	15.4	26.8	4.1
Economic Area 5	30.2	17.9	13.5	29.9	8.5
Economic Area 6	26.7	16.5	14.7	33.1	9.0

^aSource: James S. Brown, Basic Population Data for the Southern Appalachians (Social Research Service, University of Kentucky, August 1958), pp. 39-40.

TABLE XIX

PER CENT CHANGE IN POPULATION BY SPECIFIED AGE GROUPS,
SOUTHERN APPALACHIANS, BY STATE, METROPOLITAN
AND ECONOMIC AREAS, 1940-50 a

State and Area	13 and Under	14-24	25-34	35-64	65 and Over
Southern Appalachians	8.6	-18.8	4.0	36.8	39.0
Alabama	-1.1	-31.4	-7.6	36.6	49.1
Economic Area 2	-1.1	-31.4	-7.6	36.6	49.1
Georgia	11.5	-16.5	2.8	53.3	46.2
Metropolitan Area A(1)	26.3	5.2	12.9	74.9	57.6
Economic Area 1(A)	14.7	-16.3	3.0	62.1	54.1
Economic Area 2	---	-24.1	-2.2	22.7	28.1
Kentucky	-3.2	-33.7	-7.4	15.4	30.0
Metropolitan Area C(8)	8.9	-20.6	3.2	40.9	43.9
Economic Area 8(C)	-14.0	-49.4	-16.3	-2.9	19.1
Economic Area 9	1.5	-27.0	-4.3	22.9	37.2
North Carolina	6.3	-23.3	4.5	41.4	40.2
Metropolitan Area A(1)	19.2	-20.5	8.9	46.1	58.5
Economic Area 1(A)	-1.2	-30.6	-2.4	28.8	34.7
Economic Area 2	12.6	-13.3	12.3	60.5	37.1
Tennessee	19.7	-3.8	11.4	54.5	43.6
Metropolitan Area C(8a)	25.6	-14.4	2.5	49.1	54.6
Metropolitan Area D(8a)	44.3	33.8	34.9	87.5	54.9
Economic Area 7	13.0	-23.3	-3.3	41.2	37.6
Economic Area 8	10.9	-12.4	6.2	43.5	37.0
Virginia	9.5	-11.9	6.8	36.2	33.2
Metropolitan Area A(3)	25.1	-8.1	16.3	48.4	60.2
Economic Area 1	8.0	-19.6	3.0	40.0	42.3
Economic Area 2	1.6	-20.8	3.1	30.0	27.3
Economic Area 3(A)	9.4	5.0	8.3	37.7	29.4
Economic Area 4	14.3	11.5	6.2	31.6	24.9

TABLE XIX (continued)

PER CENT CHANGE IN POPULATION BY SPECIFIED AGE GROUPS,
SOUTHERN APPALACHIANS, BY STATE, METROPOLITAN
AND ECONOMIC AREAS, 1940-1950

State and Area	13 and Under	14-24	25-34	35-64	65 and Over
West Virginia	9.4	-22.7	3.9	29.1	40.2
Metropolitan Area B(2a)	11.8	14.5	8.0	33.1	47.1
Metropolitan Area C(4)	21.5	-13.2	12.0	56.8	54.5
Economic Area 2b	-7.2	-45.6	-13.2	-4.1	24.1
Economic Area 3	8.5	-23.6	7.5	18.0	34.7
Economic Area 4(C)	15.0	-11.1	8.5	41.4	65.4
Economic Area 5	-3.0	-41.0	-10.7	11.7	28.9
Economic Area 6	5.8	-33.3	-2.2	20.0	28.6

^aSource: James S. Brown, Basic Population Data for the Southern Appalachians (Social Research Service, University of Kentucky, August 1958), p. 41.

by state and economic and metropolitan areas. From Table XVIII it can be seen that a large proportion of the total population was in the dependent age group. Table XIX reveals that for the decade 1940-50 there was a significant increase in the dependent group, particularly the aged, and there was no evidence to indicate that this trend might slacken. As shown in Table XIX, the increase in the dependent age group was accompanied by decreases in the productive age group, resulting in a larger dependent age group and a proportionally smaller productive age group. The impact, in terms of economic potential and productivity, of a disproportionate incidence of the dependent on a region is tremendous. For the Southern Appalachians as a whole, 62.4 per cent of the total population was between the limits of thirteen and sixty-five years of age in 1950, limits which roughly correspond with the limits of the productive age groups. This means that 37.6 per cent of the population was in the dependent age group. Further, as revealed by Table XIX, it was obvious that the dependent group in the population was growing faster than the productive group. There was also a trend toward an increase in average and median ages of the population. However, this was a trend characteristic of the Nation as a whole and was not limited to the Southern Appalachian Region. In fact, the proportion of the population in the sixty-five

or over age group in 1950 was less than that for the Nation and slightly less than that for the South.¹³

In terms of economic and metropolitan areas in the Region, the changes in the age composition of the population had been relatively uneven. However, in the decade 1940-50, almost all areas in the Region reflected a large percentage increase in the age groups of thirty-five to sixty-four and sixty-five and over, not so large an increase in the thirteen and under age group, and a fairly large decrease in the fourteen to twenty-four age group. The twenty-five to thirty-four age group was fairly erratic with some areas showing increases, some decreases, and some remaining relatively stable, but over-all this group showed a 4.0 per cent increase over the ten year period.

The foregoing discussion has demonstrated that the proportion of the population in the youngest and oldest age groups was increasing. A continuation of this trend will mean that the productive age groups will continue to shrink in proportion to the young and the old. Such a possibility has a number of implications for the economic well-being of the Region. Not only will the problem of providing for the aged become more serious but the claims of youth on the

¹³U. S. Bureau of Census, Seventeenth Census of the United States (Washington: Government Printing Office, 1953).

social services will become more pressing. Foremost among these will be the demands for an education which must be supported by a smaller proportion of producers for a greater number of students. The presence of a large number of non-productive persons reduces the over-all per capita income. A region that has been a source of relatively cheap labor could become an area of labor shortage with all the ramifications which this would have on the economy. One of these could be that the problem of providing adequate funds for the increased school population would become extremely serious. As a result of both the increase in enrollment and a reduction in the proportion of productive workers in the population, it would appear that much greater effort will have to be made if the schools in the Region are to be maintained at their present level.

Considered with the foregoing, the problems created by the large out-migration from the region can be seen much more clearly, especially when it is realized that the age groups which suffer most from the out-migration are those which possess the greatest potential for contributions to the economy of the Region. This fact, in conjunction with the natural increase in the young and the aged, is one of the most serious problems facing the Southern Appalachians.

Educational Level of the Population

As the culture and economy of a society become more complex, the need for an increase in the formal training of the population becomes more acute. Generally, the transition from an agrarian type society to a more urban and more technical civilization not only makes the need for extensive formal schooling a necessity but also provides the means whereby this may become a reality.

Regional variations in educational attainments within the United States are great and the Southern Appalachian Region is one of the areas with a relatively low level of attainment. However, there was evidence of improvement in the educational level of the population and this may, in time, alleviate some of the problems of the Region. There was no evidence that the gap between the educational level of the people in the Southern Appalachians and the educational level of the populations of other areas was closing. In 1950, the median school years completed by persons twenty-five years of age and older was 9.3 years for the Nation and 7.2 years for the Southern Appalachians. The regional median of 7.2 years of schooling was less than the median for any state in the union and less than that for any other economic region in the Nation.¹⁴

¹⁴Brown, Basic Population Data for the Southern Appalachians, op. cit., p. 45.

From Table XX, pages 100-101, which shows the per cent distribution by years of school completed of persons twenty-five years of age and over, it can be seen that 19.1 per cent of the population twenty-five years of age and over in the Southern Appalachians had less than five years of schooling in 1950. This was considerably higher than the 11.0 per cent for the Nation as a whole and was exceeded by only seven states.¹⁵ In 1950, the percentage of the population twenty-five years old and older in the Southern Appalachian Region with at least four years of high school was 20.2 per cent for the Region compared to 33.3 per cent for the Nation, lower than that for any other economic area, and lower than that for any state in the union with the exception of South Carolina.¹⁶ For the United States, the percentage of the population twenty-five years old or older with four or more years of college was 6.0 per cent in 1950; by comparison, the Southern Appalachian Region had only 3.8 per cent, considerably less than the percentage for the Nation and less than other states with the exception of Alabama and Arkansas.¹⁷

The preceding discussion emphasizes the lag in educational achievement in the Southern Appalachians when compared

¹⁵National Education Association, Research Division, Rankings of the States (Washington: National Education Association, December, 1957), p. 3.

¹⁶Ibid., p. 4.

¹⁷Loc. cit.

TABLE XX

PER CENT DISTRIBUTION BY YEARS OF SCHOOL COMPLETED OF PERSONS TWENTY-FIVE YEARS AND OVER, SOUTHERN APPALACHIANS, BY METROPOLITAN AND ECONOMIC AREAS, 1950^a

State and Area	Elementary			High School		College		School Years Not Reported
	Under 5	5-7	8	1-3	4	1-3	4 or More	
Southern Appalachians	19.1	27.7	17.5	13.6	11.1	5.3	3.8	1.9
Alabama	20.4	36.2	12.9	16.4	7.5	2.8	1.7	2.1
Economic Area 2	20.4	36.2	12.9	16.4	7.5	2.8	1.7	2.1
Georgia	22.7	34.6	11.3	16.0	7.4	4.0	2.8	1.2
Metropolitan Area A(1)	20.9	32.8	13.1	15.2	9.5	4.4	2.5	1.6
Economic Area 1(A)	22.6	33.0	11.6	17.6	7.5	3.8	2.8	1.1
Economic Area 2	24.3	39.9	9.4	11.9	6.3	4.4	2.6	1.2
Kentucky	26.5	26.1	23.9	8.9	7.3	4.1	2.1	1.1
Metropolitan Area C(8)	11.7	17.6	24.6	15.2	17.5	7.3	4.0	2.1
Economic Area 8(C)	26.0	26.8	27.0	7.3	6.0	3.7	1.8	1.4
Economic Area 9	28.7	27.0	22.4	8.8	6.6	3.8	2.0	0.8
North Carolina	20.0	33.6	9.4	19.0	6.7	5.3	4.3	1.7
Metropolitan Area A(1)	12.3	23.8	10.0	24.9	10.5	8.6	6.8	3.1
Economic Area 1(A)	22.1	36.6	9.3	17.3	5.5	4.6	3.7	0.9
Economic Area 2	23.0	37.1	9.0	16.7	5.4	3.7	3.3	1.8
Tennessee	19.6	23.8	17.6	13.4	13.5	5.9	4.3	1.9
Metropolitan Area C(8a)	14.8	21.2	14.9	16.8	18.6	6.1	5.1	2.5
Metropolitan Area D(8a)	14.5	19.8	15.7	14.9	17.2	7.9	7.2	2.8
Economic Area 7	28.4	29.8	19.4	9.4	7.2	3.0	1.5	1.3
Economic Area 8	22.7	25.9	19.4	11.9	10.7	5.0	3.0	1.3

TABLE XX (continued)

PER CENT DISTRIBUTION BY YEARS OF SCHOOL COMPLETED OF PERSONS TWENTY-FIVE YEARS AND OVER, SOUTHERN APPALACHIANS, BY METROPOLITAN AND ECONOMIC AREAS, 1950

State and Area	Elementary			High School		College		School Years Not Reported
	Under 5	5-7	8	1-3	4	1-3	4 or More	
Virginia	19.4	34.8	8.6	13.6	10.4	5.9	4.0	3.3
Metropolitan Area A(3)	11.3	25.9	9.5	17.2	18.1	7.4	5.8	4.8
Economic Area 1	29.5	38.5	7.9	10.7	5.2	4.0	1.9	2.3
Economic Area 2	23.5	39.6	7.6	12.5	6.4	4.9	2.7	2.8
Economic Area 3(A)	17.7	35.6	8.4	13.4	10.1	6.9	4.8	3.1
Economic Area 4	15.0	33.2	9.7	14.4	12.8	6.5	4.9	3.5
West Virginia	14.4	22.9	24.3	12.9	13.8	5.7	4.3	1.7
Metropolitan Area B(2a)	10.9	19.5	21.3	15.7	17.4	7.3	6.0	1.9
Metropolitan Area C(4)	12.3	20.6	20.8	15.0	17.1	6.7	5.8	1.7
Economic Area 2b	14.6	24.3	34.1	8.3	9.7	4.2	2.9	1.9
Economic Area 3	11.5	19.8	25.9	12.8	16.5	6.5	5.5	1.5
Economic Area 4(C)	19.9	26.8	17.8	14.9	11.3	4.7	3.0	1.6
Economic Area 5	13.4	24.5	29.4	9.9	11.9	5.4	3.6	1.9
Economic Area 6	13.7	21.7	27.5	10.9	14.1	5.3	4.7	2.1

^aSource: U. S. Bureau of the Census, Population Mobility--States and State Economic Areas, Special Report P-E No. 4B (Washington: Government Printing Office, 1952).

with the Nation or even when compared with the immediately surrounding areas. While it was true that steady increases had been made in the educational level of the population, no improvement in the relative standing of the Region with reference to other economic regions or with the Nation as a whole seemed probable. The same factors that operated to create the original lag might operate to prevent the closing of the educational gap existing between the Region and other areas of the country. However, these factors would not prevent improvement from being made within the Region and there was no reason why the young people just assuming the duties of adulthood, through more and better education, should not be able to contribute more to the cultural and economic growth of the Region than did those who became adults in the 1930's and 40's.

Table XX, pages 100-101, shows variations in the educational level of the various states and areas within the Region. However, there is a degree of consistency in the variations in that the differences follow rather closely the urban to rural delineations. As might be expected, the metropolitan areas have the highest level of educational achievement and the rural areas have the lowest with various degrees of achievement in between which roughly correspond with the degree of urbanization of the area. However, almost all the areas and certainly the Region as a whole do not

occupy enviable positions in terms of the educational level of the population, and this fact highlights the great educational problem of the Region.

Natural Resources

Natural resources are those aspects of the physical environment which men use to satisfy individual and social needs. The basic resources of land, water, climate, and minerals are the foundations on which a people's economy is built. However, the existence of natural resources does not assure their use and development for the benefit of the populace. As Vance points out:

They may exist but they are not made available apart from the skills, the needs, and the demands of men organized for their utilization. Not simply the existence of minerals in the ground, but the degree of technology, the efficiency of economic organization, the availability of capital and the existing social demands determine the availability of natural resources for any particular area.¹⁸

The Southern Appalachian Region was rich in some natural resources and deficient in others. The Region was blessed with a heavy rainfall, great forests, an abundance of water power, coal, and a soil which, although possessing great variations in fertility, was by no means poor.

¹⁸Rupert B. Vance, All These People (Chapel Hill: The University of North Carolina Press, 1945), p. 8.

The soils in the Southern Appalachians had all developed under forest cover, and because of this were almost all deficient in humus in the natural state. Most of the soils required heavy fertilization to keep them productive and because of the steep topography of the region, they were particularly subject to erosion. However, the sharply sloping topography of almost all the Region plus the heavy rainfall provided one of the greatest resources of the Region--hydro-electric power and an abundance of water for use in manufacturing. The growth of the new synthetic, chemical, and paper industries in the Region was partly, at least, the result of these two factors.

Because of the topography and climatic conditions of the Region, the Southern Appalachians were generally favorable to timber growth, and the timber industry held great possibilities for the region. Originally, there was a heavy stand of timber, mostly hardwoods, but this stand had been somewhat depleted by clearing land for agriculture, by ill-advised lumbering methods, and by fire. However, there was evidence that the forests were being improved, and it is probable that the timber industry will continue as an important aspect of the economy of the Region. At the present time, the Southern Appalachian Region is the principal source

of hardwood timber in the United States.¹⁹

The value of all minerals mined in the Region in 1956, excepting coal, oil, and natural gas, was between 70 and 100 million dollars.²⁰ Of the three omissions from this figure, coal, oil, and natural gas, only coal was of any importance in the economy of the Region and it was of such importance as to receive separate treatment. Among the minerals of the Region, limestone, zinc, sandstone, mica, feldspar, manganese, and gypsum were all mined in sufficient quantity to be mentioned, and it was likely that their economic importance would be enhanced in the future as a result of the diminishing supply of high grade ore in other parts of the country and the accompanying need to tap the less pure veins of the Southern Appalachians. In this way some of the lower grade minerals of the Region may eventually be of considerable economic importance.

The major mineral in the Southern Appalachian Region and the basis for much of the Region's economy was coal. For this reason, and the further one that coal mining was more widely distributed throughout the Region than any other kind of mining activity, special attention is being concentrated

¹⁹Harold A. Gibbard, "Extractive Industries and Forestry" (A Progress Report, Southern Appalachian Studies, March 1959), p. 2.

²⁰Loc. cit.

on the coal industry. Coal production, as shown in Table XXI, page 107, fell from a peak in 1945 to a postwar low in 1955 and then fluctuated erratically to a postwar peak of 233,306,015 tons in 1956. In spite of the 1956 peak, the coal industry was an acutely depressed industry. Because of various technological improvements since World War II, coal employment, as shown in Tables XXII and XXIII, pages 108 and 109, was falling while production was increasing. In 1958, one large mine in the region produced an amount of coal slightly in excess of that produced in 1949 although 2100 men were employed in 1949 but only 749 in 1958.²¹ This mine had hired no new employees in ten years, except for a few young men to be trained as supervisors. Although all indications were that the production of coal would continue to increase, the number of persons working the mines was almost certain to continue to decrease. Table XXIII reveals the presence of an extremely strong trend in this direction.

There was some evidence to suggest that the general health conditions of the miners, their families, and other persons living in the coal mining areas had been improving since 1948.²² This was due, in part at least, to the interest exhibited by the United Mine Workers in this particular

²¹Ibid., p. 1.

²²Ibid., p. 2.

TABLE XXI

BITUMINOUS COAL PRODUCTION, THE UNITED STATES AND THE
SOUTHERN APPALACHIANS, SELECTED YEARS^a

Year	Bituminous Coal Production: Net Tons	
	United States	Southern Appalachians
1925	520,052,740	177,472,961
1930	467,526,299	172,045,192
1934	359,368,022	137,548,699
1940	453,245,000	217,238,028
1945	577,617,327	219,395,487
1950	516,311,053	215,582,217
1955	464,633,408	208,644,739
1956	500,874,077	233,306,015

^aSource: Various issues of Minerals Yearbook, Bureau of Mines, Department of the Interior.

TABLE XXII

AVERAGE TONS OF COAL MINED PER MAN-DAY, THE UNITED STATES
AND THE SOUTHERN APPALACHIANS, FOR SELECTED YEARS^a

Year	Tons per Man-Day	
	United States	Southern Appalachians
1934	4.40	3.53
1940	5.19	3.83
1945	5.78	4.30
1950	6.77	5.49
1951	7.04	5.64
1952	7.47	5.68
1953	8.17	6.56
1954	9.47	7.19
1955	9.84	7.09

^aSource: Various issues of Minerals Yearbook,
Bureau of Mines, Department of Interior.

TABLE XXIII

AVERAGE NUMBER OF MEN WORKING DAILY IN COAL MINING, THE UNITED STATES AND THE SOUTHERN APPALACHIANS, FOR SELECTED YEARS^a

Year	Average Number of Men Working Daily	
	United States	Southern Appalachians
1925	588,493	164,651
1930	493,202	158,958
1934	458,011	155,860
1940	439,075	170,358
1945	383,100	162,122
1946	396,434	169,308
1947	419,182	188,530
1948	441,631	177,375
1949	433,698	206,193
1950	415,582	201,737
1951	372,897	183,363
1952	335,217	168,846
1953	393,106	145,928
1954	227,397	108,902
1955	225,093	116,781

^aSource: Various issues of Minerals Yearbook, Bureau of Mines, Department of Interior.

aspect of the miners' welfare and to the construction of hospitals intended primarily for the use of coal miners and their families.

Occupational Status of the Population

The distribution of the population of the Southern Appalachians reflected the character of the Region's economy. Historically, the Region had been a land of agricultural supremacy resulting from the predominance of the cash crops of tobacco, corn, and various truck crops suited to the Region. In 1930, slightly more than one-third of the gainfully employed in the Region were engaged in agriculture, and agriculture was the main source of employment in approximately one-half of the counties.²³ There were, in 1930, great variations within the Region in the percentage of the population engaged in agricultural pursuits, and these variations became even greater. Nearly 20 per cent of those gainfully employed in agriculture in 1930 were unpaid family workers.²⁴

Manufacturing and mechanical industries were second only to agriculture in the number of persons employed in

²³United States Department of Agriculture, Economic and Social Problems and Conditions of the Southern Appalachians (Washington: U. S. Government Printing Office, 1935, Miscellaneous Publication No. 205), p. 86.

²⁴Loc. cit.

1930. Of this group the largest single segment was made up of workers in the textile and clothing industry, followed by the building industry, lumber and furniture industries, iron and steel industries, chemical and allied industries, and clay, glass, and stone industries. Extraction of minerals was the third largest source of employment in the Region in 1930 and about 85 per cent of the workers in this group were engaged in mining coal. Transportation, communication, trade, professional, domestic, and personal services occupied a relatively unimportant position in terms of number of people employed but, as a result of the increased industrialization in the Region, were increasing.²⁵

As can be seen from Table XXIV, pages 112-113, agriculture by 1950 no longer enjoyed a position of pre-eminence in the economy of the Region. Whereas more than one-third of the total gainfully employed in the Region was engaged in agriculture in 1930, only 22.3 per cent of the gainfully employed in 1950 was employed in agricultural pursuits. However, the Region still had a high percentage of its population engaged in agriculture when compared with the rest of the Nation, 22.3 per cent against 15.3 per cent. The Region was experiencing a decline in the number of persons engaged in agriculture but its relative position was not likely to

²⁵Loc. cit.

TABLE XXIV

PER CENT DISTRIBUTION OF EMPLOYED MALES BY MAJOR OCCUPATIONAL GROUPS, NATION AND SOUTHERN APPALACHIANS BY METROPOLITAN AND ECONOMIC AREAS, 1950^a

Area	Profes- sional	Farmers	Managers	Clerical, Kindred Workers	Sales Workers	Crafts- men, Foremen	Operators	Service Workers	Farm Laborers ^b	Farm Labor	Laborers	Occupation Not Reported
Nation	7.3	10.3	10.7	6.4	6.4	18.6	20.1	6.0	2.1	2.9	8.1	1.1
Southern Appalachians	4.7	15.2	7.3	3.9	4.5	15.6	28.9	3.7	3.2	3.9	7.7	1.4
Alabama	2.7	46.8	5.3	1.7	3.1	7.7	10.8	1.6	9.7	4.3	5.0	1.3
Economic Area 3	2.7	46.8	5.3	1.7	3.1	7.7	10.8	1.6	9.7	4.3	5.0	1.3
Georgia	3.6	19.8	7.1	3.1	4.5	14.5	27.0	4.0	3.5	3.2	8.4	1.3
Metropolitan Area A(1)	3.9	11.8	6.5	4.1	5.2	19.7	33.1	3.1	1.7	2.6	7.3	1.0
Economic Area 1(A)	3.5	16.9	7.5	3.3	5.1	14.9	28.8	4.8	2.6	3.2	8.0	1.4
Economic Area 2	3.5	31.3	6.2	2.1	2.7	11.0	19.5	2.1	6.6	3.7	10.0	1.3
Kentucky	3.0	18.0	5.9	2.9	3.0	11.8	36.4	1.9	6.5	2.9	6.5	1.2
Metropolitan Area C(8)	6.5	2.7	10.9	6.8	6.0	23.8	21.8	5.4	0.5	1.7	12.6	1.3
Economic Area 8(C)	2.5	35.6	4.7	2.1	2.2	9.8	15.8	1.2	11.5	5.2	7.8	1.6
Economic Area 9	2.9	10.4	5.9	2.9	3.0	11.5	48.9	1.8	4.6	1.9	5.2	1.0
North Carolina	4.1	21.0	6.8	3.1	4.5	14.1	23.6	4.3	4.3	4.6	8.4	1.2
Metropolitan Area A(1)	7.0	8.4	10.0	5.9	7.7	17.7	22.2	8.7	1.0	2.4	8.0	1.0
Economic Area 1(A)	3.6	31.0	5.6	2.1	3.2	11.5	16.7	2.7	6.9	6.5	8.9	1.3
Economic Area 2	2.9	14.2	6.4	2.7	4.2	15.4	35.5	3.6	2.7	3.3	7.9	1.2
Tennessee	6.2	15.4	8.1	4.6	5.5	17.1	22.1	4.8	2.6	3.7	8.4	1.5
Metropolitan Area C(8a)	7.5	2.3	11.5	7.0	7.5	20.7	24.7	7.2	0.3	0.8	9.1	1.4
Metropolitan Area D(8a)	9.8	5.3	9.6	6.3	7.2	21.3	21.8	6.8	0.6	1.8	8.1	1.4
Economic Area 7	3.4	22.8	6.1	2.1	2.5	10.3	27.0	2.1	3.6	5.4	13.2	1.5
Economic Area 8	4.4	23.6	6.4	3.3	4.5	14.8	20.6	3.5	4.3	5.3	7.6	1.7

TABLE XXIV (continued)

PER CENT DISTRIBUTION OF EMPLOYED MALES BY MAJOR OCCUPATIONAL GROUPS, NATION AND SOUTHERN APPALACHIANS BY METROPOLITAN AND ECONOMIC AREAS, 1950

Area	Profes- sional	Farmers	Managers	Clerical, Kindred Workers	Sales Workers	Crafts- men Foremen	Operators	Service Workers	Farm Laborers ^b	Farm Labor	Laborers	Occupation Not Reported
Virginia	4.4	13.9	7.5	4.2	4.8	16.4	26.6	4.4	2.1	6.2	8.1	1.4
Metropolitan Area A(3)	6.8	1.7	11.3	9.4	8.5	22.9	19.7	8.0	0.2	1.2	9.1	1.2
Economic Area 1	2.4	10.8	6.2	2.6	3.6	12.4	49.3	1.8	2.1	3.1	4.1	1.6
Economic Area 2	2.9	25.8	5.5	2.8	3.8	12.4	22.7	2.9	4.1	8.4	6.9	1.8
Economic Area 3 (A)	5.2	13.6	7.3	3.8	4.0	17.7	22.3	5.2	1.6	6.1	11.9	1.3
Economic Area 4	4.9	13.3	8.3	3.8	5.1	18.0	20.5	4.6	1.8	9.8	8.7	1.1
West Virginia	4.9	7.7	7.8	4.5	4.3	17.4	36.8	3.4	1.8	2.9	7.2	1.3
Metropolitan Area B(2a)	7.1	5.0	11.6	7.4	7.3	20.9	21.9	5.3	1.3	1.8	9.3	1.1
Metropolitan Area C(4)	7.2	1.2	9.0	6.1	5.8	20.2	37.4	4.1	0.2	0.6	7.1	1.2
Economic Area 2b	3.9	22.0	5.8	2.9	2.6	13.9	26.0	2.2	5.1	6.0	8.2	1.4
Economic Area 3	5.3	5.7	8.4	4.7	4.4	18.5	38.4	3.6	1.2	1.9	6.6	1.3
Economic Area 4(C)	3.4	1.9	6.6	3.7	3.5	17.2	54.3	2.4	0.6	0.6	4.5	1.3
Economic Area 5	4.2	17.7	7.0	3.0	3.2	13.5	22.9	3.4	4.4	8.0	10.8	1.9
Economic Area 6	5.1	10.1	7.8	4.9	4.1	17.2	21.0	6.1	0.6	11.4	10.2	1.5

^aSource: U. S. Bureau of the Census, Population Mobility--States and State Economic Areas, Special Report P-E No. 4B (Washington: Government Printing Office, 1952).

^bFarm Laborers, Unpaid Family Workers.

change in this respect because of the nation-wide decline.

While agriculture had declined steadily since 1930 in terms of number of persons employed, manufacturing had experienced a corresponding increase and by 1950 had supplanted agriculture as the single largest occupational group in the Region. Pre-eminent among the industries showing rapid growth had been the textile, chemical, and paper and pulp industries.

From Table XXIV, pages 112-113, it can be seen that employment distribution by occupation in the Southern Appalachians differed rather radically from that for the Nation as a whole. The occupational classification of professional, managers, clerical and kindred workers, sales workers, craftsmen and foremen, service workers, and laborers all had greater proportions of the gainfully employed for the Nation than for the Region. Moreover, the classifications of professional, managers, service workers, and craftsmen and foremen had a much larger proportion of the gainfully employed for the Nation than for the Southern Appalachians. This was indicative of the relative simplicity of the economy of the Region as compared to the remainder of the Nation. The greater proportion of the gainfully employed for the Nation as a whole than for the Region in the classification of laborers can be explained by the greater industrialization in the Nation. However, the relative importance of

agriculture in the Region can be seen by the greater proportion in the classifications farm laborers and unpaid family workers for the Region than for the Nation.

As might be expected, the classifications of professional, managers, clerical workers and kindred workers, sales workers, and craftsmen and foremen were heavily concentrated in the metropolitan areas within the Region. There were indications that these classifications were increasing proportionately in the Region which might result in greater diffusion of these classifications throughout the area. The growth of these occupational classifications was a reflection of the increasing sophistication and technical complexity of the economy of the Region. Along with the increasing urbanization, these trends were evidence of factors at work which were changing the entire economy of the Region.

The Character of Industry in the Region

The Manufacturers Record²⁶ listed 1,100 large manufacturing firms in the Southern Appalachian Region in 1958. While it could be misleading to speak of the typical "larger firm" for the Region, if one were to be suggested it would probably have these characteristics: (1) have between 100

²⁶Manufacturers Record (Baltimore: Manufacturers Record Publishing Company, Vol. 127, May 1958).

and 250 employees; (2) have located where it is since 1935; (3) be a branch plant; (4) be contemplating expansion in the next five years; (5) be oriented to local raw materials; and (6) have distant markets.²⁷ These characteristics were quite different from the characteristics of large firms for the Nation, and the term "larger firm" used in reference to the entire country would have considerably different connotations. However, these characteristics reflect the type of industry of the Southern Appalachians and the natural and agricultural resources of the Region.

During the period covered in the study manufacturing in the Region had moved forward steadily. Rapid improvement of transportation facilities, the growing urbanization of the Region, and the development of water power had all accompanied and contributed to the expansion. Industrial growth in the Region was continuing largely through the attempt of manufacturers to locate in strategic places in order to take advantage of low-cost materials and efficient labor, and, in some cases, to get established in a favorable location to deal with expanding markets.

While most of the twenty standard types of manufacture were represented in the Southern Appalachians, there

²⁷Lorin A. Thompson, "Industrial Growth in the Southern Appalachians" (Progress Report, Southern Appalachian Studies, October 1958), p. 2.

was some degree of concentration in textile, apparel, chemical, lumber, food, fabricated metals, petroleum, coal, and pulp and paper industries.²⁸ About one-fourth of the plants of all classifications had located in the Region since 1948 and slightly more than one-half had come to the Region since 1935. Almost a third of all firms in the Region were at one time located in states different from the present states of location, and approximately three-fourths of the plant establishments since 1935 had been branch plants.²⁹

One of the most significant factors in the growth of industry in the Region had been the availability and low cost of raw materials. While only about one-third of the markets of the firms in the Region were within 300 miles of the plant, raw materials were generally much closer and tended to offset the market distance factor. However, about 20 per cent of the raw materials used by industry in the Region come from a distance of over 500 miles.³⁰ Second only to availability and low cost of raw materials in favorable factors for industrial expansion was the availability and low cost of labor. Indeed, it would seem that the Region's greatest asset in industrial growth was its raw materials-labor attraction to outside plants. Other factors, such as site, tax structure,

²⁸Ibid.

²⁹Ibid., p. 3.

³⁰Ibid., p. 5.

community attitudes, and size of families, were of some importance in attracting industry.

The explanation for the paucity of large firms in the Region and a partial cause for the delay in industrial development was the lack of markets.³¹ The distance from primary markets and a lack of nearby markets had served to suppress industrial growth, especially of large manufacturing firms, and might be expected to continue to do so although better transportation facilities were alleviating the situation. Without the presence of large manufacturing firms, the Region could never become highly industrialized in the sense of some other economic regions. It could be surmised that the expansion of manufacturing in the Region would be developed farther through the growth of present plants and the introduction of new plants into the Region. Along with this growth and expansion would come, and there was already a trend in this direction, more complex industrial processes which would pay higher wages and add higher value by manufacture per worker than those traditional to the Region. If this trend continued, the Region would have a more balanced and diversified industrial base. The one industrial group in the Region which had made no substantial progress

³¹Ibid., p. 6.

was the heavy industry group, particularly steel and heavy machinery manufacturing.³²

The dollar value of all manufacturing within the Region totaled \$5,073,000,000 in 1954 and was the single greatest item in the business volume of the Region by a considerable margin. Tennessee led all states in manufacturing with a total of \$1,467,000,000, followed closely by Virginia with \$1,143,000,000. In all states except two, the dollar value of manufacturing composed a larger proportion of the total business volume than any other single aspect of the economy. As one would surmise, manufacturing in the Region was concentrated heavily in the metropolitan areas. However, the one area with the greatest dollar volume of manufacturing in 1954 was Economic Area 8 (A and B) in Tennessee with manufacturing in the amount of \$644,000,000.³³

By way of summary, manufacturing and industry had grown rapidly in the Region since 1920. The manufacturing firms had been characteristically small in the past and the added value per worker had been slight. While this was still true to a certain extent, the development of more complex industries, particularly the chemical industry and the diversification of types of industry were rapidly removing

³²Ibid., p. 7.

³³Blue Book of Southern Progress (Baltimore: Manufacturers Record Publishing Company, 1955), pp. 41-158.

these characteristics. Some of the newer types of industry had enabled the Region to improve its position relative to productivity per worker, and had removed the handicap of dependence on one or two major industries. The continued rapid growth of urban centers, the improvement of transportation, and the availability of relatively cheap labor practically assured the growth and diversification of industry in the future.

Volume of Business

As can be seen from Table XXV, pages 121-122, the volume of business, measured in dollars, in the Southern Appalachians for the year 1954 was \$16,812,000,000. Of this amount, the largest single sum was contributed by manufacturing, a dollar volume of \$5,073,000,000. Second in terms of amount, as might be expected, was retail trade with a dollar volume of \$4,413,000,000. Two other classifications, mining and oil and wholesale trade, passed the billion dollar mark with \$1,099,000,000 and \$2,757,000,000, respectively. As an indication of how the volume of business had grown, it was interesting to compare the dollar volume of retail trade: \$995,000,000 in 1929 and \$4,413,000,000 in 1954; and the dollar volume of wholesale trade: \$585,000,000 for 1929 and \$2,757,000,000 in 1954.

TABLE XXV

VOLUME OF BUSINESS, SOUTHERN APPALACHIANS BY STATE ECONOMIC AND METROPOLITAN AREAS, 1954^a

Area	Rural Farm	Mining and Oil	Construc- tion	Manu- facturing	Utilities	Finance	Whole- sale Trade	Retail Trade	Service Trade	Business Volume
Southern Appalachians	789	1,099	768	5,073	817	481	2,757	4,413	615	16,812
Alabama	71	2	1	225	23	18	99	214	23	676
Economic Area 2	71	2	1	225	23	18	99	214	23	676
Georgia	55	3	27	487	15	23	77	214	27	928
Economic Area 1	36	3	24	447	12	22	68	175	23	810
Economic Area 2	19	--	3	40	3	1	9	39	4	118
Kentucky	74	294	50	203	64	22	206	448	45	1,406
Metropolitan Area C (8)	2	3	23	129	20	6	34	53	8	278
Economic Area 8 (C)	42	13	6	29	9	3	40	91	6	239
Economic Area 9	30	278	21	45	35	13	132	304	31	889
North Carolina	99	12	37	575	39	33	173	375	52	1,395
Metropolitan Area A (1)	12	2	20	114	16	26	92	126	26	434
Economic Area 1 (A)	63	10	7	181	14	4	41	142	13	475
Economic Area 2	24	--	10	280	9	3	40	107	13	486
Tennessee	156	49	270	1,467	165	152	896	1,091	190	4,436
Metropolitan Area C (8a)	3	3	80	425	38	53	339	251	54	1,246
Metropolitan Area D (8a)	16	18	85	379	75	61	357	349	83	1,423
Economic Area 7	13	14	4	19	2	1	3	49	4	109
Economic Area 8 (a and b)	124	14	101	644	50	37	197	442	49	1,658

TABLE XXV (continued)

VOLUME OF BUSINESS, SOUTHERN APPALACHIANS BY STATE ECONOMIC AND METROPOLITAN AREAS, 1954

Area	Rural Farm	Mining and Oil	Construc- tion	Manu- facturing	Utilities	Finance	Whole- sale Trade	Retail Trade	Service Trade	Business Volume
Virginia	179	93	182	1,143	145	93	414	802	86	3,137
Metropolitan Area A (3)	5	2	51	330	58	42	160	184	28	860
Economic Area 1	20	79	16	18	12	5	55	127	11	343
Economic Area 2	52	8	32	189	18	9	71	140	13	532
Economic Area 3 (A)	26	3	36	321	17	9	18	143	12	585
Economic Area 4	76	1	47	285	40	28	110	208	22	817
West Virginia	155	646	201	973	366	140	892	1,269	192	4,834
Metropolitan Area B (2a)	6	3	31	134	37	24	205	128	25	593
Metropolitan Area C (4)	8	131	62	427	103	48	269	305	54	1,407
Economic Area 2b	39	26	14	95	15	5	26	108	10	338
Economic Area 3	22	102	35	183	138	25	136	234	35	910
Economic Area 4 (C)	14	349	40	38	56	28	199	350	53	1,127
Economic Area 5	48	27	13	49	8	5	41	104	11	306
Economic Area 6	18	8	6	47	9	5	16	40	4	153

^aSource: Blue Book of Southern Progress (Baltimore: Manufacturers Record Publishing Company, 1955).

The classification with the least dollar volume in 1954 was finance, followed by service trade, construction, and the farm-rural classification. This would seem to indicate the relative unimportance of these categories in the economy of the Region. It seemed significant that the farm-rural and the finance classifications were not larger in terms of dollar volume. Historically, the Region had been very dependent on the farm-rural classification, and this category occupied a prominent place in the economy. In 1954, however, the dollar volume of manufacturing exceeded by approximately seven times the dollar volume of the farm-rural classification. The low dollar volume in the finance category reflected the practice of absentee financing and the lack of capital resources in the Region which together had resulted in much of the investment in industrial and business enterprises coming from outside the Region.

Most of the dollar volume in the classification mining and oil, which, as can be observed from Table XXV, was rather substantial came from the mining of bituminous coal in the Region. This item was heavily concentrated in the states of West Virginia and Kentucky with Virginia ranking a poor third. All of the states and all of the economic areas except one included this classification in their volume of business but its importance was small except for West Virginia and Kentucky, the two coal mining states.

The importance of manufacturing in the Region's economy and its contribution to the volume of business was very great. In every state except two, West Virginia and Kentucky, the dollar volume of manufacturing exceeded every other classification by a substantial margin. Tennessee, with a dollar volume of \$1,467,000,000 ranked first among the states but was followed rather closely by Virginia with a dollar volume of \$1,143,000,000. The over-all importance of manufacturing in the economy of the Region is emphasized by the fact that approximately one-third of the total business volume in the Region was directly attributable to manufacturing in 1954.

Transportation

Any consideration of transportation in the Southern Appalachians reveals one of the major reasons for the lag in the economic and social development of the Region. The topography of the Region had consistently presented numerous obstacles to the development of an adequate system of transportation. Unlike other regions of the country, the Southern Appalachians possessed no great rivers which might serve as a ready made transportation system. Even those streams that did traverse the Region had been of limited use in transportation because of the high incidence of rapids and shoals. Improvement of the rivers of a large portion of the Region as a

means of transportation resulted from the system of locks and dams established by the Tennessee Valley Authority. In addition to the paucity of water transportation in the Region, the mountainous terrain had made the growth of a system of highways and railroads slow and tedious. To be sure, the Region shared in the early development of railroads, but the terrain was an obstacle to rapid development. Intensive development of railroads within the Region occurred as a result of efforts to exploit the local natural resources of coal, iron, and lumber. However, because of the heavy concentration of these resources in certain areas within the Region, there was a corresponding concentration of this mode of transportation in specific areas while other areas were completely without rail service.

The construction of a network of all weather roads had been an occurrence of the period under study. At the beginning of the current century, the construction and maintenance of roads was primarily the responsibility of local governments. As a result, progress in road improvement was slow and isolation to varying degrees was a characteristic of the rural population in the more mountainous areas until relatively recent times. The various states, assisted by the federal government, had undertaken the development of a comprehensive system of highways, and the Region was intertwined with an excellent system of roads. Greater progress

in the building of roads had been made in some areas than in others. Generally speaking, the economically more able areas and those with more favorable physical conditions had made the most progress.

In summary, transportation was no longer the important factor it once was in the retardation of the economic development of the Region. The Region was not only interlaced with a fairly adequate system of highways and railroads, but the improvement of rivers, especially by the Tennessee Valley Authority, had resulted in an increase in river transportation. The increasing use of motor trucks as a major means of transportation had enabled some of the more remote sections, but not all, to be served with a cheap and adequate mode of transportation. Several airlines served the region, and airports capable of accommodating commercial planes were fairly numerous throughout the area.

Agricultural Trends

Changes taking place in agriculture in the Southern Appalachian Region revealed certain trends which were steadily changing the status of agriculture and contributing to the economic upheaval taking place.

As a result of unfavorable physical conditions and other factors in the Region, small-scale agriculture had been dominant from the time of the first white settlers. In most

instances the size of the economic endeavor had been so small that for many farm families only subsistence level of living had been provided. In 1930 almost one-half of the total number of farms in the Region were less than fifty acres in size, and one-fourth of these were under twenty acres. On the other hand, only one-tenth of the farms in the Region were over 175 acres in size during the same year. As a result, for the most part, of the rough terrain less than one-third of the land in farms was crop land. Corn, hay, tobacco, and wheat, whether measured by dollar value or number of farmers growing them, were the most important crops, but on most farms the yields of these crops were below the average for the Nation. On more than one-half of all the farms in the Region, the value of all farm products sold, traded, or used by the farmer's family was under \$600 per farm in 1929, and on about 30 per cent of the farms the value of the farm products was less than \$400. Forty per cent of the farms in the Region were classified by the census of 1930 as self-sufficing; that is, one on which the value of the products used directly by the farm family was equal to or greater than the value of all crops, livestock, livestock products, and forest products sold or traded.³⁴

³⁴United States Department of Agriculture, Economic and Social Problems and Conditions of the Southern Appalachians (Washington: Government Printing Office, 1935, Miscellaneous Publication No. 205), p. 41.

However, by 1930 large commercial farms had begun to make their appearance throughout the Region and it would be a distorted picture to characterize all the farms as small-sized, low-income, self-sufficing endeavors. Many farms were sufficiently large to permit the sale of a considerably greater value of farm products than was consumed by the family and were capable of providing the income necessary for a fairly high level of living. This type of farm was the exception rather than the rule.³⁵

Historically, much of the farming in the Southern Appalachian Region had been an exploitative and extractive type of agriculture. Very little consideration had been given conservation or improvement of the land until recent years, and the usual pattern had been to plow the same land and plant the same crop year after year. As a result, erosion, always a nemesis to this kind of farming, aided by the sloping topography, had taken a heavy toll. Great strides had been taken in combating this type of farming by 1950, but much still remained to be done before agriculture in the Region could be considered to be scientific. The Region's agriculture was one of great contrasts. Probably nowhere else in the Nation could farmers be found planting crops by the seasons of the moon while their neighbors used the newest techniques and concepts offered by county agricultural agents.

³⁵Loc. cit.

As shown in Table XXVI, pages 130-133, there were 296,408 farms in the Region in 1954. This was a drop from 338,851 in 1950 and 383,870 in 1930. While the decline in the number of farms in the Region was taking place at an increasingly rapid rate, this fact did not have the significance or convey the tempo of the agricultural changes in the Region as clearly as did the tremendous growth of commercial farms. Beginning from relative scarcity in 1930, these farms had increased until a large proportion of all farms in the Region were commercial farms in 1954. Simultaneous with the growth of commercial farming was a movement away from the row-crop, exploitative pattern of agriculture to soil improving crops, crop rotation, strip farming, and contour plowing, and from the one cash crop practice to diversified farming, including the raising of fruits and vegetables and the production of livestock and livestock products.

The average size of farms in the Region, as may be observed from Table XXVI, was 85.6 acres in 1954. This figure was an increase from the average of 80.2 acres in 1950 and reflected the tremendous growth in the size of farms which had taken place in the Region since the early thirties when almost one-half of the farms were under fifty acres in size and one-fourth of these were less than twenty acres. However, while the increase in farm size in the Region had been rapid, the average farm size for the Southern Appalachians did not approach the national average of 242.2 acres

TABLE XXVI

AGRICULTURAL DATA, SOUTHERN APPALACHIANS
BY STATE AND ECONOMIC AREAS

State and Area	Number of Farms		Average Size of Farms in Acres	
	1950	1954	1950	1954
Southern Appalachians	338,881	296,408	80.2	85.6
Alabama	30,551	25,019	61.4	71.3
Economic Area 2	30,551	25,019	61.4	71.3
Georgia	26,035	21,340	91.6	95.7
Economic Area 1(A)	15,624	12,704	99.1	104.4
Economic Area 2	10,411	8,636	84.1	87.1
Kentucky	57,040	50,208	69.9	71.0
Economic Area 8(C)	28,746	25,981	83.8	84.7
Economic Area 9	28,294	24,227	56.1	57.3
North Carolina	29,349	24,811	70.0	77.9
Economic Area 1(A)	6,380	5,400	68.4	78.2
Economic Area 2	22,969	19,411	71.6	77.6
Tennessee	77,637	69,437	69.2	76.5
Economic Area 7	10,368	8,136	79.1	96.7
Economic Area 8a	30,437	26,613	71.7	76.0
Economic Area 8b	36,832	34,688	56.9	56.9
Virginia	57,692	54,040	90.3	92.9
Economic Area 1	10,821	10,090	62.1	60.8
Economic Area 2	21,507	20,617	82.1	83.0
Economic Area 3(A)	12,857	11,424	119.1	125.7
Economic Area 4	12,507	11,909	108.1	107.9
West Virginia	60,577	51,553	109.3	113.7
Economic Area 2b	18,792	15,231	103.4	113.4
Economic Area 3	11,200	9,076	85.2	94.6
Economic Area 4(C)	13,749	11,810	53.9	55.8
Economic Area 5	14,572	13,233	160.2	164.1
Economic Area 6	2,264	2,203	143.8	140.6

TABLE XXVI (continued)

AGRICULTURAL DATA, SOUTHERN APPALACHIANS
BY STATE AND ECONOMIC AREAS

State and Area	Number of Farms by Type			Average Value Per Acre	
	Com- mercial	Part- time	Resi- dential	1950	1954
Southern Appalachians	114,838	52,918	119,542	\$72.29	\$83.58
Alabama	16,703	3,430	4,885	75.31	78.20
Economic Area 2	16,703	3,430	4,885	75.31	78.20
Georgia	9,158	2,677	9,489	48.74	66.95
Economic Area 1(A)	5,584	1,800	5,315	55.86	72.27
Economic Area 2	3,574	877	4,174	41.62	61.64
Kentucky	16,048	6,952	27,206	46.94	53.15
Economic Area 8(C)	13,665	4,613	7,703	44.87	53.51
Economic Area 9	2,383	2,339	19,503	49.02	52.80
North Carolina	9,868	5,331	9,599	84.40	95.66
Economic Area 1(A)	1,595	1,187	2,617	71.91	80.26
Economic Area 2	8,273	4,144	6,982	96.89	111.06
Tennessee	32,500	15,575	21,331	84.54	104.57
Economic Area 7	2,086	1,576	4,468	46.02	61.10
Economic Area 8a	10,185	6,089	10,326	88.61	108.47
Economic Area 8b	20,229	7,910	6,537	118.99	144.15
Virginia	14,759	10,367	19,885	93.43	106.95
Economic Area 1	2,576	1,305	6,209	92.02	96.22
Economic Area 2	1,018	4,610	5,985	92.91	105.40
Economic Area 3(A)	4,525	2,376	4,520	78.42	90.01
Economic Area 4	6,640	2,076	3,171	110.37	136.16
West Virginia	15,802	8,586	27,147	72.69	79.56
Economic Area 2b	4,441	3,002	7,783	44.33	49.11
Economic Area 3	2,569	1,876	4,630	69.51	68.11
Economic Area 4(C)	1,352	1,283	9,175	102.07	114.25
Economic Area 5	6,203	2,130	4,893	46.91	54.23
Economic Area 6	1,237	295	666	100.66	112.11

TABLE XXVI (continued)

AGRICULTURAL DATA, SOUTHERN APPALACHIANS
BY STATE AND ECONOMIC AREAS

State and Area	Farm Operators with Income Exceeding Value of Farm Products Sold		Number of Farmers Working Off Their Farms	
	1949	1954	1949	1954
Southern Appalachians	164,042	135,366	163,333	159,082
Alabama	8,330	6,550	8,975	10,393
Economic Area 2	8,330	6,550	8,975	10,393
Georgia	13,294	10,229	12,005	11,829
Economic Area 1(A)	7,622	6,254	6,925	7,278
Economic Area 2	5,672	3,975	5,080	4,551
Kentucky	31,254	23,943	28,011	25,018
Economic Area 8(C)	11,937	8,283	11,532	11,132
Economic Area 9	19,317	15,660	16,479	13,886
North Carolina	14,871	12,816	14,041	14,622
Economic Area 1(A)	3,652	3,306	3,016	3,301
Economic Area 2	11,219	9,510	11,025	11,321
Tennessee	35,299	30,700	36,275	37,154
Economic Area 7	6,685	4,459	5,945	4,999
Economic Area 8a	15,321	13,802	15,283	15,564
Economic Area 8b	13,293	12,439	15,047	16,591
Virginia	26,191	24,823	29,332	30,356
Economic Area 1	6,203	5,258	6,194	5,971
Economic Area 2	8,144	8,348	9,770	10,312
Economic Area 3(A)	6,467	5,948	6,876	6,876
Economic Area 4	5,377	5,269	7,197	7,197
West Virginia	34,803	26,305	34,694	29,710
Economic Area 2b	10,998	7,930	10,412	8,902
Economic Area 3	6,720	4,742	6,870	5,575
Economic Area 4(C)	9,829	6,893	8,808	6,996
Economic Area 5	6,409	5,803	7,595	7,016
Economic Area 6	847	937	1,009	1,221

TABLE XXVI (continued)

AGRICULTURAL DATA, SOUTHERN APPALACHIANS
BY STATE AND ECONOMIC AREAS

State and Area	Number of Tractors for Farm Use		Number of Farms with Electricity	
	1959	1954	1950	1954
Southern Appalachians	54,204	86,057	250,886	273,449
Alabama	6,756	10,144	25,516	24,217
Economic Area 2	6,756	10,144	25,516	24,217
Georgia	5,992	8,212	20,669	20,269
Economic Area 1(A)	4,888	6,356	12,643	12,156
Economic Area 2	1,104	1,856	8,026	8,111
Kentucky	2,168	4,891	33,961	43,255
Economic Area 8(C)	1,784	3,970	15,574	21,568
Economic Area 9	384	921	18,387	21,687
North Carolina	6,742	9,816	23,550	23,697
Economic Area 1(A)	829	1,640	4,756	5,172
Economic Area 2	5,913	8,176	18,794	18,525
Tennessee	14,328	23,194	55,593	63,289
Economic Area 7	1,293	2,192	5,166	6,764
Economic Area 8a	6,753	10,573	24,358	24,868
Economic Area 8b	6,282	10,429	26,069	31,657
Virginia	9,603	16,021	47,401	51,093
Economic Area 1	443	729	8,263	9,505
Economic Area 2	2,175	4,439	17,410	19,419
Economic Area 3(A)	2,556	4,224	10,869	10,855
Economic Area 4	4,429	6,629	10,859	11,314
West Virginia	8,615	13,779	44,196	47,631
Economic Area 2b	1,289	2,904	10,565	13,259
Economic Area 3	2,045	3,007	9,275	8,661
Economic Area 4(C)	593	784	11,565	11,311
Economic Area 5	3,302	5,147	11,007	12,267
Economic Area 6	1,386	1,937	1,784	2,133

^aSource: United States Bureau of the Census, United States Census of Agriculture, 1954 (Washington: Government Printing Office, 1956).

in 1954, and even if the present rate of increase should continue, the gap between the regional and national averages was unlikely to decrease because of the rapid increase in average farm size for the Nation as a whole.

The average value per acre of the farms in the Region also showed an increase. In 1954 the average value per acre of all farms in the Region, including land and buildings, was \$83.58, which compared favorably with the national average of \$84.25. In 1950 the value per acre was \$72.29. These figures, while affected by inflation, showed the changes taking place in the Region relative to the value of farm property. However, the steady increases in per acre value of farm property in the Southern Appalachians were not keeping pace with the national increase.

The practice in the Region of supplementing farm income with income from other employment showed evidence of slackening. Table XXVI, pages 130-133, shows figures for the years 1949 and 1954 for both farm operators with incomes exceeding the value of farm products sold and number of farm operators working off their farms. The figures reveal a decline in both categories. The explanation for this probably lies in the tendency for marginal farmers to give up farming entirely and seek employment in industry, and the tendency for those remaining on the farms to expand their operations

to the extent necessary for the farming enterprise to occupy their full attention.

The Region continued to suffer, but to a much less degree than formerly, from out-dated and unscientific agricultural practices. However, there had been a rapid increase in the use of fertilizers and other soil conservation and farm improvement practices which resulted in the general improvement of agriculture in the region. There was a movement toward mechanization and diversification of farming. The importance of horses and mules as sources of power on the farm was decreasing and the importance of tractors and other machines was increasing. Row-crop farming, while still widely practiced, was being deemphasized while dairying, poultry, vegetables, and legumes of all kinds were being given more attention. Although the farms were still small for good farming practices, the average acreage per farm was increasing. By all indications, the Region was moving slowly toward a more balanced agriculture which would not only improve and conserve the soil but would decrease the economic dependence on one crop and make possible a higher and more stable income for the farm family.

Notwithstanding the improvements that had been and were still being made, there were still many small, sub-marginal farms that could scarcely provide a bare living for the farmer and his family. Many of these farms were located

on land so steep and rough that hand cultivation was necessary. It was almost impossible to maintain a good standard of living from this type of agriculture without income from other sources. These farms and their inhabitants posed one of the Region's greatest agricultural problems.

Table XXVII, pages 137-138, which gives the farm-operator family level of living indexes, indicates that the standard of living for farm families in the Southern Appalachians was considerably lower than that for the Nation and lower than that for the surrounding areas. For the year 1954, the farm-operator family level of living index for the Southern Appalachians was 96 compared to 140 for the Nation and 104 for the surrounding areas. Although the standard of living, as measured by the farm-operator family level of living index, had risen steadily in the Region since 1940, the gap existing between the standard of living for farm families in the Region and the remainder of the Nation had remained fairly constant. The farm-operator family level of living index for each of the seven Appalachian Region states was higher in every instance, except one, than was the index for that portion of the state within the Southern Appalachian Region. The lone exception was Alabama which has only a very small portion of its total area in the Appalachian Region. This fact means that the areas of these states outside the Region had a considerably higher farm family level of living than did

TABLE XXVII

FARM-OPERATOR FAMILY LEVEL-OF-LIVING INDEXES, NATION AND
SOUTHERN APPALACHIANS, BY STATE ECONOMIC AREAS,
1940, 1945, 1950, 1954^a

State and Area	1940	1945	1950	1954
Nation	79	100	122	140
Southern Appalachians	39	51	75	96
Alabama (entire state)	25	38	64	87
Portion of state in region	28	41	68	89
Georgia (entire state)	37	52	80	105
Metropolitan Area A(1)	56	67	83	102
Economic Area 1(A)	44	58	81	110
Economic Area 2	23	41	69	90
Portion of state in region	35	50	75	100
Kentucky (entire state)	49	61	86	105
Metropolitan Area C(8)	48	68	91	103
Economic Area 8(C)	16	23	48	72
Economic Area 9	15	22	47	67
Portion of state in region	17	24	49	71
North Carolina (entire state)	45	60	80	103
Metropolitan Area(1)	51	64	80	103
Economic Area 1(A)	25	34	59	81
Economic Area 2	41	53	74	99
Portion of state in region	30	40	64	86
Tennessee (entire state)	36	50	78	101
Metropolitan Area C(8a)	56	78	98	108
Metropolitan Area D(8a)	53	74	96	120
Economic Area 7	22	33	55	81
Economic Area 8a	34	48	79	106
Economic Area 8b	32	50	73	94
Portion of state in region	32	48	73	97

TABLE XXVII (continued)

FARM-OPERATOR FAMILY LEVEL-OF-LIVING INDEXES, NATION AND
SOUTHERN APPALACHIANS, BY STATE ECONOMIC AREAS,
1940, 1945, 1950, 1954

State and Area	1940	1945	1950	1954
Virginia (entire state)	58	73	99	119
Metropolitan Area A(3)	97	115	127	144
Economic Area 1	30	40	70	87
Economic Area 2	44	54	83	100
Economic Area 3(A)	72	83	107	121
Economic Area 4	91	109	126	147
Portion of state in region	63	75	100	117
West Virginia (entire state)	55	66	87	106
Metropolitan Area B(2a)	32	48	71	88
Metropolitan Area C(4)	52	70	89	98
Economic Area 2b	41	49	68	91
Economic Area 3	73	83	103	118
Economic Area 4(C)	35	44	65	78
Economic Area 5	55	66	91	108
Economic Area 6	81	104	125	154
Portion of state in region	51	62	82	102

^aSource: Margaret J. Hagood et al., Farm-Operator Family Level-of-Living Indexes for Counties of the U. S., 1945, 1950, and 1954, U. S. Department of Agriculture, Statistical Bulletin, No. 204, March 1957.

the areas of the same states within the Region.

In addition to the difference between the standard of living of farm families within the Region and those without, there were wide variations in farm-family living within the Region itself. The level of living was generally higher in the more fertile and less sloping areas than in the areas of less fertility and steeper topography. In the more fertile areas, prosperous communities had developed, with good roads, good schools, and good health services. In areas of less favorable geographic conditions where crops were difficult to grow and market, the capital goods needed for a satisfactory standard of living had not been accumulated and the level of living was low.

Differences in the knowledge of nutrition, sanitation, health, and child care were obstacles to the development of a desirable level of family living. Farm families in some sections of the Region were handicapped by the inadequacy of the education of the head of the household and homemaker, and by their inability to meet and solve their problems in a competent manner. There were indications that differences in education and relative isolation were among the major factors contributing to variations in the level of living of farm families within the Region. It is certain that the economic cannot be separated from the cultural factors conditioning the lives of farm families.

In summary, it was true that tremendous progress had been made in the improvement of agriculture and farm life in the Southern Appalachians. However, the Region's progress in this very important aspect of its economic life had barely kept pace with the Nation and its relative position had improved only slightly, if any, since the late thirties. The problems which faced the Region as a result of these conditions were as complex and demanding as at any time in its history.

Family Income

Income is always an important indicator of certain facets of the economic life of a region. Generally, income is treated from the standpoint of individual or per capita income. However, in view of the large families peculiar to the Southern Appalachians and the high proportion of the very young and the very old in the population, it was felt that a discussion of income in the Region from the standpoint of individual income would have a tendency toward distortion of the actual situation because of the high ratio of non-productive persons in the population. For this reason, income as used here will mean family income.

Income in the Southern Appalachians, from whatever standpoint it is discussed, has always been low in relation to other regions and the Nation as a whole. A number of

factors contributed to the relatively low income of the Region. One factor was the ruralness of the region and the preponderance of agricultural products, as contrasted to the paucity of processed goods, as sources of income. Agricultural products generally represent raw materials before processing and are therefore cheaper than processed goods; hence, the income received from agricultural products is considerably less than that received from manufactured or processed goods. In addition, the fact that goods produced and consumed at home were not included in computations of income placed the Region at a disadvantage in regional comparisons. A second factor contributing to the low income in the Region was the high birth rate and the resultant overpopulation which had a depressing affect on the wages paid. Other factors were the low educational level of the population, difficulty in cultivating the soil because of the topography, and exploitative and inefficient practices in the use of the Region's natural resources.

Table XXVIII, pages 142-143, shows the seriousness of the problem of low family income in the Region. The one income group with the largest percentage of families in 1949 was the group with incomes less than \$999. This fact becomes particularly significant when it is realized that almost one-fourth of all families in the Region were included in this group. The group with the next largest percentage of families

TABLE XXVIII

PER CENT DISTRIBUTION OF FAMILIES BY INCOME IN 1949, NATION AND SOUTHERN APPALACHIANS,
BY STATE AND METROPOLITAN AND ECONOMIC AREAS^a

State and Area	Per Cent of Families with Incomes of							
	Under \$999	\$1000 -1999	\$2000 -2999	\$3000 -3999	\$4000 -4999	\$5000 -5999	\$6000 -6999	\$7000 and over
Nation	7.9	15.3	16.6	17.6	14.4	9.6	8.6	10.0
Southern Appalachians	24.6	20.7	21.4	13.3	6.9	3.9	2.0	3.2
Alabama	45.0	26.3	12.7	6.6	2.7	1.2	0.6	1.4
Economic Area 2	45.0	26.3	12.7	6.6	2.7	1.2	0.6	1.4
Georgia	27.9	23.1	20.9	11.9	6.4	3.0	1.3	2.2
Metropolitan Area A(1)	18.4	19.9	25.5	14.9	7.8	4.3	2.0	3.6
Economic Area 1(A)	24.0	22.6	22.4	12.9	7.6	3.3	1.6	2.4
Economic Area 2	43.2	26.1	14.4	7.6	2.6	1.5	0.4	0.9
Kentucky	32.6	24.6	20.8	9.7	4.4	2.4	1.1	1.8
Metropolitan Area C(8)	14.8	11.7	22.0	22.1	11.1	6.2	3.0	4.4
Economic Area 8(C)	40.6	26.1	15.9	7.4	3.1	1.6	0.7	1.2
Economic Area 9	30.8	25.4	23.1	9.4	4.2	2.3	1.0	1.8
North Carolina	28.9	24.2	19.8	10.9	5.8	3.1	1.5	2.5
Metropolitan Area A(1)	16.2	18.5	24.3	14.6	9.5	5.5	2.8	4.6
Economic Area 1(A)	38.1	26.3	15.8	8.3	4.0	2.3	1.0	1.8
Economic Area 2	24.0	25.1	22.8	12.3	5.8	2.5	1.4	1.9
Tennessee	24.3	21.9	19.3	13.1	7.0	4.0	2.2	3.5
Metropolitan Area C(8a)	15.8	18.6	21.1	15.6	9.6	5.3	2.8	4.8
Metropolitan Area D(8a)	15.4	18.0	21.2	16.2	9.7	5.8	3.3	5.4
Economic Area 7	40.5	30.1	14.3	6.5	2.3	1.5	0.7	0.8
Economic Area 8	29.3	23.7	18.5	11.8	5.5	3.1	1.6	2.5

TABLE XXVIII (continued)

PER CENT DISTRIBUTION OF FAMILIES BY INCOME IN 1949, NATION AND SOUTHERN APPALACHIANS,
BY STATE AND METROPOLITAN AND ECONOMIC AREAS

State and Area	Per Cent of Families with Incomes of							
	Under \$999	\$1000 -1999	\$2000 -2999	\$3000 -3999	\$4000 -4999	\$5000 -5999	\$6000 -6999	\$7000 and over
Virginia	21.5	20.0	22.6	14.1	7.1	4.0	2.0	3.7
Metropolitan Area A(3)	9.8	11.1	21.4	20.0	12.3	7.9	4.0	7.6
Economic Area 1	24.0	22.4	28.8	10.4	4.4	2.4	1.2	2.0
Economic Area 2	31.8	24.7	18.5	10.2	4.3	2.6	1.0	2.1
Economic Area 3(A)	19.8	20.0	22.0	16.1	7.8	4.2	2.0	3.2
Economic Area 4	18.6	19.5	22.4	15.2	8.1	4.1	2.3	4.3
West Virginia	18.5	16.3	24.5	16.3	8.7	5.0	2.6	4.0
Metropolitan Area B(2a)	16.6	16.0	21.4	17.5	10.2	6.1	3.2	5.3
Metropolitan Area C(4)	12.0	11.1	22.6	19.7	12.7	7.0	3.9	6.3
Economic Area 2b	30.7	22.3	20.5	12.1	5.3	2.0	1.3	1.9
Economic Area 3	16.4	15.4	23.4	18.1	10.1	5.7	2.8	4.3
Economic Area 4(C)	15.0	14.1	31.4	16.4	7.6	4.7	2.8	3.9
Economic Area 5	27.2	23.0	21.8	11.8	5.0	3.0	1.3	2.2
Economic Area 6	17.1	21.0	24.6	15.8	8.7	4.4	1.4	3.1

^aSource: U. S. Bureau of the Census, Population Mobility--States and State Economic Areas, Special Report P-E No. 4B (Washington: Government Printing Office, 1952).

in 1949 was the \$2000 to \$2999 group with 21.4 per cent, followed closely by the \$1000 to \$1999 group which had 20.7 per cent. However, the impact of these figures becomes more clear when it is realized that in 1949, 66.7 per cent of all families in the Southern Appalachian Region had incomes of less than \$3000. During the same year, the percentage of families for the Nation as a whole with incomes under \$1999 was only 7.9 per cent; the \$1000 to \$1999 group contained 15.3 per cent of the families, and the \$2000 to \$2999 group had 16.6 per cent.³⁶ The three groups combined contained only 39.8 per cent of the families on a nation-wide basis compared to 66.7 per cent in the Southern Appalachians.

In each of the remaining groups, the percentage of families included was greater for the Nation than for the Region. The \$4000 to \$4999 group had twice as great a percentage for the Nation as for the Region and the \$5000 to \$5999 category was even greater, 9.6 per cent for the Nation and only 3.9 per cent for the Region. For the category of all incomes above \$6000, the percentage for the Nation was 18.6 per cent of all families but only 5.2 per cent for the Southern Appalachians. The differences in family income between the Region and the Nation may be dramatized even further by pointing out the difference in median family income,

³⁶U. S. Bureau of the Census, Seventeenth Census of the United States (Washington: Government Printing Office, 1953).

\$3,135 for the Nation and only \$2200 for the Region.³⁷

While low income had been and still was a tremendous handicap to the Southern Appalachian Region, there were indications that some of the obstacles to high income would become less important than they once were. With the population and shifts already discussed well under way, it would seem that continued improvement in income would be forthcoming. However, the effect of these changes on the gap between income in the Region and the rest of the Nation remains to be seen. With respect to the population and economic factors, the Region barely held its relative position in the Nation during the period from 1930 to 1957.

Summary of Demographic and Economic Changes

It would seem from the foregoing discussion that the major trends in the demographic and economic changes in the Southern Appalachian Region from 1930 to 1957 were:

Population

1. The total population of the Region, as a result of the highest birth rate in the Nation, increased steadily, but at a decreasing rate, in spite of heavy out-migration.
2. The proportion of the very young and the aged in

³⁷Loc. cit.

the population, mainly because of the high rate of out-migration of other age groups, grew progressively larger.

3. The population continued to shift from rural areas to urban areas.

4. The proportion of non-whites in the population, while extremely small, grew smaller.

Educational Level of the Population

1. The educational level of the population increased but still lagged behind the national average.

2. Great variations within the Region itself continued, mainly on the basis of rural-urban delineations.

Natural Resources

1. The use of natural resources moved from an extractive and exploitative kind of endeavor to one of conservation and efficiency.

2. The Region continued its heavy production of coal, hardwood timber, and water power.

Mining

1. Mining activities of all kinds became more mechanized and employment in the industry declined.

2. The relative importance of mining in the economy of the Region declined.

Occupational Status of the Population

1. Manufacturing supplanted agriculture as the Region's major occupational grouping.
2. The occupational classifications of professional and managerial reflected proportionate increases, but these groups still occupied a lower position in the Region in proportion to the total population than for the Nation.
3. Changes in the occupational status of the population moved from agricultural supremacy toward the occupational complexity of an industrial society.

Manufacturing

1. Manufacturing became the most important and fastest growing category of employment in the Region.
2. The growth of manufacturing was largely centered in the metropolitan areas.
3. Manufacturing became the one category of employment that offered the greatest opportunity for expansion in the Region.

Character of Industry

1. The large firms in the Region continued to be much smaller than for the Nation.
2. The non-durable industries continued to be the most numerous with respect to type.
3. The industry of the Region shifted toward more

complex and diversified industrial processes with resultant higher wages and higher value added by manufacture per worker.

4. Heavy industry continued to be almost entirely lacking in the Region.

Volume of Business

1. The volume of business moved from agricultural and retail trade supremacy to dependence on manufacturing.

2. The volume of business in the Region increased steadily but no faster than for the rest of the Nation.

3. The relative unimportance of finance in the volume of business continued as a result of the practice of absentee financing and the lack of capital resources in the Region.

Transportation

1. Transportation facilities in the Region improved steadily.

2. The importance of isolation as a contributing factor to economic retardation declined.

Agriculture

1. Agriculture in the Region became more scientific and more mechanized but much remained to be done in this respect.

2. The dependence on row-crop agriculture shifted toward dependence on diversified farming.

3. Farms increased in size but were still considerably

below the national average. Many subsistence farms still remained.

4. The rapid decline in farm employment continued.

5. The relative importance of agriculture in the economy of the Region declined substantially.

6. Farmers in the Region tended to increase their dependence on livestock as a means of improving and stabilizing the farming enterprise.

7. The use of fertilizer and other soil improvement practices increased.

Income

1. Income in the Region increased in amount but remained much lower than for the Nation.

2. The importance of certain barriers to improved income in the Region declined, but the Region's relative position did not improve.

The Relationship of Demographic and Economic Changes to Public School Finance

This chapter has been devoted to a review of general economic and demographic changes and trends in the Southern Appalachian Region. The purpose was to provide background information and data necessary for a clear understanding of the changes taking place in public school finance in the

Region. Schools do not operate in a vacuum, but in context with the social and economic environment of which they are a part. Public education is not static; it is constantly subject to pressures from the social order which exercise considerable control over the public schools and which modify, revise, and change the educational program.

A study of public education or of any of its facets must give consideration to economic and social phenomena which bear on the total educational program. Changes in characteristics of the population, for example, have a tremendous impact on public education and on public school finance. The fact that the very young and the aged make up an increasingly large proportion of the population is a fact which cannot be very well over-looked by school administrators in the Southern Appalachians. The disproportionate number of dependents in the population means that a decreasing number of productive persons must provide the wide range of social services demanded by an increasing number of non-productive individuals. This places a heavy strain on the tax dollar with the result that the schools must face stiffer competition to secure the needed funds from a decreasing source of income. On the other hand, a large proportion of productive wage earners means that the schools have an opportunity to secure needed revenues from an increasing source without rigorous competition for the tax dollar from a

large dependent group demanding a wide scope of services.

Changes in the occupational status of the population have certain implications for public school finance. The shift in the Southern Appalachians from agricultural and other low income producing occupations to more complex and more financially rewarding occupations will result in greater resources being available to provide various kinds of governmental services, including schools. In addition to this aspect of change in occupational status, there is the additional question of what kind of training needs to be provided for the youth of the region in view of the changes in occupational status. Does the shift from agricultural supremacy in employment to manufacturing mean that vocational training in trades should be given the same emphasis as training for agricultural pursuits? If so, how are the funds for such training to be provided and how is the need for the funds to be explained to the people? Certainly an understanding of the occupational shift would be a necessity for wise decisions relative to these problems.

Shifts in the population also have implications for school finance. The pressures of rapidly increasing and rapidly decreasing school populations, brought on for the most part by the rural-urban shift within the Region, have created serious problems for the public schools. The school population in many rural counties has decreased to the extent

that hardly enough students remain to carry on an adequate program while in some of the more urban counties the influx of students has been so great as to seriously tax the facilities in the systems. School buildings are standing empty or half-filled in some areas and jammed to capacity in others; classes are over-flowing in one place and extremely small elsewhere; instructional materials are most adequate in certain counties, while others do not have enough to go around. These problems, while perhaps not entirely caused by population shifts, certainly are aggravated by the rural-urban movement and must be considered in light of the shift.

It is a truism that education begets education. The more education a person has, generally speaking, the more he sees a need for additional training and the more eager he is to see that his children have adequate educational opportunities. The improvement in the educational level of the population in the Southern Appalachians can be expected to accelerate the demand for better and broader educational opportunities within the Region. As education comes to be looked upon as a desirable and necessary tool for success, greater emphasis will be placed on schools and the problem of securing adequate support may diminish.

It is obvious that some aspects of social and economic life have a more direct relationship to public school finance than do others. The wealth available to finance public

services of all kinds, the number and kinds of services demanded, and the proportion of governmental income available to the schools are all of primary importance. Naturally, the absence or presence of taxable wealth is directly connected with school finance and the school program will generally, but not always, reflect the degree to which wealth is available.

Changes in income are closely related to changes in economic ability and effort to support education. Low income generally means that an adequate educational program and governmental services in general can only be provided by considerable effort. On the other hand, high income means that relatively little effort is necessary to provide the needed program because of high economic ability. The factor of income, coupled with cultural attitudes, is basic to the whole problem of public school finance. Low income and unfavorable attitudes toward education almost invariably mean that only the barest of educational programs will be provided. High income and proper cultural attitudes generally result in a complete and well-rounded educational program, adequately financed and supported by the people.

Finally, the proportion of school age population in the total population and the per cent of the school age population actually in school are directly connected with school revenues and expenditures. The need for revenues and the expenditures necessary are dependent upon the enrollment

in the schools. However, the sources of revenues and the availability of funds for educational purposes depend, not on the school age population, but on the productive age group in the population. These two facts have basic implications for public school finance and must be given consideration in any investigation of the problem.

The foregoing discussion of the general demographic and economic trends in the Southern Appalachian Region and their relationship to public school finance in the Region completes the first step in achieving the objective of the study. A logical expectation from a period of social and economic change would be that public school finance has changed also. In subsequent pages, attention will therefore be directed to trends in revenues and expenditures for public schools in the Southern Appalachians.

CHAPTER III

TRENDS IN SCHOOL REVENUES AND EXPENDITURES IN THE SOUTHERN APPALACHIAN REGION

The purpose of this chapter is to show trends in the sources of school revenues and in expenditures for the budget items of instruction, current expense, and capital outlay for the period from 1939-40 through 1957-58. Analyses of revenue trends were made on the basis of the percentages of revenues derived from the various sources and the amount per pupil from each source. The expenditures for the three budget items were analyzed on the basis of expenditures per pupil in average daily attendance.

Changes in Local, State, and Federal Contributions to School Revenues

In 1939-40 the amount of public school revenues coming from local sources in the Southern Appalachians was only slightly less than that coming from state and federal sources combined. While contributions from local and state governments were about equal in amount, the federal contribution was so small as to represent only token participation in the financing of the public schools of the Region. By 1949-50 the amount of school revenues from local sources in the sample counties, twelve million dollars, was much greater than the

total school revenues for 1939-40. Money from state and federal sources for 1949-50 totaled seventeen million dollars in the sample counties. Approximately sixteen million dollars of this amount was from state sources and one million was from federal sources. By 1957-58, the amount from local sources in the sample counties had increased to more than twenty million dollars while the amount from federal and state sources had climbed to more than twenty-nine million dollars. On a percentage basis, revenues from local sources increased 226 per cent between the 1939-40 and the 1957-58 school years, while revenues from state sources increased 576 per cent and those from federal sources 3,418 per cent. Of the percentage increase in revenues from federal sources since 1939-40, 100 per cent of the increase occurred after 1950. The percentage increase in local sources was 69 per cent compared with 70 per cent from state sources between 1950 and 1958.¹

The tendency for a greater percentage of school revenues to come from sources other than local, as shown in Table XXIX, page 157, was reflected throughout the Southern Appalachians. For the regional sample as a whole, the percentage of school revenues coming from local sources decreased from 60.0 per cent in 1939-40 to 41.5 per cent in 1957-58. During the same period of time, the percentage of

¹Computed from Tables XLV, XLVI, and XLVII.

TABLE XXIX

PER CENT OF SCHOOL REVENUES OBTAINED FROM LOCAL, STATE,
AND FEDERAL SOURCES IN A DIRECTED SAMPLE OF COUNTIES
BY TYPE IN THE SOUTHERN APPALACHIANS, 1939-40,
1949-50, AND 1957-58^a

Source	School System Classification	Years		
		1939-40	1949-50	1957-58
Local	Decreasing	31.9	18.5	17.5
	Static	24.2	13.1	11.2
	Increasing	50.8	31.4	33.0
	Metropolitan	68.5	48.3	46.8
State	Decreasing	67.9	75.2	80.3
	Static	74.3	82.5	85.0
	Increasing	48.8	66.4	63.2
	Metropolitan	31.1	48.7	49.4
Federal	Decreasing	0.6	6.3	2.2
	Static	1.5	4.4	3.8
	Increasing	0.4	2.2	0.5
	Metropolitan	0.4	3.0	3.8

^aSource: Computed from Tables XLV, XLVI, AND XLVII.

revenues coming from state sources increased from 38.6 per cent to 54.7 per cent, and the percentage from federal sources increased from 0.5 per cent to 3.8.

While these figures represent a significant trend toward greater reliance on non-local revenues, the trend appears to have slowed down during the period from 1949-50 to 1957-58. The over-all percentage of revenues coming from local sources declined slightly during this eight year span, from 41.9 to 41.5 per cent. The rapid increase in the percentage of revenues coming from state sources was reversed and a very small decrease, from 54.8 per cent to 54.7, was reflected during this period for the regional sample. The gap created by a decline in the percentage of revenues coming from both state and local sources during the period from 1949-50 to 1957-58 was closed by an increase from 3.2 per cent to 3.8 per cent in the percentage of school revenues coming from federal sources. While a slight decline in the percentage of revenues coming from state sources took place, the trend toward dependence on non-local sources of revenue continued, but at a much slower rate, as a result of the increase in the percentage of revenues from federal sources.

As shown in Table XXIX, there was considerable variation among the school systems in the Region in the percentage of school revenues raised locally. However, in no case, either at the beginning of the period under study or at the

end, were school systems with decreasing school populations, systems with static school populations, or systems with increasing school populations raising as great a percentage of their revenues from local sources as were metropolitan school systems. In 1939-40, the school systems with static school populations raised slightly less than a fourth of their revenues from local sources while the metropolitan school systems raised more than two-thirds of their funds locally. The percentage difference in school revenues raised locally between the two classifications of school systems was 46.3 per cent. School systems with decreasing school populations and systems with increasing school populations raised, during the 1939-40 school year, 31.9 and 50.8 per cent respectively of their revenues from local sources. In 1957-58, school systems with static school populations raised slightly more than one-tenth of their own revenues, while metropolitan systems raised just under one-half of their revenues locally. The percentage difference between the two classifications declined from 46.3 per cent in 1939-40 to 35.6 in 1957-58. School systems with static school populations continued to raise less revenues locally with only 17.5 per cent of their revenues coming from local sources in 1957-58. School systems with increasing school populations raised 33.0 per cent of their revenues from local sources in 1957-58. This was a decrease from the percentage of funds secured locally in

1939-40 but a slight increase over the percentage of revenues coming from local sources in 1949-50, 31.4 per cent compared to 33.0 per cent.

The variations among school systems within the Region in the percentage of school revenues raised locally was due to several factors. Wealth, social attitudes, productivity of the population, value attached to education, foundation program formulas, and willingness to pay for an adequate educational program all had their effect. Certainly, a portion of the wide differences in the percentage of funds raised locally by metropolitan school systems and school systems with static and decreasing school populations was the result of a desire on the part of the metropolitan systems, plus the ability and willingness to do so, to exceed the minimum foundation program set by the state.

Since the classifications of school systems which raise only a small portion of their funds locally qualify for state aid because of their inability to provide the minimum program for local funds, other governmental units must raise a portion of their funds for them. Obviously, as the percentage of funds coming from non-local sources increases for a large number of school systems, the differences in percentage of revenues from local sources becomes less, so that if all funds came from sources other than local there would be no difference in the percentage of funds raised by the school

districts themselves.

In each of the classifications of school systems the picture on a regional basis shows about the same trend as does the sample total. Moreover, the percentage rate of decrease in school funds coming from local sources varied but little among the school system classifications. In each of the classifications there was a decrease in the per cent of school revenues raised locally from 1939-40 to 1957-58. Both at the beginning and end of the period, metropolitan school systems were raising a larger percentage of their funds from local sources than were any of the other school system classifications. School systems with increasing school populations were next to the metropolitan systems in percentage of funds raised locally, followed by systems with decreasing school populations and systems with static school populations in that order.

Accompanying the downward trend in the percentage of school revenues raised locally during the period under study was an upward trend in the percentage of funds coming from state and federal sources. In 1939-40, for the regional sample as a whole, 38.6 per cent of all school revenues came from state sources and only 0.5 per cent from federal sources. By 1957-58, the percentage of funds from state sources had increased to 54.7 per cent and the percentage from federal sources to 3.8 per cent. The percentage increase in revenues

from state sources was fairly evenly distributed among the school system classifications. However, the increase in the percentage of funds coming from federal sources was erratic. The metropolitan school systems and school systems with static school populations reflected the greatest percentage gain from 1939-40 to 1957-58, while school systems with decreasing school populations and systems with increasing school populations experienced a decline in the percentage of revenues coming from federal sources between 1949-50 and 1957-58.

Although the percentages in Table XXIX, page 157, indicate that the increase in the percentage of revenues coming from state sources varied but little for the four classifications of school systems, those school systems with decreasing school populations received a much higher amount per student in average daily attendance from the increase in revenues from state sources than did metropolitan systems. As shown in Table XXX, page 163, school systems with decreasing school populations received only \$36.67 per pupil in average daily attendance from state sources in 1939-40, but \$184.48 per pupil came to these school systems in 1957-58 from state sources. This was an increase of \$146.81 per student in revenues from state funds for the period of time under study. For the same period, revenues from state sources, on a per-pupil basis, increased from \$19.74 to \$115.61 in the

TABLE XXX

PER PUPIL REVENUES FROM LOCAL, STATE, AND FEDERAL
SOURCES IN A DIRECTED SAMPLE OF COUNTIES BY
TYPE IN THE SOUTHERN APPALACHIANS,
1939-40, 1949-50, AND 1957-58^a

Source	School System Classification	Years		
		1939-40	1949-50	1957-58
Local	Decreasing	\$ 18.84	\$ 30.50	\$ 40.29
	Static	10.17	15.01	19.03
	Increasing	22.60	39.56	74.89
	Metropolitan	43.56	77.76	109.41
State	Decreasing	\$ 37.67	\$123.97	\$184.48
	Static	31.21	94.76	154.18
	Increasing	21.75	83.57	143.44
	Metropolitan	19.74	78.42	115.61
Federal	Decreasing	\$.38	\$ 10.45	\$ 5.01
	Static	.60	5.02	6.88
	Increasing	.13	2.83	8.63
	Metropolitan	.26	4.86	8.96

^aSource: Computed from Tables XLV, XLVI, XLVII, and LV.

metropolitan systems, a per-pupil increase of \$95.87. Although this was a large increase, it was not nearly as large as the increase in the amount received per pupil from state sources in school systems with decreasing school populations. The per pupil increases in the amount of revenues from state sources in school systems with static and increasing school populations were \$122.97 and \$121.69, respectively, from 1939-40 to 1957-58.

In the amount of revenue received per pupil from federal sources for the eighteen year span studied, the metropolitan school systems had the largest increases, followed closely by school systems with increasing school populations. In 1939-40, the metropolitan systems received only \$0.26 per pupil in average daily attendance from federal sources but this had increased to \$8.96 in 1957-58, an increase of \$8.70. For the period under study, the increase in revenues from Federal sources amounted to \$8.50 in school systems with increasing school populations, \$6.28 in school systems with static school populations, and \$4.63 in school systems with decreasing school populations for each child in average daily attendance.

When federal and state funds going to local school districts were combined and reduced to a per pupil basis for comparison with local revenues, additional light is thrown on trends toward outside aid to school systems. For each

\$1.00 received by metropolitan school systems per pupil in average daily attendance in 1939-40 from state and federal sources, school systems with decreasing school populations received \$1.90, school systems with static school populations received \$1.56, and school systems with increasing school populations received \$1.09. By 1957-58, the ratio had decreased to the extent that for each \$1.00 received from non-local sources per pupil by metropolitan systems, \$1.52 was received by school systems with decreasing school populations, \$1.29 by school systems with static school populations, and \$1.22 by school systems with increasing school populations. The lone exception to the decrease in the difference between metropolitan school systems and those of other classifications in the amount of revenue received per pupil from non-local sources was in the case of systems with increasing school populations.

Viewed from the standpoint of revenues secured from local sources, the reverse of the above is seen. For every \$1.00 raised for each pupil in average daily attendance by systems with static school populations in 1939-40, \$4.28 was raised by metropolitan systems. This ratio had increased to \$5.75 by 1957-58. At the same time, the ratio between systems with decreasing school populations and metropolitan systems increased from \$1.00 for \$2.31 in 1939-40 to \$1.00 for \$2.72 in 1957-58, while the ratio between systems with

increasing school populations and metropolitan systems decreased during the same period from \$1.00 for \$1.93 to \$1.00 for \$1.46.

The advantage of school systems with decreasing, static, and increasing school populations over metropolitan systems in ratio of revenues per child in average daily attendance received from non-local sources diminished during the eighteen year span from 1939-40 to 1957-58. During the same period, the advantage metropolitan systems held over systems not metropolitan in the ratio of revenues from local sources per student in average daily attendance increased, with the exception of the ratio between metropolitan school systems and systems with increasing school populations which showed a decrease.

Changes in Expenditures for Budget Items of Instruction, Current Expense, and Capital Outlay

It was shown in the previous section that one of the marked changes in public school finance in the Southern Appalachians was the change in sources of public school revenues. The shift from dependence on local to non-local sources for school revenues during the period under study was clear-cut.

The purpose of this section was to show expenditure trends which have accompanied the changes in sources of revenues with particular attention to the budget items of

instruction, current expense, and capital outlay.

Expenditures for Instruction

The budget item of instruction, since it includes salaries paid teachers and expenditures for instructional materials, is perhaps the most closely related to the quality of instruction of any school budget item. For this reason and the additional one that a large proportion of total expenditures is for this item, expenditures for the budget item of instruction were analyzed first.

The average expenditure per pupil in average daily attendance for instruction in the sample counties during the period under study increased from \$37.95 to \$150.92, a percentage increase of 298 per cent. The dollar increase was \$112.97, of which \$52.17 came between 1939-40 and 1949-50 and \$60.80 between 1950-51 and 1957-58. This indicates an accelerating rate of increase and a greater average annual increase in the latter period.

While there were considerable dollar differences in 1939-40 among the four classifications of school systems used in the study in per pupil expenditures for instruction, these differences increased during the period. As shown in Table XXXI, page 168, the range in 1939-40 was from a high expenditure of \$47.13 per pupil in average daily attendance by metropolitan school systems to a low of \$30.38 per pupil in school systems with static school populations, a difference of \$16.75.

TABLE XXXI

PER PUPIL EXPENDITURES FOR INSTRUCTION IN THE PUBLIC SCHOOLS
OF A DIRECTED SAMPLE OF COUNTIES BY TYPE IN THE
SOUTHERN APPALACHIANS, 1939-40,
1949-50, AND 1957-58^a

School System Classification	Years		
	1939-40	1949-50	1957-58
Decreasing	\$ 43.71	\$ 97.43	\$158.19
Static	30.38	72.22	130.62
Increasing	30.58	79.22	150.53
Metropolitan	47.13	111.60	164.34

^aSource: Computed from Tables XLVIX and LV.

By 1957-58, the range was from a high of \$164.34 to a low of \$130.62, and the difference between the metropolitan school systems and school systems with static school populations had increased to \$33.72. Thus, the dollar difference between the school system classification with the lowest expenditure per pupil and the school system classification with the highest expenditure had more than doubled. For every \$1.00 spent per pupil in average daily attendance in 1939-40 by school systems with static school populations, metropolitan school systems spent \$1.55. By 1957-58, the metropolitan systems were spending \$1.26 for every \$1.00 spent by school systems with static school populations. The ratio between metropolitan systems and systems with increasing school populations in instructional expenditures per pupil was \$1.00 to \$1.09 in 1957-58. Between metropolitan systems and systems with decreasing school populations the ratio was \$1.00 to \$1.04 for the same year.

The school system classification with the greatest absolute or dollar increase from 1939-40 to 1957-58 was the classification of increasing school populations. The dollar increase in this classification was from \$30.58 in 1939-40 to \$150.53 in 1957-58, an increase of \$119.95. The classification with the smallest dollar increase was the static population classification which increased from a low in 1939-40 of \$30.38 to \$130.62 in the school year of 1957-58, an

increase of \$119.95. The classification with the smallest dollar increase was the static population classification which increased from a low in 1939-40 of \$30.38 to \$130.62 in 1957-58, a dollar increase of \$100.24. Metropolitan systems increased from a per pupil expenditure of \$47.13 for instruction at the beginning of the period to \$164.34 at the end, and school systems with decreasing school populations increased from \$43.71 to \$158.19.

Percentage wise, the school system classification with the greatest increase in expenditures for instruction per pupil in average daily attendance from 1939-40 to 1957-58 was the increasing school population classification with an increase of 392 per cent. School systems with static school populations increased 330 per cent, and those with decreasing school populations increased 262 per cent. The metropolitan systems, although showing the second greatest dollar increase, had the smallest percentage increase with 294 per cent.

In the eight year period between 1949-50 and 1957-58, the dollar increase in per pupil expenditures for instruction was greater than in the preceding ten year period in each of the four classifications of school systems, with the exception of the metropolitan classification. Between 1939-40 and 1949-50, school systems with decreasing school populations increased their expenditures for instruction in the amount of \$53.72, school systems with static school populations had a

per pupil expenditure increase of \$41.84, school systems with increasing school populations had an increase of \$48.64, and metropolitan systems had a dollar increase of \$64.47. From 1949-50 to 1957-58, the dollar increase for systems with decreasing school populations was \$60.76; for systems with static school populations, \$58.40; for systems with increasing school populations, \$71.31; and for metropolitan systems, \$52.74. The annual dollar increase was greater in every case in the 1949-50 to 1957-58 period than in the preceding ten-year period. In no case, however, did the percentage of increase in the 1949-50 to 1957-58 period exceed the percentage increase from 1939-40 to 1949-50.

In general, the trend for the eighteen-year period had been to increase per pupil expenditures for instruction quite rapidly. As can be seen from Table XXXI, over three times as much was being spent per pupil in average daily attendance in 1957-58 for instruction as in 1939-40 by all the classifications of school systems. In two classifications, school systems with static school populations and school systems with increasing school populations, the amount being spent per pupil for instruction in 1957-58 was four times as great as in 1939-40. The dollar differences which existed in 1939-40 among the classifications of school systems increased during the period but the percentage differences decreased. Expenditures increased more rapidly on a percentage basis in

school systems with increasing school populations than in any other classification, and slowest in metropolitan systems. However, per pupil expenditures for instruction were higher in metropolitan systems during the period covered than in any other classification of systems. School systems with static school populations reflected the lowest expenditures for instruction.

Trends in Expenditures for Current Expense

In view of the fact that expenditures for instructional purposes generally constitute from 70 to 80 per cent of current expense expenditures in the states making up the Southern Appalachian Region, it would be expected that expenditure trends in current expense would follow closely expenditure trends in instruction. This was found to be true.

The average expenditure per pupil in average daily attendance for current expense in the sample counties in the four classifications of school systems increased from \$48.99 in 1939-40 to \$203.12 in 1957-58, an absolute increase of \$154.13 and a percentage increase of 315 per cent. As was true in instructional expenditures, the annual rate of increase in dollars was greater between 1949-50 and 1957-58 than between 1939-40 and 1949-50.

In 1939-40, the range in the four classifications of school systems in the sample counties in expenditures per pupil in average daily attendance was from a low of \$39.07

in school systems with increasing school populations to a high of \$61.13 in metropolitan systems. This was a dollar difference of \$21.44. Expressed another way, this means that for every \$1.00 that was spent per child for current expense in systems with increasing school populations, \$1.54 was spent by metropolitan systems. School systems with decreasing school populations and school systems with static school populations spent \$56.08 and \$39.69, respectively, for current expense per child in average daily attendance in 1939-40.

By 1957-58, the range in the four classifications of school systems for current expense expenditures per pupil in average daily attendance had increased to \$224.42 for the high expenditure and \$172.73 for the low expenditure. This was an absolute difference of \$51.69, or more than double the dollar difference in 1939-40. Between the high and low expenditures by metropolitan systems and systems with static school populations, respectively, were systems with decreasing school populations and systems with increasing school populations with per pupil expenditures of \$210.42 and \$204.92 in that order.

From 1939-40 to 1957-58, the dollar increase in per pupil expenditures for current expense for each of the four classifications of school systems ranged from \$165.85 in school systems with increasing school populations to \$133.04

in school systems with static school populations. Metropolitan systems had a dollar increase of \$163.29 and systems with decreasing school populations increased by the amount of \$154.34. In terms of percentages, the increase in per pupil expenditures for current expense by metropolitan systems was 267 per cent, for school systems with decreasing school populations the increase was 275 per cent, for systems with static school populations the increase amounted to 335 per cent, and for systems with increasing school populations the percentage increase was 424 per cent. Both the greatest percentage increase for the period and the greatest dollar increase in expenditures for current expense were in those school systems with increasing school populations.

During the first ten years, 1939-40 to 1949-50, of the eighteen-year period under study, the dollar increase was smaller in two of the four classifications of school systems than in the last eight years of the period. These two classifications were those with static school populations and those with decreasing school populations. The remaining two classifications had greater dollar increases during the first ten years than in the last eight. All the classifications, except systems with decreasing school populations, had greater dollar increases per year in the last eight years than in the first ten. However, all classifications had greater percentage increases during the first ten years than

in the last eight. The annual dollar increase in per pupil expenditures for current expense during the period from 1949-50 to 1957-58 was \$8.37 in school systems with decreasing school populations, \$8.68 in systems with static school populations, \$9.98 in metropolitan systems, and \$10.28 in school systems with increasing school populations. From 1949-50 to 1957-58, school systems with decreasing school populations had a percentage increase in per pupil expenditures for current expense of 47 per cent, metropolitan systems had an increase of 55 per cent, school systems with static school populations had a per pupil increase of 67 per cent, and the percentage increase in school systems with increasing school populations was 73 per cent.

As can be seen from Table XXXII, page 176, the same differences and the same similarities, in general, that were found among the four classifications of school systems in expenditures for instruction were found also in expenditures for current expense. However, one significant difference was found. While the trend in per pupil expenditures for both instruction and current expense was one of rapid increase, more than four times as much was spent for current expense in 1957-58 as in 1939-40 compared to an increase of only three times as much for the same period in expenditures for instruction. This indicates that expenditures for the current expense items of general control, auxiliary services,

TABLE XXXII

PER PUPIL EXPENDITURES FOR CURRENT EXPENSE IN THE PUBLIC
SCHOOLS OF A DIRECTED SAMPLE OF COUNTIES BY TYPE
IN THE SOUTHERN APPALACHIANS, 1939-40,
1949-50, AND 1957-58^a

School System Classification	Years		
	1939-40	1949-50	1957-58
Decreasing	\$ 56.08	\$143.49	\$210.42
Static	39.69	103.25	172.73
Increasing	39.07	112.65	204.92
Metropolitan	61.13	144.61	224.42

^aSource: Computed from Tables L and LV.

operation and maintenance of plant, and fixed charges increased at a faster rate during the period under study than did expenditures for the current expense item of instruction. This also suggests that a larger portion of expenditures for current expense was going for items other than instruction at the end of the period than at the beginning.

Trends in Expenditures for Capital Outlay

Expenditures for capital outlay vary considerably from year to year. They are much more unstable expenditures than either instructional expenditures or expenditures for current expense. The reasons for this are readily apparent. Expenditures for capital outlay are for items of an expensive and permanent nature. Once expenditures are made there is no reason to make expenditures again for the same item for a number of years. Expenditures, when made, are large and for a local school system there are usually large fluctuations in this item from year to year. A school building once constructed does not have to be replaced for many years, but during construction the expenditures are great. Hence, the amount spent per pupil for capital outlay in any particular year loses some of its meaning.

The average per pupil expenditure for capital outlay in the sample counties of the four classifications of school systems was \$5.01 in 1939-40. By 1949-50, this figure had increased to \$15.32 but by 1957-58 had decreased to \$15.02.

The dollar or absolute increase between 1939-40 and 1949-50 was \$10.31. The dollar decrease between 1949-50 and 1957-58 was \$0.30. The absolute increase for the entire period was \$10.01.

As shown in Table XXXIII, page 179, the range in expenditures for capital outlay per pupil in average daily attendance in 1939-40 was from \$1.04 to \$11.00. As might be expected, the smaller figure was the per pupil expenditure for school systems with decreasing school populations and the larger figure was the expenditure by school systems with increasing school populations. School systems with static school populations expended \$2.61 per pupil and metropolitan systems spent \$5.04. The dollar difference between the smallest amount spent and the largest during 1939-40 was \$9.60. For every \$1.00 spent per pupil in 1939-40 on capital outlay by school systems with decreasing school populations, \$7.85 was spent by systems with increasing school populations.

In 1949-50, the smallest per pupil expenditure for capital outlay was again made by school systems with decreasing school populations and the largest expenditures were made, as in 1939-40, by systems with increasing school populations. This time, however, the low figure was \$5.84 and the high figure was \$30.07. The absolute difference between the two was \$24.23 in 1949-50, more than double the difference

TABLE XXXIII

PER PUPIL EXPENDITURES FOR CAPITAL OUTLAY IN THE PUBLIC
SCHOOLS OF A DIRECTED SAMPLE OF COUNTIES BY TYPE
IN THE SOUTHERN APPALACHIANS, 1939-40,
1949-50, AND 1957-58^a

School System Classification	Years		
	1939-40	1949-50	1957-58
Decreasing	\$ 1.40	\$ 5.84	\$ 6.57
Static	2.61	10.13	10.37
Increasing	11.00	30.07	14.18
Metropolitan	5.04	15.23	28.96

^aSource: Computed from Tables LI and LV.

in 1939-40. Metropolitan school systems and systems with static school populations had per pupil expenditures of \$15.23 and \$10.13, respectively, at the end of the first ten years. By 1957-58, school systems with decreasing school populations were still making the smallest per pupil expenditure for capital outlay, but metropolitan systems had replaced systems with increasing school populations as the top spenders for this purpose. The range was from a low of \$6.57 to a high of \$28.96, an absolute difference of \$22.39. This was a decrease from the dollar difference between the high and low figures in 1949-50, but was still more than double the 1939-40 difference. Per pupil expenditures by school systems with static school populations in 1957-58 were \$10.37, an increase from \$10.13, and expenditures by systems with increasing school populations were \$14.18 per pupil, a decrease from \$30.07 in 1949-50.

The percentage increase in average per pupil expenditure for capital outlay in the sample counties of the four classifications of school systems was 200 per cent between the beginning and the end of the period. The greatest percentage increase for the period under study in per pupil expenditures was an increase of 474 per cent by metropolitan systems. The smallest percentage increase was the increase of 29 per cent by school systems with increasing school populations. However, per pupil expenditures for previous

years should be kept in mind for a more realistic picture. School systems with decreasing school populations had a percentage increase of 369 per cent and systems with static school populations showed an increase of 297 per cent between 1939-40 and 1957-58.

The absolute differences in per pupil expenditures for capital outlay for the four classifications of school systems from 1939-40 to 1957-58 were: \$23.92 for metropolitan systems, \$7.76 for systems with static school populations, \$5.17 for systems with decreasing school populations, and \$3.18 for systems with increasing school populations. The last figure is unrealistic, however, because of the high per pupil expenditure at the beginning of the period and the very large expenditure in 1949-50 by school systems in this classification.

With the exception of metropolitan school systems, the greatest dollar increase in per pupil expenditures for capital outlay took place during the first ten years of the eighteen-year period. School systems with decreasing school populations had a dollar increase of \$4.44 in per pupil expenditures from 1939-40 to 1949-50, but only \$0.73 between 1949-50 and 1957-58. School systems with static school populations had a dollar increase of \$7.52 during the first period but only \$0.24 in the last, and school systems with increasing school populations had an absolute gain of \$19.07

in the first ten years but a decrease of \$15.89 in the last eight. Metropolitan systems increased \$10.19 during the first period and \$13.73 in the last. Except for the metropolitan systems, the dollar increase per year and the percentage increase was greater during the period from 1939-40 to 1949-50 than in the period from 1949-50 to 1957-58.

The trend in per pupil expenditures for capital outlay was one of extremely rapid increase during the first ten years of the period under study. However, except for metropolitan systems, the rate of increase slowed considerably between 1949-50 and 1957-58. Dollar differences in per pupil expenditures among the classifications of school systems, which were great in 1939-40, had doubled by 1957-58. Expenditures, as one might have expected, were erratic with one classification of school systems spending more than twice as much in 1949-50 as in 1957-58.

Summary

The period from 1939-40 to 1957-58, marked by rapid social and economic movements, was a time of change in public school finance in the Southern Appalachians. Public school revenues in the sample counties used in the study increased from \$10,399,861 in 1949-40 to \$29,064,496 in 1949-50 and to \$49,688,055 in 1957-58, an overall increase of

378 per cent.² While school revenues raised from all sources increased rapidly during the period, there was a significant decline in the percentage of public school revenues raised from local sources. This percentage decrease took place in spite of the fact that funds raised from local sources in 1957-58 were more than double all revenues in 1939-40.³ The rapid increase in the percentage of funds coming from state and federal sources slowed considerably during the last eight years of the period. However, for all the classifications of school systems, except those with increasing school populations, the trend continued to be significant. At no time during the eighteen-year period did school systems with decreasing, static, or increasing school populations raise as large a percentage of their revenues from local sources as did the metropolitan systems, and at no time during the period did metropolitan systems receive as large a proportion of their revenues from non-local sources as did the other three classifications of school systems.

Although the increase in the percentage of revenues coming from non-local sources varied but little for the four classifications of school systems, school systems with decreasing, static, and increasing school populations received

²From Table XLVIII.

³Ibid.

a greater increase in revenues from state and federal funds per child in average daily attendance than did metropolitan systems.

There were great variations among the classifications of school systems in the percentage of revenues raised locally by school districts at both the beginning and end of the period. However, the percentage difference in 1957-58 was not as great as in 1939-40, but the dollar difference was greater. Metropolitan systems and systems with increasing school populations raised slightly more than one-half of their school revenues from local sources in 1939-40 but by 1957-58 none of the classifications of school systems were raising half of their revenues from local sources.

While the period under study was a time of decreasing local support of schools and of increasing non-local support, it was also a time of increased expenditures in the public schools of the Region. The average per pupil expenditure in the four classifications of school systems for current expense and capital outlay, two budget items which account for more than 90 per cent of total school expenditures, had respective increases from \$48.99 and \$5.04 in 1939-40 to \$203.12 and \$28.96 in 1957-58. Expenditures for instruction, the major item in current expense, increased during the period from from \$37.95 to \$150.92 per pupil. Percentages of increase in expenditures per pupil were 298 per cent for instruction,

315 per cent for current expense, and 200 per cent for capital outlay. The average annual increase was greater for the two budget items of instruction and current expense during the last eight years of the period than in the first ten, indicating an acceleration of increase.⁴

Differences among the classifications of school systems in expenditures for the three budget items increased during the period. In 1939-40, there were differences between the highest and lowest per pupil expenditures for instruction of \$16.75, for current expense of \$21.44, and for capital outlay of \$9.60. By 1957-58, these differences had increased to \$33.72 for instruction, \$51.69 for current expense, and \$22.96 for capital outlay. While expenditures for the three budget items studied increased rapidly in all classifications of school systems during the period under study, the dollar differences among the classifications increased also.

⁴Computed from Tables XLVIX, L, LI, and LV.

CHAPTER IV

TRENDS IN ECONOMIC ABILITY AND EDUCATIONAL EFFORT

The purpose of this chapter was to show the changes in the economic ability of the Southern Appalachians and the application of that ability toward the support of public schools in the Region from 1939-40 to 1957-58. Economic ability was analyzed in terms of per capita income and income per child in average daily attendance. Educational effort was treated from the standpoint of the ratio of income devoted to school revenues per child in average daily attendance to per capita income.

The figures on income used in this chapter were taken from Sales Management¹ and are defined as "effective buying income." While Sales Management is widely used by public and private firms and by some state departments of education in measuring economic ability, the data therein are estimated and the income figures used in this chapter must be considered in the light of that limitation. Because of the variations in the purchasing power of the dollar from area to area within the Region and because of the difficulties involved in such a procedure, no effort has been made to compensate for the effects of inflation.

¹"Survey of Buying Power," Sales Management, 78:20, 1957.

Trends in Per Capita Income

As can be seen in Table LIV in the Appendix, effective buying income in the sample of counties used in the study increased from \$385,635,000 in 1940 to \$1,585,650,000 in 1958. When considered from the standpoint of the average per capita income for the four classifications of school systems, the increase was from \$251 in 1940 to \$1091 in 1958. Percentage wise, this was an increase of 335 per cent. For every \$1.00 of income per person in the sample counties in 1940, there was \$4.35 in 1958.

While the rate of increase in per capita income had been very rapid throughout the eighteen year period, the rate of increase was more rapid during the first ten years of the period than in the last eight. By 1950, the total effective buying income in the sample counties had increased to \$1,159,778,000. This was an absolute increase of \$874,143,000 over the 1940 figure, or a percentage increase of 227 per cent. This compares with an absolute increase of \$425,872,000 from 1950 to 1958 and a percentage increase of 37 per cent. In terms of average per capita income for the four classifications of school systems combined, the annual rate of per capita increase was \$48.00 during the first ten years and \$45.00 during the last eight.

The percentage increase in per capita income was very large in every county in the sample and in every school

system classification from 1940 to 1958. Generally speaking, the largest percentage increases occurred, however, in those counties with the lowest per capita incomes in 1940, so that counties with the lowest incomes at the beginning of the period had the largest percentage increase to 1958, and the counties with the highest per capita incomes in 1940 had the smallest percentage increase. The percentage difference between the counties with the highest and lowest per capita income was therefore reduced. However, the dollar or absolute difference increased between the beginning and end of the period. In 1940, the dollar difference between the highest and lowest counties in per capita income was \$511. By 1958, this difference had increased to \$969. In spite of the increase of dollar or absolute differences, the dollar difference expressed as a ratio declined. Kanawha County, West Virginia, the county with the highest per capita income in 1940, had \$10.83 per capita income for every \$1.00 of per capita income in the lowest county, Leslie County, Kentucky. In 1958, the same two counties were still the highest and lowest in per capita income, but for every \$1.00 in per capita income in Leslie County, Kanawha County had only \$2.58.

While the counties in the sample were moving closer together on a percentage and ratio basis and despite the fact that the highest and lowest counties in per capita income were the same at the beginning and end of the period, there

was relatively little change in the rankings of the counties. The four metropolitan counties, as might be expected, were the four highest counties throughout the period in per capita income, and the four lowest counties in 1940 were still the lowest in 1958. The greatest change in rank for any county in the sample was that for Gilmer County, West Virginia, which dropped from fifth in 1940 to ninth in 1958.

Per capita incomes for the four classifications of school systems for the years 1940, 1950, and 1958 are presented in Table XXXIV, page 190. As can be seen from the table, school systems with static school populations were the lowest of the four classifications in per capita income in 1940, and the same was true in 1950 and 1958. Just as the counties with lower per capita incomes increased faster than those with higher incomes, school systems with static school populations increased faster than either of the remaining classifications. In 1940, school systems with static school populations had a per capita income of \$130. By 1958, this figure had increased to \$922, an absolute increase of \$792 and a percentage increase of 609 per cent. For every \$1.00 in per capita income in school systems with static school populations in 1940, there was \$7.09 in 1958. Although school systems with static school populations were still considerably below the average of the four classifications, the rapid rate of increase resulted in a decrease in the ratio of

TABLE XXXIV

PER CAPITA EFFECTIVE BUYING INCOME IN A DIRECTED SAMPLE
OF COUNTIES BY TYPE IN THE SOUTHERN APPALACHIANS,
1940, 1950, AND 1958^a

School System Classification	1940	1950	1958
Decreasing	\$ 176	\$ 564	\$ 975
Static	130	422	922
Increasing	179	666	987
Metropolitan	519	1,270	1,480

^aSource: Computed from Table LIII.

per capita income for the average of the four classifications to school systems with static school populations from \$1.93 to \$1.00 in 1940 to \$1.18 for \$1.00 in 1958. However, the dollar difference between the average of the four classifications and school systems with static school populations had increased considerably in the same period. The increase in the dollar difference was from \$121 in 1940 to \$179 in 1958.

In comparing the lowest per capita income in the four classifications with the highest, school systems with static school populations and metropolitan school systems respectively, some significant observations can be made. In 1940, the dollar difference between the lowest and highest per capita income in the four classifications of school systems was \$389. By 1950, this difference had increased to \$848, but by 1958 had declined to \$558. From these figures, it is obvious that the gap in 1950 between metropolitan school systems and school systems with static school populations in per capita income was closed to a certain extent during the last eight years of the period.

While the dollar difference in the two classifications widened considerably between the beginning and end of the period, the ratio difference decreased. For every \$1.00 of per capita income in school systems with static school populations in 1940, there was \$3.99 in metropolitan systems. By 1958, this ratio had been reduced to \$1.60 for each \$1.00

in metropolitan systems. Thus, the difference in income-ability between metropolitan school systems and school systems with static school populations as measured by ratio of per capita income, although still considerably greater in metropolitan systems, had decreased during the eighteen year period. On the other hand, the dollar difference had increased from \$389 in 1940 to \$558 in 1958.

School systems with decreasing school populations ranked second among the four classifications of school systems in per cent of increase in per capita income during the period under study. Per capita income in school systems with decreasing school populations increased from \$176 in 1940 to \$975 in 1958. This was a dollar increase of \$799 and a percentage increase of 454 per cent. The rate of annual increase was \$38.80 between 1940 and 1950 and \$51.37 between 1950 and 1958. For every \$1.00 in per capita income in 1940, school systems with decreasing school populations had \$5.54 in 1958.

In comparing per capita income in school systems with decreasing school populations with school systems possessing the highest and lowest per capita incomes in the four classifications, some significant facts emerge. School systems with decreasing school populations had a dollar increase over the eighteen-year period of \$799, the systems with the lowest per capita income increased \$792, and those with the highest per capita income had a dollar increase of \$961. Percentage

wise, the increases were 454 per cent for school systems with decreasing school populations, 609 per cent for those with the lowest per capita income, and 185 per cent for school systems with the highest per capita income. For every \$1.00 in per capita income in systems with the lowest per capita income in 1940, school systems with decreasing school populations had \$1.35. Systems with the highest per capita income, however, had \$2.95 for every \$1.00 in systems with decreasing school populations. By 1958, the ratio difference had decreased and for every \$1.00 in per capita income in the lowest school systems, systems with decreasing school populations had only \$1.06, and the ratio with the highest systems was now \$1.00 to \$1.52.

In beginning the discussion of per capita income in school systems with increasing school populations, it should be pointed out that, in general, this classification of school systems was nearer the combined classification average than either of the remaining classifications in per capita income. The rate of increase in per capita income for this classification was lower than the rate for systems with decreasing and static school populations, but higher than the average rate and much higher than the rate for metropolitan systems.

For the period under study, the increase in per capita income was from \$179 to \$987, an absolute increase of \$808

and a percentage increase of 451 per cent for school systems in this classification. By 1958, school systems with increasing school populations had \$7.09 in per capita income for every \$1.00 they had in 1940.

The rate of increase in per capita income for metropolitan school systems was 185 per cent between 1940 and 1958. Although this was the smallest percentage increase in the four classifications, the absolute or dollar increase was the largest. The amount of increase was from \$519 to \$1,480, or \$961. For each \$1.00 in per capita income in metropolitan school systems in 1940, there was \$2.85 in 1958. Metropolitan systems in 1958 had \$1.61 in per capita income for every \$1.00 in school systems with static school populations, \$1.52 for every \$1.00 in school systems with decreasing school populations, and \$1.50 for every \$1.00 in systems with increasing school populations. For the years covered in the study metropolitan systems had higher per capita income than any of the other classifications for each year. School systems with static school populations did not have as high a per capita income in 1950 as metropolitan systems had in 1940. On the basis of per capita income, metropolitan school systems had 4.0 times as much ability in 1940 as school systems with static school populations, but in 1958 they had only 1.6 times as much.

The general result of the greater percentage increase

in income in the classifications of school systems with low per capita incomes was to make the Region somewhat more homogeneous on a ratio basis and to decrease the differences in income-ability among the classifications. However, the dollar differences in per capita income among the four classifications increased at the same time.

Trends in Income Per Pupil In Average Daily Attendance

While per capita income is unquestionably of value in determining ability to support education, income per pupil in average daily attendance is a more realistic index. A locality with high per capita income but with a large number of children to educate may be no more able financially than a locality with lower per capita income but with a proportionally smaller number of children. Since average daily attendance is concerned only with children actually attending school, income per pupil is directly connected with the educational effort each locality must make.

Table XXXV, page 196, presents the income per pupil in average daily attendance in the sample counties used in the study by classification of school systems. The average of the four classifications in income per pupil in attendance increased from \$1309 to \$5518, a dollar increase of \$4209 and a percentage increase of 322 per cent from 1940 to 1958.

TABLE XXXV

EFFECTIVE BUYING INCOME PER CHILD IN AVERAGE DAILY
ATTENDANCE IN A DIRECTED SAMPLE OF COUNTIES BY
TYPE IN THE SOUTHERN APPALACHIANS, 1940,
1950, AND 1958^a

School System Classification	1940	1950	1958
Decreasing	\$ 887	\$2,803	\$4,520
Static	616	2,033	4,102
Increasing	988	3,443	5,431
Metropolitan	2,747	7,338	8,021

^aSource: Computed from Tables LIV and LV.

For each \$1.00 of income per child in average daily attendance in 1940, there was \$4.22 in 1958.

A comparison shows that for every \$1.00 in systems with static school populations there was \$2.12 in the average of the four classifications in 1940, and in 1958, \$1.35. In systems with decreasing school populations, the average of the four classifications was \$1.45 and \$1.22 to each \$1.00 for the respective years. The average of the four classifications had \$1.31 in income per child in average daily attendance to each \$1.00 in school systems with increasing school populations in 1940, and \$1.02 to each \$1.00 in 1958. Metropolitan systems had \$2.10 in 1940 for every \$1.00 in the average of the classifications, and \$1.45 for each \$1.00 in 1958. For each \$1.00 of income per child in attendance in systems with static school populations, there was \$4.46 in metropolitan systems in 1940, and \$1.96 in 1958. Metropolitan systems had \$3.10 for every \$1.00 in systems with decreasing school populations in 1940, and \$1.77 for each \$1.00 in 1958. For systems with increasing school populations the ratio was \$2.78 to \$1.00 in 1940 and \$1.48 to \$1.00 in 1958. The difference in income-ability between metropolitan school systems and school systems in the other classifications was much greater in both 1940 and 1958 when measured by income per child in average daily attendance than when measured by per capita income. The same trends evident in per capita

income were evident in income per child in attendance. While differences among the classifications decreased on a ratio basis, dollar differences increased.

The school system classifications with higher per capita income also had higher income per child in average daily attendance. However, the smaller percentage of school age children in the total population of these classifications made the differences in income between the high and low classifications more pronounced on an income per child basis than on a per capita income basis. Without exception, the rank order of the classifications on a per capita income basis was the same as the order on a per child in attendance income basis.

Changes in Educational Effort

Drewry,² in a study similar to this, devised two methods by which educational effort might be measured. One of the methods centered on the per cent of income devoted to school revenues and the other on the ratio of school revenues per school age child to per capita income. While neither of the methods of measuring educational effort is entirely satisfactory in all respects, both measures are believed to be as

²Galen N. Drewry, "Public School Revenue Trends, 1940-1952" (Unpublished Ed. D. thesis, George Peabody College for Teachers, Nashville, 1953), pp. 140-150.

satisfactory as any which can be devised until such time as more detailed and refined data are available on the cost of living, income, and other factors which affect educational ability and educational effort. Since both methods appeared to be defensible measures of educational effort and since they met some of the shortcomings of the usual methods, they were used in this study. However, since per pupil in average daily attendance has been used throughout the study as a unit of measure, the latter method was altered to that effect for purposes of this investigation. Tables appearing later in the chapter present the application of the two methods to the classifications of school systems in the sample counties used in the study.

As shown in Table XXXVI, page 200, all classifications of school systems, with the exception of metropolitan systems, showed a decrease in the per cent school revenues were of effective buying income during the period under study. By this measure, all of the classifications of school systems decreased between 1939-40 and 1949-50 and two decreased from 1949-50 to 1957-58. The greatest decrease during the entire period was shown by school systems with static school populations, which by this measure were making the greatest effort in 1939-40. The rapid decrease, however, dropped school systems in this classification to second place in educational effort in 1957-58. In 1939-40, the rank order of the

TABLE XXXVI

TOTAL EDUCATIONAL EFFORT IN A DIRECTED SAMPLE OF
COUNTIES BY TYPE IN THE SOUTHERN APPALACHIANS,
1939-40, 1949-50, AND 1957-58^a

School System Classification	Per Cent School Revenue Was of Effective Buying Income		
	1939-40	1949-50	1957-58
Decreasing	6.41	5.88	5.08
Static	6.82	5.54	4.24
Increasing	5.05	3.65	4.17
Metropolitan	2.31	2.19	2.91

Source: Computed from Tables XLVIII and LIV.

classifications of school systems in educational effort as measured by this method was: school systems with static school populations, school systems with decreasing school populations, school systems with increasing school populations, and metropolitan systems. However, between 1939-40 and 1957-58, metropolitan school systems showed an increase in effort but not enough to change the ranking. School systems with increasing school populations showed an increase in effort between 1949-50 and 1957-58, but the increase was insufficient to overcome the decrease in the first ten years of the eighteen year period.

While all the classifications of school systems, except one, showed a downward trend in educational effort, the variation in effort between the classifications was not as great at the close of the period as at the beginning.

However, by this measure, the effort made by metropolitan school systems was considerably lower than that by either of the other classifications and much lower than the effort by school systems with decreasing school populations. This was more even distribution of effort than in 1939-40 when all the other classifications were making twice as great an effort as the metropolitan systems.

The second method used, that of the ratio of school revenue per child in average daily attendance to per capita income, tended to verify the findings of the first method.

As shown in Table XXXVII, page 203, this method reflected a downward trend in educational effort for the period by all classifications of school systems except the metropolitan systems which showed an increase. However, school systems with increasing school populations showed a rise in effort during the last eight years of the period just as they did when the first method was used. School systems with static school populations and systems with decreasing school populations showed a decline in effort between 1939-40 and 1957-58 by this measure.

Despite the general agreement on over-all trends, the two methods were not in agreement in measuring the educational effort of the four classifications of school systems. In 1939-40, both measures indicated that the least effort was being made by the metropolitan systems. Ranked next to the metropolitan systems by both measures in effort expended in 1939-40 were school systems with increasing school populations. However, the first method used, the per cent school revenue was of income, indicated that the greatest educational effort was being made by school systems with static school populations, while the second method, that of the ratio of revenue per child in attendance to per capita income, showed the greatest effort as being made by school systems with decreasing school populations. The difference in effort between the two classifications of school systems, as measured

TABLE XXXVII

EDUCATIONAL EFFORT AS MEASURED BY RATIO OF REVENUE PER
PUPIL IN AVERAGE DAILY ATTENDANCE TO PER CAPITA
INCOME IN A DIRECTED SAMPLE OF COUNTIES BY
TYPE IN THE SOUTHERN APPALACHIANS,
1939-40, 1949-50, AND 1957-58^a

School System Classification	Ratio of Revenue Per Pupil in ADA to Per Capita Income		
	1939-40	1949-50	1957-58
Decreasing	.3232	.2924	.2356
Static	.3229	.2720	.1953
Increasing	.2484	.1891	.2408
Metropolitan	.1224	.1268	.1580

^aSource: Computed from Tables XLVIII, LIII, and
LV.

by both methods, was very small, however.

By 1957-58, the two methods still showed that the least effort was being made by metropolitan school systems. Whereas the second smallest effort was being made by school systems with increasing school populations in 1939-40 as measured by both methods, the ratio method did not show this to be true in 1957-58, but instead indicated that this classification was making the greatest effort at the close of the period. While the percentage method showed only one change in the rank order of classifications between 1939-40 and 1957-58, the ratio method changed the rank order of all the classifications except one. The greatest change was in the classification of systems with increasing school populations, which, by this measure was making the second smallest effort in 1939-40, but was making the greatest effort in 1957-58.

Despite the variations in the findings of the two methods of measuring educational effort, certain general trends were indicated by both. First, metropolitan school systems were making a greater effort in 1957-58 than in 1939-40. Second, the gap between the school systems making the least effort and those making the greatest effort decreased during the period. Third, the effort made by school systems with increasing school populations decreased between 1939-40 and 1949-50 but increased between 1949-50 and 1957-58. Fourth, all the classifications except metropolitan decreased

in educational effort during the period.

Since educational effort is made up of two parts, that put forth on the local level and that put forth on the state level, it seemed important that an analysis be made of the two parts of the total effort. Such an analysis would give some indication whether state effort tends to take the place of local effort or whether the two components of the total effort tend to move in the same direction. An analysis of this kind would also provide an opportunity to compare state and local effort with the total effort.

Table XXXVIII, page 206, presents local and state educational effort for the beginning and end of the period under study. It can be observed from the table that local effort declined in each of the four classifications of school systems while state effort declined in two of the classifications and increased in two. The decline in local effort in school systems with increasing school populations and in metropolitan school systems was considerably less rapid than in school systems with static and decreasing school populations. The decline in state effort between 1939-40 and 1957-58 was greater in school systems with static school populations than in systems with decreasing school populations, but both classifications, as noted above, suffered significant decreases in state effort.

TABLE XXXVIII

LOCAL AND STATE EDUCATIONAL EFFORT IN A DIRECTED SAMPLE
OF COUNTIES BY TYPE IN THE SOUTHERN APPALACHIANS,
1939-40 AND 1957-58^a

School System Classification	Per Cent School Revenue Was of Effective Buying Income			
	Local		State	
	1939-40	1957-58	1939-40	1957-58
Decreasing	2.12	0.89	4.22	4.08
Static	1.65	0.47	5.06	3.60
Increasing	2.56	1.37	2.47	2.64
Metropolitan	1.58	1.36	0.71	1.44

^aSource: Computed from Tables XLV, XLVII, and LIV.

The least local effort in 1957-58 was made by school systems with static and decreasing school populations, the two classifications with the smallest percentage of local funds at the close of the period. School systems with increasing school populations and metropolitan school systems, the two classifications with the highest percentage of local funds, stood at the top in local effort.

As local effort decreased in metropolitan school systems and in school systems with increasing school populations, state effort increased. However, this was not true in the remaining two classifications where both local and state effort decreased during the period.

Comparison between local effort and total effort shows a high degree of correlation. All classifications showed a decline in local effort between the beginning and end of the period, and all classifications but one, metropolitan, showed a decline in total effort. The rate of decline was, generally speaking, more rapid in local effort than in total effort, however. The correlation between state effort and total effort was also high, with two classifications of school systems showing a decline in both state and total effort for the period, one classification showing an increase in both local and state effort, and one classification, school systems with increasing school populations, showing an increase in state effort but a decrease in total effort.

Generally speaking, during the period under study metropolitan school systems were making the least over-all effort to support education by both measures, the least state effort, but the second highest local effort as measured by per cent of income devoted to school revenues. In 1939-40, as measured by the per cent method, school systems with static school populations were making the greatest effort to support education, but, according to the ratio measure, school systems with decreasing school populations were making the greatest effort. However, the difference between the effort made by the two classifications, as measured by both methods, was slight. In 1957-58, both methods of measuring educational effort indicated that less effort was made by metropolitan systems than by any of the remaining three classifications. However, except for the metropolitan systems, the two methods showed different rank orders for all the classifications in educational effort during the last school year of the period. As measured by the per cent method, the order was school systems with decreasing school populations first in effort, school systems with static school populations second, systems with increasing school populations third, and metropolitan systems last in effort. By the ratio measure, the order in educational effort was school systems with increasing school populations first, school systems with decreasing school populations second, school systems with static school populations

third, and metropolitan systems fourth. As can be seen, there was complete absence of agreement, except for the metropolitan classification, as to the rank of the classifications according to educational effort in 1957-58 by the two methods of measure.

Summary

The period from 1939-40 to 1957-58 was a time of rapidly rising income and of rapid increases in school revenues. The average per capita income in the four classifications of school systems in the sample counties used in the study was four times as great in 1958 as in 1940. Stated another way, for each \$1.00 of income per person in the sample counties in 1940, there was \$4.35 in 1958. While the increase was very large in every county in the sample and in every school system classification, the greatest percentage increases occurred in those counties and in those school system classifications with the lowest per capita income in 1940. The percentage differences between counties and school system classifications with the highest and lowest per capita income was therefore reduced, although the dollar difference increased. The greater percentage increase in school systems with low per capita income resulted in the Region becoming more homogeneous with reference to per capita income and in

a decrease in the differences in income-ability among the school system classifications.

The average of the four classifications in income per pupil in average daily attendance increased from \$1048 to \$5518 during the period, a percentage increase of 427 per cent. For each \$1.00 of income per child in attendance in 1940, there was \$5.27 in 1958. Although per capita income in the sample counties increased at a rapid rate between the beginning and end of the period, there was an even greater rate of increase in income per child in average daily attendance. While differences among the school system classifications decreased on a ratio basis, dollar differences increased. School systems classifications with higher income per pupil in average daily attendance also had higher per capita income but the difference in income-ability between the classifications was much greater at both the beginning and end of the period when measured by income per child in attendance than when measured by per capita income. The metropolitan systems, which had the greatest ability on either basis, had even greater ability on a per pupil in attendance basis.

Educational effort, as measured by the two methods used, declined in all of the school system classifications except metropolitan. Despite the decrease in other classifications and the increase in the metropolitan systems, the systems in the metropolitan classification were making the

least educational effort in 1958, just as they were in 1940. By the per cent method of measurement, school systems with decreasing school populations were making the greatest effort in 1957-58 while the ratio method showed that school systems with increasing school populations were making the greatest effort.

Local effort declined in all the classifications during the period under study, but the decrease was much more rapid in school systems with decreasing and static school populations than in metropolitan systems and systems with increasing school populations. State effort increased in metropolitan systems and in systems with increasing school populations but declined in school systems with decreasing and static school populations during the period. However, state effort was still much higher in the latter two classifications than in the former. There was a positive relationship between high state effort and high total effort.

Differences in total effort between systems making the greatest effort and those making the least effort decreased. However, at the close of the period, generally speaking, systems least able were still making the greatest effort.

CHAPTER V

CHANGES IN THE LEVEL OF SCHOOL SUPPORT

The purpose of this chapter was to analyze the level of school support in metropolitan school systems, school systems with increasing school populations, school systems with static school populations, and school systems with decreasing school populations. In making the analysis, three measures of school support were used. The first measure used was the ratio of total school district revenues to the total population which gave an indication of the total support provided the public schools for each person in the population. The second measure was the ratio of public school revenues raised locally to the total population in the local district. This measure gave the per capita amount of school revenues raised locally and, because of the large amounts of revenues coming from non-local sources, was a better measure of local support than the first. Expenditure per pupil in average daily attendance, the third measure of support, was used to indicate the actual level at which the schools were supported for each child in attendance. Per pupil expenditures were used in preference to per pupil revenues since expenditures are the amounts actually spent for each student. Too, expenditures include funds from items other than revenue and are therefore a more comprehensive and complete measure of the level of support.

Per Capita School Revenues

Table XXXIX, page 214, presents per capita school revenues for the four classifications of school systems. The average of the per capita school revenues for the school system classifications was \$10.51 in 1939-40. By 1957-58, this figure had increased to \$44.78, a dollar increase of \$34.27 and a percentage increase of 326 per cent. Stated another way, for each \$1.00 in per capita school revenues in 1939-40, there was \$4.26 in 1957-58. The increase during the period was at a faster rate during the first ten years than in the last eight, 168 per cent compared to 59. The absolute increase during the first ten years was \$17.63, and \$16.64 during the last eight. The annual dollar increase was \$1.76 between 1939-40 and 1949-50 and \$2.08 between 1949-50 and 1957-58.

The increasing school systems had the greatest percentage increase in per capita revenues during the period, an increase of 378 per cent. The absolute increase of school systems in this classification was \$34.35; from \$9.08 in 1939-40 to \$43.43 in 1957-58. Stated as a ratio, for every \$1.00 in per capita revenues in this classification at the beginning of the period, there was \$4.78 at the close.

Metropolitan school systems had the smallest percentage increase of the four classifications with a percentage increase of 267 per cent. The absolute increase in this

TABLE XXXIX

PUBLIC SCHOOL REVENUES PER CAPITA IN A DIRECTED SAMPLE
OF COUNTIES BY TYPE IN THE SOUTHERN APPALACHIANS,
1939-40, 1949-50, AND 1957-58^a

School System Classification	Per Capita School Revenues		
	1939-40	1949-50	1957-58
Decreasing	\$12.00	\$35.08	\$50.47
Static	8.89	24.19	40.93
Increasing	9.08	25.35	43.43
Metropolitan	12.08	27.95	44.29

^aSource: Computed from Tables XLVIII and LVI.

classification was \$32.21. Metropolitan systems had the highest per capita revenues among the four classifications at the beginning of the period with \$12.08 per capita, but had dropped to second place by 1957-58 because of the slow rate of increase. However, for every \$1.00 in per capita school revenues in 1957-58 there was only \$0.37 in 1939-40.

School systems with decreasing school populations had the greatest absolute increase in per capita revenues during the period under study. The dollar increase was from \$12.00 in 1939-40 to \$50.47 in 1957-58. The percentage increase, 321 per cent, of school systems in this classification was second lowest. However, by 1957-58 there was \$4.21 in per capita school revenues for every \$1.00 in 1939-40. School systems with static school populations had a percentage increase of 360 per cent for the period and a dollar increase of \$32.04.

The dollar difference between the highest and lowest classification in per capita school revenues in 1939-40 was \$3.11. By 1949-50, this difference had increased to \$10.89, but by 1957-58 had receded to \$9.54. The ratio difference between the highest and lowest school system classification decreased from \$1.36 for each \$1.00 in 1939-40 to \$1.23 for each \$1.00 in 1957-58. The tendency, noted elsewhere in the study, for lower ranking classifications to increase faster than higher ranking classifications held true here and

resulted in the difference in dollar ratios being smaller at the close of the period than at the beginning despite the increase in dollar differences.

In all classifications except school systems with decreasing school populations the absolute increase in per capita school revenues was greater during the last eight years of the period than in the first ten. The annual rate of increase between 1949-50 and 1957-58 for the four classifications was: \$2.26 for school systems with increasing school populations, \$2.09 for school systems with static school populations, \$2.04 for metropolitan school systems, and \$1.92 for school systems with decreasing school populations.

The major trend in per capita school revenues during the period under study was toward a rapid increase. The per capita revenues in all the classifications except the metropolitan more than quadrupled between 1939-40 and 1957-58. With this rapid increase went a widening of the dollar differences among the classifications of school systems, but a closing of the dollar ratio differences. The annual dollar increase in per capita revenues was greatest during the last eight years of the period but the percentage increase was greatest in the first ten years. There was little change in the standings of the classifications between the beginning and close of the period. The two highest classifications at

the beginning were the two highest at the close, although they had changed positions. The lowest and second lowest classifications held their respective places throughout.

Because of the large amounts of non-local funds used by local school districts to support schools, total per capita revenues do not give an accurate indication of how much each person in the local school district is contributing to the local support of schools. To overcome this handicap, per capita revenues for funds raised locally were computed and are presented in Table XL, page 218.

In 1939-40, the average per capita amount of school revenues raised locally by the four classifications of school systems was \$4.75. This amount, by 1957-58, had increased to \$12.12, an absolute increase of \$7.37 and an increase of 115 per cent. This increase, while large, was not as great in either amount or per cent as the per capita increase in total school revenues. This fact is indicative of the rapidly declining importance of local sources in school revenues. For every \$1.00 in total school revenues per capita in 1939-40, there was \$4.26 in 1957-58, but for every \$1.00 in per capita school revenues from local sources at the beginning of the period, there was only \$2.15 at the close.

It can be seen from Table XXXIX, page 214, and Table XL, page 218, that there were greater differences among the four classifications of school systems in per capita school

TABLE XL

PER CAPITA SCHOOL REVENUES FROM LOCAL SOURCES IN A
DIRECTED SAMPLE OF COUNTIES BY TYPE IN THE
SOUTHERN APPALACHIANS, 1939-40,
1949-50, AND 1957-58^a

School System Classification	Revenues Per Capita		
	1939-40	1949-50	1957-58
Decreasing	\$ 3.97	\$ 6.49	\$ 8.85
Static	2.15	3.37	4.60
Increasing	4.61	7.96	14.33
Metropolitan	8.28	13.49	20.71

^aSource: Computed from Tables XLV, XLVI, XLVII,
and LVI.

revenues from local sources than in total school revenues per capita. This was true both at the beginning and end of the period. However, with the exception of school systems with decreasing school populations, those systems with high per capita revenues raised locally also had high total revenues per capita. School systems with decreasing school populations had the second highest total school revenues per capita in 1939-40, but the second lowest per capita revenues from local sources. By 1957-58, this same classification had the highest total revenues per capita but still was second lowest in terms of per capita revenues from local sources. This was, of course, indicative of the large amounts of funds coming from non-local sources to school systems of this classification.

The largest percentage increase in per capita school revenues from local sources among the school system classifications was the increase of 211 per cent registered by systems with increasing school populations. The dollar increase for these school systems was from \$4.61 in 1939-40 to \$14.33 in 1957-58, or \$9.72. There was \$3.11 in per capita school revenues from local sources in 1957-58 for every \$1.00 in 1939-40. The smallest percentage increase in per capita school revenues from local sources was made by school systems with static school populations, followed closely by school systems with decreasing school populations. The respective

percentage increases for these two classifications was 114 per cent and 123 per cent during the period under study. The smallest dollar increases were also by these two classifications. Metropolitan school systems had the highest per capita revenues from local sources both at the beginning and end of the period. The dollar increase for school systems of this classification was \$12.43 and the percentage increase was 150 per cent between 1939-40 and 1957-58.

As was stated before, the range from the highest to the lowest classification in per capita school revenues raised locally was greater than the range for total school revenues per capita. In 1939-40, school systems with static school populations had the lowest per capita school revenues from local sources while metropolitan school systems had the highest. The figures were \$2.15 and \$8.28 respectively, giving a dollar difference of \$6.13. Stated as a ratio, for each \$1.00 in per capita school revenues from local sources for school systems with static school populations, there was \$3.85 for metropolitan systems. The same two classifications were still the highest and lowest in local per capita school revenues by 1957-58, but the dollar difference between the two had increased to \$16.11. Metropolitan systems now had \$4.50 for each \$1.00 for school systems with static school populations.

For the four classifications of school systems, the percentage rates of increase for per capita revenues raised

at the local level were: 211 per cent for school systems with increasing school populations, 150 per cent for metropolitan school systems, 123 per cent for school systems with decreasing school populations, and 114 per cent for school systems with static school populations. The general tendency for lower classifications to increase faster than the higher classifications of school systems did not hold true for per capita revenues from the local level. This resulted in a widening of both the dollar differences and dollar ratio differences between the highest and lowest classifications. The rates of increase given above for per capita school revenues during the period under study compare with per capita income increases of 609 per cent for school systems with static school populations, 454 per cent for school systems with decreasing school populations, 451 per cent for school systems with increasing school populations, and 185 per cent for metropolitan school systems.

From this comparison and from Table XLI, page 222, it can be seen that per capita income increases were much greater than per capita local school revenues. The same is true of increases in total school revenues per capita, with the exception of metropolitan school systems in which per capita total school revenues increased at a faster rate than per capita income. School systems with increasing school populations and metropolitan school systems had the greatest

TABLE XLI

PER CENT INCREASE IN PER CAPITA INCOME, TOTAL SCHOOL REVENUES
 PER CAPITA, AND PER CAPITA SCHOOL REVENUES FROM LOCAL
 SOURCES IN A DIRECTED SAMPLE OF COUNTIES BY TYPE
 IN THE SOUTHERN APPALACHIANS FROM
 1939-40 TO 1957-58^a

School System Classification	Per Capita Income	Total School Revenues Per Capita	Local School Revenues Per Capita
Decreasing	454	321	123
Static	609	360	114
Increasing	451	378	211
Metropolitan	185	267	150

^aSource: Computed from Tables LIII, XLVIII, LVI,
 XLV, and XLVII.

increase in per capita school revenues from local sources but the smallest increases in per capita income.

Trends in Total Expenditures Per Pupil in Average Daily Attendance

The third measure of school support used in this chapter was the total expenditures for each child in average daily attendance. Table XLII, page 224, shows the expenditures per pupil for the four classifications of school systems for selected years. The average of the expenditures of the four classifications increased from \$57.25 in 1939-40 to \$236.90 in 1957-58. This was an absolute increase of \$179.65 and a percentage increase of 314 per cent. This compares with an average percentage increase of 326 per cent in total school revenues per capita and an average percentage increase of 115 per cent in per capita school revenues from local sources for the period studied. These comparisons show that the percentage increase in total school expenditures per pupil in average daily attendance lagged slightly behind the percentage increase in total school revenues per capita and considerably behind the percentage increase in per capita income, 335 per cent to 314 per cent. For each \$1.00 spent per pupil in attendance in 1939-40, \$4.14 was spent in 1957-58 by the sample counties which make up the four school system classifications. The annual dollar increase in per pupil

TABLE XLII

TOTAL EXPENDITURES PER PUPIL IN AVERAGE DAILY ATTENDANCE FOR
ALL PURPOSES IN THE PUBLIC SCHOOLS OF A DIRECTED SAMPLE OF
COUNTIES BY TYPE IN THE SOUTHERN APPALACHIANS,
1939-40, 1949-50, AND 1957-58^a

School System Classification	Years		
	1939-40	1949-50	1957-58
Decreasing	\$ 58.74	\$168.40	\$251.11
Static	43.93	118.45	192.51
Increasing	53.04	160.88	240.57
Metropolitan	73.32	183.70	263.44

^aSource: Computed from Tables LII and LV.

expenditures was greater during the first ten years of the period than in the last eight, \$10.06 compared to \$9.88.

The classification of school systems with the highest expenditure per child during the period covered was the metropolitan classification. In 1939-40, metropolitan school systems spent \$73.32 per pupil in attendance. This figure increased to \$183.70 in 1949-50 and to \$263.44 in 1957-58. The dollar increase for the period amounted to \$190.12. The dollar ratio increase was from \$1.00 in 1939-40 to \$3.59 in 1957-58, and the percentage increase was 259 per cent.

School systems with static school populations had the lowest per pupil expenditure at both the beginning and close of the period. The percentage increase for school systems in this classification was 338 per cent, the second highest increase among the classifications. The per pupil expenditure in 1939-40 for these school systems was \$43.93, but by 1957-58 the expenditure per pupil was \$192.51, a dollar increase of \$148.58. For each \$1.00 in per pupil expenditures in 1939-40, there was \$4.38 in 1957-58.

The greatest percentage increase in expenditures per pupil in average daily attendance for the period under study was by school systems with increasing school populations. School systems in this classification spent \$53.04 per pupil in 1939-40 and \$240.57 in 1957-58, a percentage increase of 354 per cent and a ratio increase of from \$1.00 in 1939-40 to

\$4.54 in 1957-58. School systems with decreasing school populations were spending \$58.74 per pupil at the beginning of the period and \$251.11 at the close. This was a percentage increase of 327 per cent for the school systems in this classification and a dollar increase of \$192.37.

In 1939-40, the range in expenditures per pupil in average daily attendance was from \$43.93 in school systems with static school populations to \$73.32 in metropolitan systems. This was a dollar difference of \$29.39. For each \$1.00 spent in school systems with static school populations, \$1.67 was spent in metropolitan school systems. In the same year, for each \$1.00 spent by metropolitan systems, \$0.72 was spent by systems with increasing school populations, and \$0.80 was spent by systems with decreasing school populations.

By 1957-58, the range was from \$192.51 in school systems with static school populations to \$263.44 in metropolitan school systems. The dollar difference was now \$70.93 and the ratio difference was \$1.37 in metropolitan systems for each \$1.00 in systems with static school populations. Metropolitan systems spend \$1.10 for each \$1.00 spent by systems with increasing school populations, and \$1.05 for each \$1.00 spent by school systems with decreasing school populations.

The major trend was toward rapidly increasing expenditures per pupil in average daily attendance. The average per

pupil expenditure in the four classifications of school systems more than quadrupled between 1939-40 and 1957-58. While all classifications increased rapidly, the lower classifications in expenditures per pupil increased at a more rapid rate than did the higher classifications. This resulted in a decrease in the ratio difference between the high and low classifications, despite the fact that the dollar difference increased. Expenditures per pupil in average daily attendance increased at a rate slightly less than the rate of increase in total school revenues per capita, and at a rate significantly less than the rate of increase for per capita income. Those classifications of school systems which had the highest rate of increase in per capita income had the lowest rate of increase in expenditures per pupil, with the exception of the metropolitan systems.

Differences in the Level of School Support Among School System Classifications

While some of these differences have been pointed out in preceding pages, it seems desirable that differences existing among the classifications of school systems be more clearly outlined. Although the need for and desirability of equal support for each child in school is not a problem with which this study deals, it is important that differences which existed and changes which occurred in the period under

study be presented. Table XLIII, page 229, points out the differences in the level of support for each child as measured by expenditures per pupil in average daily attendance on a comparison basis. For the classifications combined, or considered separately, there was a strong trend toward decreasing the differences in level of support present at the beginning of the period. Whereas the range between the highest and lowest classifications was \$0.40 in 1939-40, it was only \$0.27 in 1957-58, both of these, of course, based on a maximum of \$1.00. This decrease of differences resulted from the faster rate of increase in the non-metropolitan classifications.

The rank of the classifications was unchanged during the period. Metropolitan systems had the largest expenditure per pupil throughout the period, and school systems with static school populations had the smallest. Systems with decreasing school populations ranked second in per pupil expenditures both at the beginning and at the close of the period, and systems with increasing school populations ranked third.

By the measure used in Table XLIII, metropolitan school systems were supporting their schools at 1.7 times the level of school systems with static school populations in 1939-40, 1.4 times the level of support by school systems with increasing school populations, and 1.3 times the level of systems with decreasing school populations. In 1957-58,

TABLE XLIII

AMOUNT SPENT PER PUPIL IN AVERAGE DAILY ATTENDANCE BY SCHOOL
SYSTEMS WITH DECREASING, STATIC, AND INCREASING SCHOOL
POPULATIONS FOR EACH DOLLAR SPENT BY METROPOLITAN
SYSTEMS IN A DIRECTED SAMPLE OF COUNTIES BY
TYPE IN THE SOUTHERN APPALACHIANS,
1939-40 AND 1957-58^a

School System Classification	Years	
	1939-40	1957-58
Decreasing	\$.80	\$.95
Static	.60	.73
Increasing	.72	.91
Metropolitan	1.00	1.00

^aSource: Computed from Tables LII and LV.

metropolitan systems were supporting their schools at a level 1.4 times the level of school systems with static school populations and 1.1 times the level by systems with increasing and decreasing school populations. As measured by per capita income, metropolitan systems had 4.0 times the ability that systems with static school populations had in 1939-40, and 2.9 times the ability of systems with increasing school populations and systems with decreasing school populations. In 1957-58, by the same measure, metropolitan systems had 1.6 times the ability of systems with decreasing school populations, 1.6 times the ability of systems with static school populations, and 1.5 times the ability of systems with increasing school populations. Thus, the metropolitan systems were supporting their schools at a higher level than either of the other classifications during the period studied, but doing so with less effort because of higher ability.

The Relationship Between Increases in School Support and Increases in Per Capita Income

In order to determine if increases in per capita income in the Southern Appalachians were being accompanied by corresponding increases in the level of school support, the ratio of per capita income in 1958 to that in 1940 was divided into the ratio of per capita school revenues in 1957-58 to those in 1939-40. This procedure gives the relative

increase in per capita revenues compared to per capita income. Since expenditure per pupil in average daily attendance was also a measure of school support, the ratio of per pupil expenditures in 1957-58 to that in 1939-40 was divided into the ratio of per capita income in 1958 to that of 1940. The results of these computations are presented in Table XLIV, page 232. It can be seen from the table that the increases in per capita income were greater than the increases in per capita school revenues in all classifications of school systems except metropolitan. The greatest difference in increases in per capita income and in increases in per capita school revenues was in school systems with static school populations. In this classification, per capita income was increasing at a considerably faster rate than per capita school revenues. In metropolitan systems, on the other hand, per capita school revenues were increasing at a faster rate than per capita income.

In terms of expenditures per pupil in average daily attendance, the same general findings were made. Per capita income was increasing at a faster rate than expenditures per pupil in all classifications except metropolitan. However, the difference in the rate of increase in per capita income and the rate of increase in per pupil expenditures was slightly greater than the difference in the rate of increase in per capita income and the rate of increase in school

TABLE XLIV

INCREASES IN PER CAPITA SCHOOL REVENUES AND EXPENDITURES PER CHILD IN AVERAGE DAILY ATTENDANCE COMPARED WITH INCREASES IN PER CAPITA INCOME IN A DIRECTED SAMPLE OF COUNTIES BY TYPE IN THE SOUTHERN APPALACHIANS, 1939-40 TO 1957-58^a

School System Classification	Ratio of Per Capita Income in 1958 to 1940	Ratio of Revenues Per Student in 1957-58 to 1939-40	Ratio of Expenditures Per Student in 1957-58 to 1939-40	Ratio of Column 3 to Column 2	Ratio of Column 4 to Column 2
(1)	(2)	(3)	(4)	(5)	(6)
Decreasing	5.54	4.21	4.27	0.76	0.77
Static	7.09	4.60	4.38	0.65	0.62
Increasing	5.51	4.78	4.54	0.87	0.82
Metropolitan	2.85	3.67	3.59	1.29	1.26

^aSource: Computed from Tables XLVIII, LII, LIII, LV, and LVI.

revenues. The greatest difference in the rate of increase of per capita income and per pupil expenditures was in school systems with static school populations. However, there was a considerable difference in the two rates of increase in all the classifications except metropolitan where the increase in expenditures was greater than the increase in income. School systems with decreasing school populations made a more favorable showing in terms of differences in income and the level of school support when expenditures per pupil were used instead of revenues per capita.

It can be seen from the findings of the computations involved in developing Table XLIV that, except in metropolitan systems the increases in ability to support education, as measured by per capita income, were increasing at a much faster rate in the sample counties used in the classifications than was the level of support during the period under study.

Summary

During the period under study, the level of school support increased rapidly. Per capita school revenues more than quadrupled in all classifications except the metropolitan and the average per pupil expenditure was four times as great in 1957-58 as in 1939-40. Generally speaking, the school systems with low levels of support increased their

support at a faster rate than did those with high levels of support. This resulted in a closing of the dollar ratio differences among the classifications although the absolute differences increased. Expenditures per pupil in average daily attendance increased at a slightly less rapid rate than the rate of increase in per capita school revenues. The rate of increase in per capita school revenues from the local level, greatest in metropolitan systems, was considerably less than the rate for expenditures per pupil or for the rate for per capita revenues. This was indicative of the move from local to non-local sources for school revenues. The general tendency for lower classifications of school systems to increase faster than higher classifications did not hold true for per capita school revenues from the local level. The net effect of this was for the dollar ratio gap and the absolute difference between the high and low school systems to widen.

Except for metropolitan systems, those classifications of school systems with the highest rate of increase in per capita income had the lowest rate of increase in expenditures per pupil.

Generally speaking, there was a strong trend toward decreasing the differences in level of support among the classifications of school systems which were present at the beginning of the period. The rank of the classifications in

terms of level of support was unchanged during the period. Metropolitan systems, both at the beginning and close of the period, were supporting their schools at a higher level than any of the remaining classifications. They were doing this, however, with less effort because of their greater ability.

Measured by expenditures per pupil in average daily attendance or by per capita school revenues, the level of support of schools increased at a slower rate than did ability, with the exception of metropolitan systems where the level of support increased faster than ability. The metropolitan systems, however, started the period with a comparatively low level of support. The greatest difference in the rate of increase in ability and the rate of increase in school support occurred in those school systems with static school populations. The difference in the two rates, however, in the classifications of school systems with decreasing and increasing school populations was considerable. School systems with static school populations were supporting their schools at the lowest level and making the least effort. These systems had, however, the most rapid rate of increase in ability.

CHAPTER VI

SUMMARY, CONCLUSIONS, AND IMPLICATIONS

The purpose of this chapter was to present, in generalized form, a brief summary of the entire investigation, the conclusions warranted by the findings of the study, and implications for the administration of education in the Southern Appalachian Region.

Summary

This study was directed toward an investigation and analysis of various aspects of public school finance in the Southern Appalachian Region with emphasis on trends in public school revenues and expenditures. The major problem was divided into five sub-problems. These were: (1) to review the general demographic and economic trends of the Southern Appalachian Region; (2) to assay recent developments in school finance in the Region toward the end of determining trends in local, state, and federal contributions to public school revenues and trends in expenditures for budget items of instruction, capital outlay, and current expense; (3) to analyze efforts to support education as indicated by public school revenues in terms of the economic ability of the Region as measured by personal income; (4) to analyze the level of school support in metropolitan school systems, school systems

with increasing school populations, school systems with static school populations, and school systems with decreasing school populations; and (5) to draw conclusions and state implications for the administration of education in the Region.

The study was limited to a selected sample of school systems and the period of time from 1939-40 to 1957-58. The study was further restricted to revenues for public elementary and secondary schools and expenditures for budget items of instruction, current expense, and capital outlay.

Two principal methods of research were used to achieve the purpose of the study. In reviewing the general economic and demographic changes and trends in the Southern Appalachian Region, which constituted the first step toward the achievement of the purpose of the study, the historical method was utilized. The goal here was to provide a setting and background information which would contribute to an understanding of public school finance in relation to the social and economic forces of the Region. In order to accomplish the remaining steps, namely, assaying recent developments in school finance with emphasis on changes, analyzing efforts to support education and analyzing the level of support, the normative-survey method of research was employed.

Data were gathered from the work of sociologists and economists working on other phases of the Southern Appalachian Studies, from census reports, from annual and biennial

reports of State Departments of Education, from publications of the United States Office of Education and the National Education Association, from local school systems, and from "Survey of Buying Power," Sales Management.

The study was presented in six chapters with four of the chapters devoted exclusively to the body of the investigation. The findings of each section of the study were presented in a summary at the end of each chapter.

Conclusions

The conclusions of this study are based on the findings of the study as stated in the summaries at the close of the chapters. Since the findings fell into six major areas, they are here synthesized and presented accordingly.

Population Changes and Movements

The total population of the Region, as a result of the highest birth rate in the Nation, increased steadily during the period under study. This growth took place despite heavy out-migration. Accompanying the growth in numbers was an increase in the proportion of the very young and the aged in the population. This growth in the proportion of the dependent group in the population plus the changes in school attendance relative to the total population complicated the problem of financing the schools. The rapid shift from rural to urban

areas resulted in portions of the Region being subjected to a substantial population decline while other portions exhibited rapid growth. As a result, school facilities were over-taxed in some areas and not fully utilized in others. The educational level of the population, very low at the beginning of the period, had improved by the end, but was still considerably below the national average. The proportion of non-whites and foreign born in the population, while extremely small, grew smaller.

Economic Changes

The economy of the Region, long dependent on agriculture, moved toward industrialization. Manufacturing became the most important and fastest growing source of employment in the Region. The use of natural resources moved from an extractive and exploitative kind of endeavor toward one of conservation and efficiency. Mining activities of all kinds became more mechanized, but, as employment in the industry declined, its relative importance in the economy declined also. Agriculture became more scientific and more mechanized as the dependence on row-crop agriculture shifted toward dependence on diversified farming.

With these changes came increased productivity and income from which the schools of the Region could draw additional financial support. As the importance of certain barriers to improved income and productivity in the Region

declined, there was evidence that the economy was developing a base for continued growth and expansion. The shift from agricultural and other low income producing occupations to more complex and more financially rewarding occupations resulted in greater resources being available for public education.

Changes in the Sources of School Revenues

The major trend in school revenues during the period under study was the decreasing importance of local contributions. Although school revenues raised from all sources increased rapidly, the percentage raised from local sources decreased. The rapid increase in the proportion of school funds coming from state sources indicated that the states were not only interested in equalizing educational opportunities but were assuming a major role in the financing of the schools. While the increase in the percentage of revenues coming from non-local sources varied only slightly for the four classifications of school systems used in the study, metropolitan systems had the smallest increase.

There were great variations among the classifications of school systems in the percentage of revenues raised locally at both the beginning and end of the period. The percentage difference was not as great, however, in 1957-58 as in 1939-40, although the dollar difference was greater.

While revenues coming from federal sources had greater percentage increases than funds from either local or state sources, federal sources were contributing only a small portion of the total revenues by the close of the period.

Changes in School Expenditures

While the period under study was a time of decreasing local support of schools and of increasing non-local support in terms of percentage of funds, it was also a time of rapidly increasing school expenditures. Increases of three or more times in the budget items studied were common. Increased revenues were making possible a larger percentage of current expense for budget items other than instruction. While differences in levels and rates of increase in expenditures decreased among the classifications of school systems, dollar differences among the classifications grew larger.

At both the beginning and close of the period, metropolitan school systems were making the greatest per pupil expenditure for the budget item of instruction, the item which is most closely related to the quality of educational offerings. School systems with static school populations were making the smallest per pupil expenditure for this budget item throughout the period. However, the dollar ratio difference between the two classifications had been reduced by 1957-58 in spite of the fact that the dollar difference had increased throughout the period and was continuing to

increase at the close of the period. The highest rate of increase was being made by school system classifications with the smallest expenditures while the lowest rate of increase was by the classifications with the highest expenditures. This resulted in the school systems becoming more homogeneous with respect to the budget items considered.

Except for the budget item of capital outlay, the rate of increase in per pupil expenditures was greater during the last eight years of the period than in the first ten. This was indicative of an accelerating rate of increase in expenditures for instruction and current expense.

Changes in Educational Effort and Economic Ability

The period under study was a time of rapidly rising economic ability and of decreasing educational effort in all classifications of school systems except metropolitan. However, in spite of the decrease in other classifications and the increase in the metropolitan systems, the systems in the metropolitan classification were making the least educational effort in 1957-58 just as they were in 1939-40. Local effort declined in all classifications but the decrease was much more rapid in school systems with decreasing and static school populations than in the remaining two classifications. State effort increased in metropolitan systems and in systems with increasing school populations but declined in school systems with decreasing and static school populations. Differences in

total effort between systems making the greatest effort and those making the least effort decreased.

Economic ability, as measured by per capita income, more than quadrupled during the period under study. While the increase was very large in every county in the sample and in every school system classification, the greatest percentage increases occurred in those school system classifications with the lowest per capita income. Although the dollar difference increased, the percentage difference between school system classifications with the highest and lowest per capita income was reduced. The rate of increase in income per child in average daily attendance increased at even faster rate than per capita income.

Increases in income-ability were not matched by increases in school support. However, differences in income-ability and differences in educational effort among the classifications decreased. Systems least able, however, made the greatest educational effort both at the beginning and end of the period.

Trends in the Level of School Support

The level of school support increased rapidly during the period. However, school systems with low levels of support increased their support at a faster rate than did those with high levels of support. This resulted in a closing of the dollar ratio difference among the classifications although

the absolute difference increased. Except for metropolitan systems, those classifications of school systems with the highest rate of increase in per capita income had the lowest rate of increase in school support. Metropolitan systems, both at the beginning and end of the period, were supporting their schools at a higher level than any of the remaining classifications. They were doing this, however, with less effort because of their greater ability.

Whether measured by expenditures per pupil in average daily attendance or by per capita school revenues, the level of support increased at a slower rate than did ability, except in the case of metropolitan systems. School systems with static school populations had the greatest difference in the rate of increase in ability and rate of increase in support among the school system classifications. These systems were supporting their schools at the lowest level and making decreasing effort in spite of the highest rate of increase in ability.

Implications for the Administration of Education

Since school finance is basic to the adequate functioning of every aspect of the school program, findings of an investigation such as this have important implications for all persons interested in education, but especially for those responsible for the administration of the public schools.

The financing of public schools cannot be considered out of context of the social and economic order of which the schools are a part. Education is intimately related to the social, political, and economic environment. It is essential for the school administrator to take these elements into account in planning. Demographic movements and economic changes are closely related to school financing. Administrators should be trained to secure and use information in these areas. Provision needs to be made for the systematic gathering and analyses of data for such items as population shifts, changes in the occupational status of the population, and changes in income so as to assure the availability of needed information for policy decisions.

Changes in the sources of public school revenues have particular significance to educational administrators. The trend for an increasing proportion of revenues to come from non-local sources must be assessed with reference to its impact on the educational program and its effect on local efforts to support schools. The growing importance of revenues from federal sources also demands a better understanding of the role of the federal government in school finance. There is the further concern that with the decrease in local responsibility in the financing of the public schools conceivably may go a decrease in local interest in school affairs. Educational leaders have a responsibility to involve

the people of the district to the extent, at least, that they are able to understand the bases upon which the schools operate.

Non-local participation in the financing of public education necessitates a close working relationship between administrators on the local, state, and federal levels. The cooperation of everyone concerned in working toward common purposes must be had. The problem of the extent to which non-local financing involves state and federal agencies in the determination of local policies is a difficult one. It carries with it responsibility for local school administrators to understand the purpose of federal and state assistance and for educational leaders on the state and federal level to understand the problems of local school people.

Despite the shift from local to non-local sources of revenues, the demands of an adequate educational program necessitate the raising of large amounts of revenues from local sources. Educational administrators, in cooperation with the people of the district, must devise satisfactory means of raising the needed funds.

The inequities in educational effort should be carefully evaluated at both the local and state levels. The failure of educational effort to keep pace with increased ability calls for the exercising of leadership in the development of additional school support from the improved economy of the Region.

Inequalities in educational opportunity, as measured by school revenues and expenditures, should receive consideration from both local and state levels. While equality of opportunity is highly desirable, identity of opportunity is not. Local school systems should have the opportunity to exceed the minimum programs if they so desire, but equality of opportunity should be a goal toward which educators strive. The existing differences in school programs should be carefully evaluated and steps taken to correct inequalities in opportunity.

The increasingly large sums of money being spent on education in the Region make more urgent than ever serious and continued consideration of the type of educational programs being provided. Recent economic changes call for educational programs quite different from those of a few years ago. Financial support for education, gained so slowly and only after great effort, can be maintained only by sound programs.

There was evidence among the school systems of the Region of need for various kinds of research in school finance. Since it seems clear that much of the responsibility for this rests with State Departments of Education, these agencies should initiate programs whereby cooperative research could be done. Assistance should be given local systems in planning and carrying forward their own research

projects, and efforts should be made to utilize the facilities and resources of colleges and universities in these projects. The research carried on should be concerned with the solution of real problems, and should be cooperatively determined and carried forward.

BIBLIOGRAPHY

BIBLIOGRAPHY

- Alabama State Department of Education. Annual Report.
Montgomery: State Board of Education, 1939-40, 1949-50,
and 1957-58.
- American Association of School Administrators. "Some Emerging
Truths in School Finance," Twenty-third Yearbook, Paths to
Better Schools. Washington: National Education Associa-
tion, 1945.
- Anderson, C. Arnold, and Mary Jean Bowman. "Can Money Alone
Improve Our Schools," The School Executive, 74 (March
1955), 82-84.
- Blue Book of Southern Progress. Baltimore: Manufacturers
Record Publishing Company, 1955.
- Bogue, Donald J. Components of Population Change, 1940-50.
Oxford, Ohio: Scripps Foundation, 1957.
- Bowles, Gladys K. Farm Population: Net Migration from the
Rural-Farm Population, 1940-50. Statistical Bulletin
176, Washington: U. S. Department of Agriculture, June
1956.
- Brown, James S. Basic Population Data for the Southern
Appalachians. Social Research Service, The University of
Kentucky, August 1958.
- _____, "Migration Within, To, and From the Southern Appa-
lachians, 1935-58: Extent, Directions, and Social Ef-
fects." The University of Kentucky, 1958. (Mimeographed)
- Burke, Arvid J. "Cost of Education in a Locality and Its
Property Valuation," Teachers College Record, 55 (October
1953), 20-23.
- College of Education, University of Tennessee. The Public
School Systems of Scott County and Oneida, Tennessee.
Knoxville: The University of Tennessee, 1958.
- Council of State Governments. The Forty-Eight State School
Systems. Chicago: The Council, 1949.
- Cubberley, Elwood. School Funds and Their Apportionment.
New York: Teachers College, Columbia University, 1905.

- Drewry, Galen N. "Public School Revenue Trends, 1940-1952." Unpublished Ed. D. thesis, George Peabody College for Teachers, 1954.
- Ford, Thomas R. "Population Estimates for Kentucky Counties and Economic Areas, July 1, 1957." Progress Report 66, Agricultural Experiment Station, The University of Kentucky, August 1958.
- Georgia State Department of Education. Biennial Report. Atlanta: State Department of Education, 1938-40 and 1948-50.
- Gibbard, Harold A. Extractive Industries and Forestry. Progress Report, Southern Appalachian Studies. Morgantown: West Virginia University, March 1959.
- Gibbs, James E. "Public Education in Tennessee--Grades 1-12." A Report to the Tennessee Legislative Council, Nashville, 1957.
- Grimm, L. R. Our Children's Opportunities in Relation to School Costs. Springfield: Illinois Education Association, 1938.
- Hagood, Margaret J., et al. Farm-Operator Family Level of Living Indexes for Counties of the U. S., 1945, 1950, and 1954. U. S. Department of Agriculture, Statistical Bulletin No. 204. Washington: Government Printing Office, March 1957.
- Hutchins, Clayton D. "Recent Trends in School Revenues," The American School Board Journal, 136 (January 1958), 30-32.
- _____, and Albert R. Munse. Expenditures for Education at the Midcentury. Washington: Government Printing Office, 1953.
- Johns, R. L. "Local Ability and Effort to Support Schools," Problems and Issues in Public School Finance. National Conference of Professors of Educational Administration. New York: Teachers College, Columbia University, 1952.
- _____, and Herbert A. Meyer. "Distributing State Funds--How to Estimate Taxpaying Ability of Local School Units," Nation's Schools, 49 (February 1952), 49-50.

Kentucky State Department of Education. Report of the Superintendent of Public Instruction. Frankfort: State Board of Education, 1939-41 and 1949-51.

Manufacturers Record. Vol. 127. Baltimore: Manufacturers Record Publishing Company, May 1958.

Monroe, Walter S. (editor). Encyclopedia of Educational Research. Revised Edition. New York: The Macmillan Company, 1950.

Morphet, Edgar L., and Erick L. Lindman. Public School Finance Programs of the Forty-Eight States. U. S. Office of Education, Circular No. 274. Washington: Government Printing Office, 1953.

Mort, Paul R. "Cost-Quality Relationship in Education," Problems and Issues in Public School Finance. National Conference of Professors of Educational Administration. New York: Teachers College, Columbia University, 1952.

National Education Association, Committee on Tax Education and School Finance. The Index of Local Economic Ability in State School Finance Programs. Washington: National Education Association, August 1953.

_____, Research Division. "Improving the Property Tax," Research Bulletin, XXXVI, No. 1. Washington: National Education Association, 1958.

_____, Rankings of the States. Washington: National Education Association, 1957.

_____, Status and Trends. Washington: National Education Association, August 1958.

North Carolina State Department of Public Instruction. Biennial Report. Raleigh: State Superintendent of Public Instruction, 1938-40 and 1948-50.

Remmers, H. H. and K. S. Davenport. "Educational Achievement as Compared with Money Spent on Schools," School and Society, 61 (May 19, 1945), 333-335.

"Survey of Buying Power," Sales Management, 48, 68, 78, 80, and 82 (1941, 1951, 1957, 1958, and 1959).

Swalls, Fred. "Trends in State Support of Public Education," The Teachers College Journal, 30 (December 1958), 38-39.

Thompson, Lorin A. "Industrial Growth in the Southern Appalachians." Progress Report, Southern Appalachian Studies, October 1958.

Tennessee State Department of Education. Annual Statistical Report. Nashville: Commissioner of Education, 1939-40, 1949-50, and 1957-58.

U. S. Bureau of the Census. Population Mobility--States and State Economic Areas. Special Report P-E No. 4B. Washington: Government Printing Office, 1952.

_____, Seventeenth Census of the United States. Washington: Government Printing Office, 1953.

_____, United States Census of Agriculture, 1954. Washington: Government Printing Office, 1956.

_____, 1950 Population Report P-B. Vol. II. Washington: Government Printing Office, 1952.

U. S. Bureau of Mines, Department of Interior. Minerals Yearbook. Washington: Government Printing Office, 1925 through 1955.

U. S. Department of Agriculture. Economic and Social Problems and Conditions of the Southern Appalachians. Misc. No. 205. Washington: Government Printing Office, 1935.

U. S. Office of Education. Statistics of Public School Systems in 101 of the Most Rural Counties. Washington: Government Printing Office, 1958.

_____, "Statistics of State School Systems, 1952-54," Biennial Survey of Education in the United States, 1952-1954. Washington: Government Printing Office, 1956.

_____, Trends in Significant Facts on School Finance. Washington: Government Printing Office, 1957.

Vance, Rupert B. All These People. Chapel Hill: The University of North Carolina, 1945.

Virginia State Department of Education. Annual Report. Richmond: Superintendent of Public Instruction, 1939-40, 1949-50, and 1957-58.

West Virginia State Department of Education. West Virginia State School Report. Charleston: State Superintendent of Free Schools, 1938-40, 1948-50, and 1957-58.

APPENDIX

CLASSIFICATION OF THE SAMPLE COUNTIES BY TYPE OF SCHOOL
SYSTEM, SOUTHERN APPALACHIANS, 1939-40 TO 1957-58

Systems with Decreasing School Populations

Pickens County, Georgia	Gilmer County, West Virginia
Owsley County, Kentucky	Tucker County, West Virginia

Systems with Static School Populations

Dekalb County, Alabama	Sevier County, Tennessee
Jackson County, Kentucky	Barbour County, West Virginia
Swain County, North Carolina	

Systems with Increasing School Populations

Leslie County, Kentucky
Bradley County, Tennessee
Grant County, West Virginia
Hawkins County, Tennessee
Giles County, Virginia

Metropolitan Systems

Buncombe County, North Carolina
Hamilton County, Tennessee
Knox County, Tennessee
Kanawha County, West Virginia

TABLE XLV

PUBLIC SCHOOL REVENUES BY SOURCE IN A DIRECTED SAMPLE
OF COUNTIES BY TYPE IN THE SOUTHERN APPALACHIANS,
1939-40^a

Counties	Source		
	Local	State	Federal
Alabama			
Dekalb	\$ 75,289	\$ 293,328	\$ 10,391
Georgia			
Pickens	17,406	60,363	---
Kentucky			
Jackson	16,404	59,054	---
Leslie	22,557	61,305	---
Owsley	13,903	35,114	---
North Carolina			
Buncombe	645,399	734,263	20,232
Swain	28,390	91,879	1,463
Tennessee			
Bradley	142,517	65,774	---
Hamilton	1,287,420	359,736	---
Hawkins	60,056	102,893	---
Knox	1,471,565	362,904	---
Sevier	52,007	106,276	---
Virginia			
Giles	172,736	74,175	---
West Virginia			
Barbour	74,943	207,582	2,792
Gilmer	95,981	105,032	956
Grant	24,063	101,832	2,457
Kanawha	2,084,939	1,031,062	12,482
Tucker	44,808	163,658	2,477
Total	\$6,329,383	\$4,016,232	\$ 53,250

^aSource: Annual and biennial reports and records of State Departments of Education.

TABLE XLVI

PUBLIC SCHOOL REVENUES BY SOURCE IN A DIRECTED SAMPLE
OF COUNTIES BY TYPE IN THE SOUTHERN APPALACHIANS,
1949-50^a

Counties	Source		
	Local	State	Federal
Alabama			
Dekalb	\$ 107,600	\$ 836,113	\$ 8,550
Georgia			
Pickens	32,883	184,199	---
Kentucky			
Jackson	52,776	178,625	31,915
Leslie	55,022	189,467	9,611
Owsley	26,733	94,948	44,201
North Carolina			
Buncombe	881,832	2,350,786	268,872
Swain	30,273	231,800	42,472
Tennessee			
Bradley	273,412	577,043	14,894
Hamilton	2,948,180	2,087,043	103,629
Hawkins	135,598	532,862	17,480
Knox	3,697,297	2,237,799	132,869
Sevier	59,189	561,500	14,319
Virginia			
Giles	310,857	226,443	---
West Virginia			
Barbour	125,153	558,925	28,086
Gilmer	116,937	320,815	23,645
Grant	69,692	258,514	18,351
Kanawha	3,204,702	4,148,159	165,551
Tucker	60,379	363,164	13,331
Total	\$12,188,515	\$15,938,205	\$937,776

^aSource: Annual and biennial reports and records of State Departments of Education.

TABLE XLVII

PUBLIC SCHOOL REVENUES BY SOURCE IN A DIRECTED SAMPLE
OF COUNTIES BY TYPE IN THE SOUTHERN APPALACHIANS,
1957-58^a

Counties	Source		
	Local	State	Federal
Alabama			
Dekalb	\$ 137,683	\$ 1,339,608	\$ 56,901
Georgia			
Pickens	50,872	320,393	7,996
Kentucky			
Jackson	62,853	398,196	12,381
Leslie	119,202	445,364	15,534
Owsley	36,564	195,007	5,613
North Carolina			
Buncombe	1,377,342	4,085,081	205,251
Swain	44,539	353,662	39,137
Tennessee			
Bradley	301,962	900,944	55,159
Hamilton	5,883,737	4,452,429	232,238
Hawkins	245,105	881,911	67,986
Knox	5,953,678	4,520,517	822,358
Sevier	91,160	814,571	30,413
Virginia			
Giles	824,894	408,629	28,811
West Virginia			
Barbour	139,147	685,604	21,698
Gilmer	129,600	342,905	9,562
Grant	73,926	360,779	12,857
Kanawha	5,095,571	6,288,845	239,236
Tucker	78,964	373,412	10,298
Total	\$20,646,799	\$27,167,927	\$ 1,873,329

^aSource: Annual and biennial reports and records of State Departments of Education.

TABLE XLVIII

TOTAL PUBLIC SCHOOL REVENUES IN A DIRECTED SAMPLE OF
COUNTIES BY TYPE IN THE SOUTHERN APPALACHIANS,
1939-40, 1949-50, 1957-58^a

Counties	Years		
	1939-40	1949-50	1957-58
Alabama			
Dekalb	\$ 379,008	\$ 952,263	\$ 1,534,192
Georgia			
Pickens	77,769	217,082	379,261
Kentucky			
Jackson	75,458	263,316	473,430
Leslie	83,862	254,100	580,100
Owsley	49,017	165,882	237,254
North Carolina			
Buncombe	1,399,894	3,501,490	5,667,674
Swain	121,730	304,545	437,338
Tennessee			
Bradley	208,291	865,349	1,258,065
Hamilton	1,647,156	5,138,852	10,568,404
Hawkins	162,949	685,940	1,195,002
Knox	1,834,469	6,067,965	11,296,553
Sevier	158,283	635,008	936,144
Virginia			
Giles	246,911	537,300	1,262,334
West Virginia			
Barbour	285,317	712,164	846,349
Gilmer	201,969	461,397	482,067
Grant	128,352	346,557	447,562
Kanawha	3,128,483	7,518,412	11,623,652
Tucker	210,943	436,874	462,674
Total	\$10,399,861	\$29,064,496	\$49,688,055

^aSource: Annual and biennial reports and records of State Departments of Education.

TABLE XLIX

PUBLIC SCHOOL EXPENDITURES FOR INSTRUCTION IN A DIRECTED
SAMPLE OF COUNTIES BY TYPE IN THE SOUTHERN APPALACHIANS,
1939-40, 1949-50, AND 1957-58^a

Counties	Years		
	1939-40	1949-50	1957-58
Alabama			
Dekalb	\$ 260,116	\$ 685,551	\$ 1,307,658
Georgia			
Pickens	53,369	142,365	265,646
Kentucky			
Jackson	60,206	165,994	289,397
Leslie	61,746	180,962	343,283
Owsley	37,315	74,643	140,643
North Carolina			
Buncombe	741,065	2,246,957	3,009,012
Swain	78,655	183,911	289,770
Tennessee			
Bradley	152,423	524,157	943,517
Hamilton	1,483,370	4,055,513	8,161,641
Hawkins	147,571	460,956	797,957
Knox	1,617,503	4,215,097	7,873,534
Sevier	127,735	364,287	581,489
Virginia			
Giles	114,365	347,893	784,506
West Virginia			
Barbour	211,365	404,250	575,402
Gilmer	145,452	259,871	326,947
Grant	94,884	177,631	276,665
Kanawha	2,097,459	4,885,952	8,458,673
Tucker	163,252	280,075	323,062
Total	\$7,647,851	\$19,656,065	\$34,748,802

^aSource: Annual and biennial reports and records of
State Departments of Education.

TABLE L

PUBLIC SCHOOL EXPENDITURES FOR CURRENT EXPENSE IN A
DIRECTED SAMPLE OF COUNTIES BY TYPE IN THE SOUTHERN
APPALACHIANS, 1939-40, 1949-50, AND 1957-58^a

Counties	Years		
	1939-40	1949-50	1957-58
Alabama			
Dekalb	\$ 353,193	\$ 906,176	\$ 1,587,216
Georgia			
Pickens	69,101	201,032	269,962
Kentucky			
Jackson	70,621	242,610	405,263
Leslie	74,754	229,518	480,166
Owsley	44,572	148,246	205,158
North Carolina			
Buncombe	965,692	3,044,382	5,162,589
Swain	104,409	295,135	407,571
Tennessee			
Bradley	209,466	762,089	1,265,369
Hamilton	1,844,023	5,080,229	10,518,171
Hawkins	172,563	655,231	1,101,364
Knox	2,073,164	5,134,717	10,523,460
Sevier	157,608	539,681	807,434
Virginia			
Giles	167,448	486,540	1,025,251
West Virginia			
Barbour	278,132	595,312	817,530
Gilmer	184,467	373,521	477,225
Grant	115,198	271,977	410,298
Kanawha	2,820,465	6,700,322	11,352,677
Tucker	214,287	392,047	452,681
Total	\$9,919,163	\$26,058,765	\$47,269,385

^aSource: Annual and biennial reports and records of
State Departments of Education.

TABLE LI

PUBLIC SCHOOL EXPENDITURES FOR CAPITAL OUTLAY IN A DIRECTED
SAMPLE OF COUNTIES BY TYPE IN THE SOUTHERN APPALACHIANS,
1939-40, 1949-50, AND 1957-58^a

Counties	Years		
	1939-40	1949-50	1957-58
Alabama			
Dekalb	\$ 35,824	\$ 49,700	\$ 82,870
Georgia			
Pickens	1,077	2,276	4,317
Kentucky			
Jackson	4,702	17,118	8,714
Leslie	3,384	1,315	35,382
Owsley	1,972	558	9,141
North Carolina			
Buncombe	177,197	221,287	422,626
Swain	14,458	9,271	20,574
Tennessee			
Bradley	85,970	130,184	100,079
Hamilton	31,016	1,554,768	2,590,192
Hawkins	305	163,154	77,227
Knox	3,667	45,231	1,579,695
Sevier	3,106	150,306	97,562
Virginia			
Giles	103,764	310,894	35,582
West Virginia			
Barbour	5,220	26,667	32,034
Gilmer	8,292	30,989	17,616
Grant	12,035	36,612	47,989
Kanawha	423,096	281,203	253,363
Tucker	1,459	11,518	12,784
Total	\$ 916,544	\$3,043,051	\$ 5,427,747

^aSource: Annual and biennial reports and records of
State Departments of Education.

TABLE LII

TOTAL PUBLIC SCHOOL EXPENDITURES IN A DIRECTED SAMPLE OF
COUNTIES BY TYPE IN THE SOUTHERN APPALACHIANS,
1939-40, 1949-50, AND 1957-58^a

Counties	Years		
	1939-40	1949-50	1957-58
Alabama			
Dekalb	\$ 411,688	\$ 980,970	\$ 1,735,019
Georgia			
Pickens	69,101	201,031	379,554
Kentucky			
Jackson	91,086	266,267	485,978
Leslie	84,794	195,584	575,508
Owsley	51,414	173,191	253,620
North Carolina			
Buncombe	1,398,005	3,540,997	5,727,548
Swain	119,763	306,094	428,145
Tennessee			
Bradley	296,784	894,083	1,447,806
Hamilton	1,899,179	6,666,212	13,470,286
Hawkins	172,868	1,176,810	1,219,157
Knox	2,371,119	7,041,463	12,260,569
Sevier	160,726	689,994	961,654
Virginia			
Giles	296,210	823,295	1,290,984
West Virginia			
Barbour	283,838	715,333	875,288
Gilmer	196,364	471,578	547,039
Grant	139,550	345,355	493,983
Kanawha	3,570,710	8,106,168	12,628,434
Tucker	219,791	462,561	496,467
Total	\$11,832,990	\$33,056,986	\$55,277,039

^aSource: Annual and biennial reports and records of State Departments of Education.

TABLE LIII

PER CAPITA EFFECTIVE BUYING INCOME IN A DIRECTED SAMPLE
OF COUNTIES BY TYPE IN THE SOUTHERN APPALACHIANS,
1940, 1950, AND 1958^a

Counties	Years		
	1940	1950	1958
Alabama			
Dekalb	\$ 115	\$ 478	\$ 926
Georgia			
Pickens	171	515	970
Kentucky			
Jackson	60	224	764
Leslie	52	235	717
Owsley	72	278	743
North Carolina			
Buncombe	497	1262	1392
Swain	114	306	873
Tennessee			
Bradley	244	876	1074
Hamilton	542	1351	1414
Hawkins	127	535	947
Knox	473	1363	1429
Sevier	126	477	910
Virginia			
Giles	224	944	1215
West Virginia			
Barbour	235	625	1139
Gilmer	167	682	1137
Grant	249	738	984
Kanawha	563	1106	1686
Tucker	293	783	1052

^aSource: "Annual Survey of Buying Power," Sales Management, 1941, 1951, and 1958.

TABLE LIV

TOTAL EFFECTIVE BUYING INCOME IN A DIRECTED SAMPLE OF
COUNTIES BY TYPE IN THE SOUTHERN APPALACHIANS,
1940, 1950, and 1958^a
(add 000)

Counties	Years		
	1940	1950	1958
Alabama			
Dekalb	\$ 4,938	\$ 21,845	\$ 85,650
Georgia			
Pickens	1,574	4,584	7,955
Kentucky			
Jackson	978	2,979	9,549
Leslie	788	3,713	11,687
Owsley	650	2,057	4,758
North Carolina			
Buncombe	53,934	157,245	190,548
Swain	1,393	3,121	7,868
Tennessee			
Bradley	6,551	28,470	38,129
Hamilton	97,704	283,710	360,929
Hawkins	3,619	16,532	31,537
Knox	84,537	306,266	356,272
Sevier	2,917	11,257	22,843
Virginia			
Giles	3,277	18,314	24,672
West Virginia			
Barbour	4,727	12,500	20,160
Gilmer	2,005	6,684	8,529
Grant	2,188	6,494	7,482
Kanawha	109,982	265,551	434,634
Tucker	3,873	8,456	8,940
Total	385,635	1,159,778	1,585,650

^aSource: "Annual Survey of Buying Power," Sales Management, 1941, 1951, and 1958.

TABLE LV

PUBLIC SCHOOL AVERAGE DAILY ATTENDANCE IN A DIRECTED SAMPLE
OF COUNTIES BY TYPE IN THE SOUTHERN APPALACHIANS,
1939-40, 1949-50, AND 1957-58^a

Counties	Years		
	1939-40	1949-50	1957-58
Alabama			
Dekalb	9,683	10,834	9,731
Georgia			
Pickens	1,689	1,777	1,880
Kentucky			
Jackson	3,227	2,866	2,665
Leslie	2,917	3,170	3,786
Owsley	1,527	1,334	1,205
North Carolina			
Buncombe	20,972	21,079	24,704
Swain	2,480	1,946	1,862
Tennessee			
Bradley	5,439	6,590	7,760
Hamilton	32,173	34,398	43,599
Hawkins	5,458	5,974	6,888
Knox	32,255	36,896	45,062
Sevier	4,646	5,174	5,429
Virginia			
Giles	3,090	3,756	4,312
West Virginia			
Barbour	4,252	4,157	3,615
Gilmer	2,754	2,131	1,756
Grant	1,764	1,862	1,938
Kanawha	40,605	45,645	53,985
Tucker	3,166	2,527	1,836
Total	178,097	192,116	222,013

^aSource: Annual and biennial reports and records of State Departments of Education.

TABLE LVI

TOTAL POPULATION IN A DIRECTED SAMPLE OF COUNTIES BY TYPE
IN THE SOUTHERN APPALACHIANS, 1940, 1950, AND 1958^a

Counties	Years		
	1940	1950	1958 ^b
Alabama			
Dekalb	43,075	45,048	42,700
Georgia			
Pickens	9,136	8,855	8,300
Kentucky			
Jackson	16,339	13,101	11,500
Leslie	14,981	15,537	14,900
Owsley	8,957	7,324	6,200
North Carolina			
Buncombe	108,755	124,403	135,400
Swain	12,177	9,921	6,200
Tennessee			
Bradley	24,498	32,338	34,000
Hamilton	180,478	208,255	247,100
Hawkins	28,523	30,494	31,300
Knox	178,468	223,007	246,100
Sevier	23,291	23,375	22,000
Virginia			
Giles	14,635	18,956	21,200
West Virginia			
Barbour	19,869	19,745	18,100
Gilmer	12,046	9,746	7,800
Grant	8,805	8,756	7,800
Kanawha	195,619	239,629	255,500
Tucker	13,173	10,600	8,100
Total	912,825	1,049,090	1,127,000

^aSource: U. S. Bureau of the Census, Seventeenth Census of the United States (Washington: Government Printing Office, 1953).

^bEstimated figures from "Survey of Buying Power," Sales Management, 1959.