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Labor and Wages

February 1965

Progress Report RS-47

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OCCUPATIONAL TRENDS IN NORTH CAROLINA 1940-1960

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1940 - 1960

by

R. David Mustian

Report of a Study Conducted Under the Direction
of C. Horace Hamilton, Professor
of Rural Sociology

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INTRODUCTION AND REVIEW OF LITERATURE

Purpose and Nature of Study

The purpose of this study is to evaluate the extent, direction, and significance of the changes which have occurred in the general occupational structure of the North Carolina labor force between 1940 and 1960. The extent and direction of the observed changes will be analyzed in terms of major demographic characteristics of the labor force: age, sex, color, residence, income, and education. Some attention will also be given to occupational trends within the industrial structure of the state.

The major methodological orientation of this study is demographic, descriptive, and historical. Distribution of workers by major occupational classes during the years 1940, 1950, and 1960 will be shown and related to demographic variables. On the basis of the facts analyzed, some general inferences will be made with regard to basic changes in the social structure of the state.

A major methodological contribution of this study is the development of a measure of affinity of demographic categories for occupational classes. This simple statistical device has proven to be an effective and useful instrument for measuring the extent and direction of occupational trends. The measure of affinity is essentially a correlation coefficient based on computations from two-by-two

tables. It combines in one statistic not only a measure of persons in the i^{th} demographic category, but also a measure of persons in the i^{th} category who are also in the j^{th} occupational category. For example, the measure of affinity can and does not only reflect the proportion of females in professional occupations, but also the proportions of professional workers who are females.

In this study, the measure of affinity is used mainly as a statistical device to show the extent and direction of change. However, the measure also has an implied sociological meaning for this study, for it represents the relationship between an individual and his occupation.

Another important methodological contribution of this study has been the analysis of changes in the labor force and in occupations in terms of two components of change: changes in the structure of the labor force and changes in the magnitude of the labor force within general and specific demographic categories. Structural changes indicate whether there has been vertical movement among the occupational classes; whereas, magnitudinal changes indicate increases or decreases in the size of occupational classes. In measuring the structural component, magnitude is held constant; and in measuring magnitude, structure is held constant.

The primary thesis of this study is that occupational trends in the state are operating in the same direction as

in previous years--but at an increased tempo. Another major hypothesis of this study is that the basic social structure of the state has not undergone significant changes. That is, although major increases or decreases in occupational categories may have occurred, the social status pyramid may not have changed significantly. A decrease in the number of low status agricultural workers, it is hypothesized, has resulted in a corresponding increase in the number of low status workers in other industries.

Special attention will be given to the larger and more significant trends including the decline in the agricultural labor force, the increase in the employment of women in certain occupations, the changing employment of white and nonwhite workers by occupation, and the relationship of employment of young and aged workers to occupational changes.

The significance and implications of the findings of this thesis will be discussed in terms of general causal factors and in terms of current problems of education and social adjustment. Special emphasis will be given to technological change, increase in the total population, urbanization, industrialization, and the migration from farms. The relation of occupational changes to educational trends and needs will be discussed also. Finally, the relation of the observed changes to employment opportunities of Negro workers will be evaluated.

Theoretical Orientation

Interdependence of Society

Society may be thought of as an entity, and it provides an ecological model of dominance and interdependence among parts. Society, as an entity that may be considered apart from the life of its individual members, rests upon the interdependence and interworking of its parts (North, 1926). Thus, in attempting to understand a society and its major institutions, one cannot overlook the work institution with its array of occupations. Occupation, as well as education and income, is a major force influencing the position of an individual in the social structure.

Durkheim (1949) held that in any highly developed region, state, or nation there had to be interdependence of the parts of structure of society. According to Durkheim, an increase in the density of population brought about increased specialization. Therefore, with a collection of population, a division of labor and an occupational specialization arise; thus, a working force evolves from a market economy. A collection of population provides a major attracting force for industries to locate near that collection. A collection of population insures a source of labor, a source of potential if not actual occupational specialization, and a market for goods produced.

Occupational Stratification

A system of occupational stratification has been observable in most societies. And yet, whatever be the different temporary bases of occupational stratification at different times and in different societies, side by side with these partially changing bases there seem to exist some bases which are permanent and universal (Sorokin, 1927). Sorokin felt that there were two conditions fundamental to the development of a somewhat universal and permanent system of occupational stratification: first, the importance of an occupation for the survival and existence of a class as a whole; and second, cultural conditioning determines whose intelligence is permitted to apply itself to a high-prestige occupation. Thus, Sorokin concluded that in any given society, the more occupational work consists in the performance of the functions of social organization and control, the more privileged is that group and the higher rank does it occupy in the occupational hierarchy, and vice versa. Also, the higher the degree of intelligence necessary for its successful performance, the more privileged is that group.

Sorokin offered three confirmations in support of an occupational stratification structure in society. The first confirmation is the almost universal and permanent fact that the occupational groups of unskilled manual workers have always been at the bottom of the occupational hierarchy. Secondly, the manual occupational of these

groups as a whole have been always less privileged, less paid, less influential, and less esteemed than the intellectual occupational groups. Thirdly, the nature of the occupation of those individuals and groups which have composed the highest strata in different societies, which have had the highest prestige, the highest income, and which have composed their aristocracy supports a system of occupational stratification.

The larger that a society is, the more refined is its occupational specialization. As a society becomes larger and more complex, it becomes necessary to delegate duties and positions to individuals, thus developing specialization. Any society or organization may be thought of as a set of related statuses and any person may then be located by naming the status he occupies (Gross, 1958, p. 99). And yet the position of individuals in the social structure has consequences: their prestige positions in the community, their family relations, their religious and civil affiliations, their interests, and nonwork activities in general. In fact, the position of the individual in the social structure influences the sociological and psychological development of the individual and influences his attitudes concerning himself and the people interacting with him.

A division of labor in society is accompanied by a system of stratification. Division of labor means the

allocation of functions to persons; that is, each person occupies a position with its appropriate roles in the working force. Stratification may be defined as a system of differentially valued positions in society. Stratification and status are important in this framework because an individual's position within the overall social structure is determined largely by his occupation in contemporary, largely urban, and industrial society.

Importance of Occupations

The occupation of an individual and where the individual works are of tremendous importance. Dublin and Lotka (1936, p. 220) wrote that:

The work a man does, the conditions under which his work is done, and the wages he receives for doing it determine in great measure the circumstances of his life, the house he lives in, the clothes he wears, the food he eats, and his recreation. A man's occupation is, therefore, one of the most potent factors in deciding the state of his health and fixing the length of his life.

Depending on the occupation of an individual, one can estimate how much his income is, whether he is likely to be married or not, the size of his family, where he lives, where he works, how he spends his leisure time, and what clubs he belongs to. And from our estimates of these things, we in turn make a judgment as to how we should behave toward him. Occupations have become so important to us because place of origin and name have become unreliable

as indices of status (Gross, 1958). Thus, from a sociological point of view, occupations are important because of the interaction in work relationships. Occupations and work provide us with one of the major bonds through which we are provided with a fundamental index of status and self-respect.

Occupations are not only important in interaction patterns, but they also greatly influence the development of the individual. The occupation that an individual pursues stamps him with mental and physical traits characteristic of the form and level of his occupation, defines his social interactions, influences his political affiliations, limits his interests and aspirations, and shapes the boundary of his culture. Thus, occupation may be thought of as the supreme determinant of the course of the human life.

Significance of Study

There has been long and continuous sociological interest in measuring the social status of occupations. This interest derives in part from attempts to describe a social stratification structure where differences in the social status of occupations define the social strata. Change, as well as occupation, is a major influence in the interactions of an individual and his well-being. Also, every society is characterized by an interplay of those

forces making for cultural stability and those making for change. Social change represents any observable difference in any social phenomena over any period of time. Just as society is dynamic, the occupational structure is dynamic and ever-changing. In fact, when a society is as dynamic as ours, it is inevitable that the occupational structure would also be dynamic. Thus, an analysis of the state's changing occupational structure should throw considerable light on other social changes.

The analysis of the state's labor force would illuminate important aspects of the occupational structure.

Anderson and Davidson (1940, p. 1) wrote that:

The study of occupational trends is essential to show the shifts in occupational emphasis and in the use society makes of its workers.

Information of economic activity does more than describe certain characteristics of the people: it furnishes broad measures of their levels of living and their comparative well-being. Such an analysis also reflects the economic needs of families in different segments of the population, technological and economic developments affecting work opportunity, the degree of industrialization and urbanization, and social customs and legal restrictions with respect to work by women and children.

In order to counsel students and prospective employees and to offer information concerning occupations, the counselor must have a knowledge of the occupational structure of

an area. This study could reveal opportunities and prevent training for declining occupations by describing trends, the structure itself, and the demographic characteristics of the persons in the labor force.

A description of the state's labor force would be valuable in indicating occupations where increased numbers were needed to fill the occupations and indicating areas with sufficient resources of current and potential manpower.

The measure of affinity provides a ready assessment of the extent and direction of changes in the occupational structure. It also provides the correlation between occupation and demographic variables such as sex and color from which we can obtain estimates of discrimination against females and nonwhite populations.

The scope of this study does not include a projection of trends into the future. However, trends are useful indicators of social and economic changes. Measures of the occupational structure indicate the economic well-being of the population, and the numbers employed in occupations are useful indicators of social well-being. Occupational trends may indicate the direction that our economy is taking.

This study also has implications for manpower planning for economic development in the state. Also,

results could be used in planning for vocational training in the state.

Summary

The purpose of this study is to observe and evaluate the extent, direction, and significance of changes in the state's occupational structure. The primary hypothesis of the study is that trends are operating in the same direction but at an increased tempo.

The major theoretical orientation rests on the description of the institution of work with its array of occupations. The sociological orientation rests on the importance and role of occupations in determining the position of an individual in the social structure.

The study is significant in its evaluation of change and the use society makes of its workers. The measure of affinity representing the relation between individual and occupation is an important development in the methodology of measuring change in the occupational structure.

Review of Literature

Introduction

Several major viewpoints from literature have relevance for the study of changes in the occupational structure of the state. Methodological studies are particularly important in terms of the development of concepts and the

organization of the occupational structure. Previous studies concerning the analysis of trends are also very important as a background for this study. Sociologically, the primary works from literature are studies based on the attempts to locate the position of an individual in the social structure by means of his occupation. Closely related are studies of the mobility of the individual in the social structure. Changes in occupations in many cases indicate changes in the position of the individual in the social structure.

There have been no studies of occupational trends at the state level. Studies at the national level in many cases have only been collections of tables with little or no interpretation of the tables. For example, see the study of Kaplan and Casey (1958).

The literature sources cited are important for the development of concepts used in labor force studies such as this study. The literature cited also illustrate possible uses of occupational and labor force statistics from secondary sources.

Methodology and Descriptions of the Labor Force

Methodological books concerning development of concepts are important in this frame of reference. Ducoff and Hagood (1947) presented a valuable work in the development of the labor force concept and the methodology of the

measurement of the labor force. Jaffe and Stewart (1951) emphasized the development of a concept related to a theory of economic development. Their methodological work was from an economic frame of reference. The work included a discussion of statistical sources and procedures, size of the labor force, and composition of the labor force.

Especially relevant in this frame of reference are books in the field of occupational trends and description of the American labor force. Durand (1948) summarized the changes in the characteristics and size of the United States labor force from 1890 to 1940, and projected these trends unto 1960. Durand offered interpretation of the trends and related them to problems of society. He described his statistical procedures and methods in deriving comparable data for the censuses from 1890 to 1940.

Anderson and Davidson (1940) in their first book of occupational trends summarized the general occupational trends and discussed the importance of trends and the factors affecting trends. The authors presented a thorough analysis of occupational trends in all the industrial-occupational classes. In a second book, Anderson and Davidson (1945) used Edwards' system of classification. The authors indicated trends in the major occupational classes. They included somewhat of a projection by offering their observations on the postwar prospects of labor.

Bancroft (1958) described the American labor force from an economic point of view. Her study was devoted to an examination of the ways in which the economic activity of the American people has been changing and of the factors underlying the changes. She presented the trends by variables in the occupational classes and also offered projections until 1975.

Thomas (1956) has an important study of the occupational structure as related to education. He discussed the idea of an occupational structure, characterized the labor force, and discussed the influence and importance of different variables on the occupational structure.

Occupational Prestige and Class

Kahl (1957) brought together in a well-organized way the research findings of the past thirty years which have illuminated the American class structure. His book included results from all facets of research on the social structure.

Lynd and Lynd (1929) lived in "Middletown" in order to study the class structure and occupational changes that occurred in the recent past. The Lynds found two major classes--business and working--depending on skill and occupation. In 1935, Lynd (1937) found six major classes in "Middletown." A man's occupation was found to be a major influence in shaping his life. From the Lynd studies, one observes that the stratification structure becomes more

extensive and specialized as the occupational structure becomes more diversified and specialized.

The National Opinion Research Center (NORC) study under the direction of North and Hatt (Opinion News, Sept., 1947, 9:3-13) was based on the opinions of a representative sample of the American adult population in 1947. Persons were asked to give their opinions about ninety occupations. The results clearly showed that the people had a prestige scale in mind and placed various occupations on a scale with considerable consensus.

Hodge et al. (1964), following the methodology of the first NORC study, repeated the study. Results showed very little change and a stability of occupational morphology. The small changes (increases in prestige scores) were probably due to more knowledge of occupations by the respondents.

Campbell (1952) and Centers (1953) conducted studies using the NORC scale of occupations. Both researchers asked people's opinions as to where occupations should be placed in an occupational structure. Major findings were that there is more known about the ends of the scale, and people will enlarge their own class by including other occupations not in their class group.

Occupational mobility

Occupational Mobility

Equally important in this field are the studies of occupational mobility. Davidson and Anderson (1937) conducted a study of occupations in California. The study was intended to disclose all the major features of the occupational life history of each respondent. Findings were offered as to occupational inheritance, time of first job, role of schooling, number and duration of occupations followed, vertical movement, career patterns, and geographic migration. Major findings were that occupational inheritance had decreased, first jobs characterized mature jobs, schooling raised cultural level, and fifty per cent of the respondents moved geographically.

Lipset and Bendix (1959) presented results of the Oakland study of intra-generational occupational mobility. They also brought together and analyzed the comparative international research on social mobility. The authors reported findings on comparative rates of mobility. They summarized available mobility material from other countries and discussed the role and nature of mobility in an industrial society.

Results of National Studies

Although there have been no studies of occupational changes and trends at the state level, there are numerous studies at the national level.

Important studies have been made by Ducoff and Hagwood (1947), Jaffe and Stewart (1951), Durand (1948), Anderson and Davidson (1940) and (1945), Bancroft (1958), Thomas (1956), Kahl (1957), Form and Miller (1960), Dubin (1958), Nosow and Form (1962), Spaulding (1961), and Bendix and Lipset (1953) and (1959).

Major results of these studies indicate a sharp decline in agricultural occupations, a rapid increase in the number of female workers, and a rise in numbers of workers in the skilled occupations of urban places. The number of persons in the labor force is a stable proportion of the total population. The labor force is aging. Definite trends since 1910 have been increases in numbers of workers in professional, clerical, and operative occupations and decreases in numbers of workers classed as laborers and service workers. The general educational level of workers has increased.

Negro workers were found to be younger than white workers and less educated. There were larger proportions of Negro females than males and larger proportions of Negro workers in low-status occupations than white workers.

Summary

Methodological studies were important in development of concepts and methods. Descriptive works such as Durand's (1948) are important in studying the historical development

of the labor force. Anderson and Davidson (1940, 1945) have been pioneers in the study of occupational trends.

However, the development of a socioeconomic scale of occupations by Edwards was the basis for the majority of the above studies.

Although Edwards' scale is only one way of grouping occupations, it has been widely used as the above studies support. These studies do not exhaust the field, but in the author's opinion they are the most relevant ones for this frame of reference. The majority of the occupational studies were in the field of occupational prestige-status studies. Few sociologists have studied trends in the occupational framework; thus the need for research in this field is discussed in the last chapter.

Results of studies of changes and trends indicate a rapid decline in agricultural occupations, a rapid increase in the number of skilled workers, and a tremendous upsurge in the number of female workers since 1940.

METHODOLOGY

Research Procedures

Introduction

The primary aim of this study is to describe changes in the occupational structure of the state. However, consideration of the following hypotheses is enlightening in evaluating change. First, there is a difference in the distribution of workers in occupational categories in 1940 and 1960. Secondly, there has been a general upward class movement in the social structure of the state. Thirdly, there are differences in the distributions in occupational categories by demographic variables in 1940 and in 1960.

The methodological orientation of the study is descriptive and demographic. The general approach is to describe and to measure occupational trends and to compare trends among the various demographic classes of the population. Inferences and interpretations are made regarding the significance of the more important findings. Statistical tools employed in this study are percentage distributions, theoretical distributions, percentage change between two time periods, analysis of variance techniques, components of change analysis, and the measure of affinity for occupations.

Percentage Distributions

Percentage distributions are useful in describing the actual allocation of individuals in the occupational structure. A comparison of the percentage distributions of the different times that the censuses were taken gives a preliminary evaluation of trends in the state. However, with data from several decades, it is rather difficult to get a good picture of what is happening with only the use of percentage distributions. Differences between percentage distributions are useful indicators of direction of changes and degree of change. Mathematically, the differences, which have a range of minus one and plus one, are regression coefficients. For example, the difference cannot be greater than absolute one or less than zero. So, depending on the direction of the difference, the difference is plus or negative in sign. A negative difference indicates a decrease in that category and, vice versa, a positive difference indicates an increase in that category over the time period. The size of the difference would indicate the extent or degree of the change between two time periods.

Theoretical Distributions

In viewing the differences between distributions of two decades, the concept of a theoretical distribution is important. The theoretical figures for 1960 were obtained by assuming no differences between the relative or percentage

distributions at the beginning and end of the time period. Thus, the total number of employed persons in 1960 were multiplied by the percentage distribution of 1940 occupational categories. The theoretical distributions are important in viewing what the distribution would have been like if the 1940 distribution had prevailed. For example, consider the following:

<u>Occupational class</u>	<u>1940</u>	<u>1960</u>	
		<u>Actual</u>	<u>Expected</u>
Professional	400	500	600
Nonprofessional	600	1,000	900

The "expected" distribution of 1960, thus, has the same percentage distribution as the 1940 distribution. However, the use of theoretical distributions imply the same rate of change in every occupational category which is unlikely.

Percentage Change

Percentage change in number of workers between two time periods measures relative change in an occupational class. This measure is helpful in viewing the degree of change between two dates. The largest disadvantage of this measure is that the percentage changes do not discriminate between the absolute numbers involved in the change. Thus, the largest and smallest categories could have the same percentage change. Therefore, absolute numbers have to be

considered in conjunction with percentage change in order to evaluate important changes in various categories.

Analysis of Variance in Participation Rates

Participation rates in the labor force were analyzed by analysis of variance techniques to determine the amount of variation between participation rates contributed by demographic variables and interaction between variables. The F-test was used to test mean squares for significance. Three- and four-way interactions were used as the error mean square. After the first test, nonsignificant mean squares were combined with the error term to make a final test of significance.

Components of Change

Change in labor force participation rates and occupational distributions was broken into components of change by a method suggested by Kitagawa (1955). The total change can be broken into two components: (1) change due to changes in age structure, and (2) change due to changes in age-specific rates. The total change is simply the difference between the crude participation rates at two different points in time, e.g., 1940 and 1960. The component of change due to changes in specific rates is obtained by computing an age-adjusted, or weighted average participation rate for each year, using as weights an average of the two base

population distributions by age. The difference between the two age-adjusted rates is subtracted from the difference between the two crude rates to obtain the component of change due to changes in age structure of the two base populations.

Percentage changes in the number of workers by occupation, but not by age, were also broken into components. In this case, however, the components consist of: (1) a magnitude component and (2) a structural component. The magnitude component is simply the percentage change between two points in time in the total number of workers without regard to occupation. Had there been no changes in the percentage distribution of workers by occupation (i.e., in the occupational structure), the number of workers in each occupation would have changed by the same percentage as did the number of total workers. The structural component of change for a given occupational class is obtained by subtracting the magnitude component from the actual percentage change in the number of workers by occupation.

The components of change are useful in determining what part of the total change is caused by changes in specific rates and by changes in the occupational structure. They also provide an image of what the occupational structure would have been like if, unrealistically, there had been no changes in structure and/or specific rates.

Measure of Affinity

The measure of affinity of a demographic class for an occupation overcomes some of the disadvantages of and supplements other techniques for measuring change; it is used to measure both the extent and direction of change. It combines in one measure the vertical percentage distribution of the occupational structure of a given year and the horizontal percentage distribution of workers in an occupational category across another variable or set of demographic categories. It is actually a coefficient of correlation between a demographic variable and an occupational variable.

The procedure for determining the coefficient of correlation between occupation and another set of demographic categories is illustrated below. Basically, the coefficients are determined from a series of two-by-two tables of frequencies; but actually, the computation is accomplished by using vertical and horizontal percentage distribution tables already available from other phases of the study.

As a generalized example, the correlation between sex and the professional variables may be determined from the following model table of frequencies:

<u>Variable Y</u>	<u>Variable X</u>		
	<u>Male</u>	<u>Female</u>	<u>Total</u>
Professional	A	B	A+B
Nonprofessional	C	D	C+D
Total	A+C	B+D	N

The regression of occupation on sex is:

$$b_{yx} = \frac{B}{B+D} = \frac{A}{A+C}$$

The regression of sex on occupation is:

$$b_{xy} = \frac{B}{A+B} - \frac{D}{C+D}$$

Thus, the correlation or affinity coefficient is:

$$r_{xy} = \sqrt{b_{xy} \cdot b_{yx}}$$

These computations are easily made by the use of two percentage distribution tables: (1) distribution of all workers by occupational class--a vertical distribution table--and (2) distribution of workers of a given occupational class by a demographic class such as sex, age, color, etc.--a horizontal distribution. These vertical and horizontal distribution tables are already available because they have been used in the simple descriptive aspects of the study. However, these tables do not provide directly the values needed for the calculation of the regression and affinity coefficients; but, they nevertheless, do provide indirectly the needed values. For example, the vertical percentage distribution of workers by occupational class does not provide the proportion $\frac{D}{C+D}$; but the same results may be obtained by an indirect formula based on $\frac{B+D}{N}$ and $\frac{A+B}{N}$ which are available from the vertical and horizontal percentage distribution

tables. The indirect formula for b_{xy} may be written as follows:

$$b_{xy} = \left[\frac{B}{A+B} - \frac{B+D}{N} \right] \left[\frac{1}{1 - \frac{A+B}{N}} \right]$$

Derivation and proof of this indirect formula is seen in the similarity of the following two expressions:

$$(1) \quad \frac{B}{A+B} - \frac{D}{C+D} = \frac{BC - AD}{(A+B)(C+D)} = b_{xy}$$

$$(2) \quad \frac{B}{A+B} - \frac{B+D}{N} = \frac{BC - AD}{N(A+B)}$$

These two expressions differ only by one factor in the denominator. If the second expression is divided by the first, $\frac{C+D}{N}$ is obtained. Now since $\frac{C+D}{N} = \frac{N - (A+B)}{N} = 1 - \frac{A+B}{N}$, the second expression may be divided by $1 - \frac{A+B}{N}$ to obtain

b_{xy} . That is:

$$b_{xy} = \left[\frac{B}{A+B} - \frac{B+D}{N} \right] \left[\frac{1}{1 - \frac{A+B}{N}} \right]$$

If the X-variate (say sex) is dichotomal, it is not necessary to use an indirect formula to get b_{yx} . If the X-variate should be polychotomal, then we can write:

$$b_{yx} = \left[\frac{B}{B+D} - \frac{A+B}{N} \right] \left[\frac{1}{1 - \frac{B+D}{N}} \right]$$

Thus, the measure of affinity is a measure based on the correlation between two dichotomal variables: occupation

and a demographic variable. However, the correlation coefficient is signed to show "affinity" between a specific demographic class and a specific occupation; for example, female sex and professional occupation, rather than just a measure of correlation between sex and occupation. The measure has the properties of the correlation coefficient r , varying from minus to plus one.

If the measure were positive, this would indicate positive affinity of females for, say, the professional category. The measure is the same for the opposite of the dichotomy with the sign reversed. That is, if the affinity of females for the professions is positive, the affinity of males for the professions is negative. In other terms, the affinity coefficient reflects not only the proportion of the workers who are in the i 'th demographic class (such as female, or age class 14-19), but also the proportion of all workers of the i 'th demographic class who are in the j 'th occupational category.

Measures of affinity for each category and for each year are used in describing and measuring trends in the occupational structure. Sign of the measure indicates direction and the size of the coefficient indicates degree of affinity. The difference between affinity coefficients in time represents the direction and amount of change.

Source of Data

Two possible sources of data for occupational studies exist: the Monthly Report on the Labor Force and the decennial censuses. Bancroft (1958) felt that the Monthly Reports on the Labor Force were better estimates of the number of people in the labor force than the decennial censuses because of the superior training of the personnel making the monthly surveys. However, she pointed out that for an analysis of areas below the national level, the only data available are the decennial censuses. Therefore, in this study, the decennial censuses serve as the sources of data.

The data used in this study for 1950 and 1960 are based on sample data, while data for 1940 were complete-count data. The data for 1960 are based on a 25 per cent sample, and the data for 1950 are based on a 20 per cent sample. For purposes of this study, these different percentage samples do not affect the comparability of occupational classifications. The variances of the estimates for different years vary greatly, but yet, the sample data provide as efficient estimates as a complete count because of the difficulty of an accurate complete census. Yates (1960) felt that the use of sampling frequently provided more accurate information than complete censuses because the random sampling errors are assessable. Other errors such as incompleteness and inaccuracy of information are

liable to be more serious in a complete census than in a sample census. Also, a complete census can only be properly tested for accuracy by some form of sampling check. The occupational classifications for the three censuses have remained relatively stable with few changes in the major classes.¹

Time Period

Certain factors necessitate a span of twenty years for this study. First, this time period is sufficient to permit a comparison of 1950 and 1960 with a pre-war bench mark. Secondly, the time period is long enough for certain basic trends and differences to be observable, yet short enough for manageability. Finally, the census data used and the definitions involved are relatively comparable for this period. For example, the introduction of the labor force concept in 1940 enables one to make a comparable study for the past two decades.

Description of Variables

Demography has an important role in explaining certain facets of society. Halbwachs (1960, pp. 196-197) wrote that:

...the facts of population permeate every aspect of the framework of special sociologies, and it is in this

¹The occupational classes for 1940 include persons in the armed services. The clerical and kindred workers and sales workers are combined into one category for 1950 and 1960.

this respect that there is a morphology in the broad sense that studies population and its forms in their relationships with the diverse activities of society.

Halbwachs (1960, p. 189) also said that:

Population, as such, is a specific reality and ~~also~~ autonomous in the sense that it is necessary to explain population facts by other population facts.

For example, the study of changes in the social structure involves the analysis of changes in the occupational structure. Thus in this study, demographic variables will be used to evaluate and characterize changes in the labor force of North Carolina for two decades.

Until the depression of the thirties, the American economy and social policy were largely laissez faire (Jaffe and Stewart, 1951). Also, the emphasis on the collection of adequate occupational statistics was not appreciable. This laissez faire economy broke down during the great depression. Because of large numbers of unemployed workers suddenly cast on society the need for current and adequate occupational statistics was evident. Until this time, no attempts had been made to estimate and record unemployment. Current unemployment and other labor force statistics were recognized as valuable indicators of economic fluctuations after the experience of the depressions.

In order to estimate unemployment, the Bureau of the Census in 1940 introduced the labor force concept to replace the gainful worker concept. The purpose was to refine the

concept in order to obtain an estimate of the number of unemployed. The gainful worker concept differed from the labor force concept in that it included persons 10 years of age and older who reported a gainful occupation, regardless of whether or not they were working or seeking work, and excluded those without experience in a gainful occupation.

Edwards (1943) was commissioned by the Bureau of Census to develop a set of comparable occupational statistics for researchers from the United States census data from 1870 to 1940. The first part of his work is a comparison of occupation and industry statistics for 1930 and 1940. Edwards next offered comparative occupation statistics from 1870 to 1930. In the third section of his work, Edwards developed a socioeconomic grouping of occupations. Each step up the classification scheme is accompanied by an increase in education, income, and prestige.

Kahl (1957, pp. 64-65) had the following to say about the tremendous job of classification that Edwards did:

Edwards had to find a way of classifying thousands of occupations into a few niches of equal 'social-economic status.' He did not use a single definition of status; he lumped together factors such as the nature of the work, the skill and training involved in it, the income it brought, and common opinion about its prestige. He probably could have done little else, since his job was to reorganize existing historical data and not to do original research; yet it is unfortunate that his rule-of-thumb classifications have been so widely adopted by research men as measures of occupational prestige.

Using the basic assumptions and estimates of Edwards, Kaplan and Casey (1958) have up-dated Edwards' earlier work. The process of up-dating Edwards' work involved bringing together certain of the separate series developed by him, preparing new estimates to fill gaps, and adjusting the appropriate figures to conform to the definition of the 1950 occupational classification system.

The Bureau of the Census has refined the occupational classificatory system by the development of a socioeconomic status scoring system which serves as an objective base for the combination of occupations to form status groupings. The Bureau of the Census (1963, Working Paper 15) developed the socioeconomic score by combining data on occupation, income, and educational attainment. The score was figured by taking a simple average of individual scores of occupation, income, and educational attainment of the chief income recipient. This score was assigned to all other family members. The items of occupation, income, and educational attainment were used because it was felt that they represented different aspects of socioeconomic status and also because they were included in the current and other population censuses and surveys. The score was designed primarily for use in comparative analysis.

The occupational groupings used in this study are the groupings developed by the Bureau of the Census; that is, the classificatory system developed by A. M. Edwards (1943).

Each step up the system is theoretically accompanied by an increase in income, education, and prestige.

The changes in schedule design and interviewing techniques for labor force questions had little effect on the comparability between the censuses for 1940, 1950, and 1960.

The occupational categories are described below.

1. Professional, technical, and kindred workers-- Includes engineers, medical and other health workers, teachers, and other workers. Important² occupations in this category are clergymen, engineers, nurses, and teachers.
2. Farmers and farm managers -- Includes owners-operators, tenant farmers, and share croppers. Major occupations are owners and tenants.
3. Managers, officials, and proprietors, except farm--includes buyers, managers, creditmen, society and union officials, postmasters, purchasing agents and etc. Primary occupations are manufacturing and retail trade managers and officials.
4. Clerical, sales, and kindred workers -- Includes secretaries, stenographers, typists, other clerical workers, salesmen, insurance agents, sales clerks and salesmen in retail trade, etc. Major occupations are salesmen, sales clerks, secretaries, and insurance agents.
5. Craftsmen, foremen, and kindred workers -- Includes construction craftsmen, mechanics and repairmen, metal craftsmen, and other craftsmen. Major occupations are mechanics and repairmen, manufacturing foremen, and carpenters.
6. Operatives and kindred workers -- Includes drivers and deliverymen, and other operatives and kindred workers. Primary occupations are truck and tractor drivers and textile workers.

²Important, major, or primary in terms of numbers in North Carolina

7. Private household workers -- Includes baby sitters, housekeepers, and laundresses in private households. Important occupations are private household workers.
8. Service workers except private household -- Includes protective service workers, waiters, cooks, bartenders, and other service workers. Major occupations are barbers, protective service workers (policemen and firemen) janitors, waiters, and hairdressers.
9. Farm laborers and farm foremen -- Includes unpaid family workers and self-employed farm service laborers. Primary occupations are paid and unpaid farm workers.
10. Laborers except farm and mine -- Includes carpenters' helpers, car washers, fishermen, longshoremen, etc. Important occupations are manufacturing and construction laborers.

Demographic Variables

Demographic variables in this study are residence, color, sex, age, education, and income. For the variable of residence, the employed workers were classified by the conventional residence groupings of urban, rural-nonfarm, and rural-farm. Places with populations of 2,500 or more are classified as urban, and the population outside these places are classified as rural. The segment of the rural population residing on farms is classified as rural-farm and the remainder of the rural population is classified as rural-nonfarm. Similarly, employed workers were divided by color--white and nonwhite--and by sex--male and female.

Because of the lack of data at the state level, generalizations about the level of educational attainment were

based on data for the United States and the South for the 1950 and 1960 censuses. These data were presented for the total and nonwhite populations by median years of school completed. Data for the variable of income were available only for 1950 and 1960 and only for the nonwhite population in 1960. Median incomes or wages by occupational categories were presented.

The marital status of persons in the labor force was presented for the categories of single persons, married persons with the spouse present, and a category composed of widowed, separated, and divorced persons.

Definition of Concepts

Data on employment status were derived from questions on the census household questionnaire. The questions were designed to identify: (a) persons who worked at all during the reference week; (b) those who did not work but were looking for work or were on layoff; and (c) those who neither worked nor looked for work but had jobs or businesses from which they were temporarily absent. Data obtained were for primary occupations of individuals. For example, if an individual had more than one job, then the job at which he spent the most hours was the one enumerated.

For purposes of this study, the labor force was defined as including all persons 14 years of age and over classified as being employed, unemployed, or as members of the Armed

Forces. The civilian labor force comprised only the employed and unemployed components of the labor force. The experienced civilian labor force comprised the employed and the experienced unemployed.

The category of not in the labor force consisted of all persons 14 years of age and over who were not classified as members of the labor force and includes persons doing only incidental unpaid family work. Most of the persons in this category were students, housewives, retired workers, seasonal workers, inmates of institutions, or persons who cannot work because of long-term physical or mental illness or disability.

The data on employment refer to the calendar week prior to the date on which the respondents filled the questionnaire or were interviewed by enumerators. This week was not the same for all respondents because not all persons were enumerated during the same week. The majority of the population was enumerated the first half of April in 1950 and 1960. The reference week for 1940 was the last week of March.

Employed persons comprise all civilians 14 years of age and over who were either (a) "at work"--those who did any work for pay or profit, or worked without pay for 15 hours or more on a family farm or in a family business; or (b) were "with a job but not at work"--those who did not

work and were not looking for work but had a job or business from which they were temporarily absent because of bad weather, industrial dispute, vacation, illness, or other personal reasons.

In 1940 the members of the Armed Services were classified among the employed and included in the data by occupational category.

Persons were classified as unemployed if they were 14 years of age and over and not "at work" but looking for work. A person was classified as looking for work not only if he actually tried to find work during the reference week but also if he had made such efforts recently and was awaiting the results of these efforts.

In this study, a trend was defined as a prevailing inclination or tendency. Trends were observed by means of measures of affinity for occupations. The measure of affinity is a measure of the degree of association or correlation between an occupational category and demographic variable. For example, a measure of affinity could be determined for the professional category as related to sex. This measure would indicate the degree of correlation between the occupational variable (professional-nonprofessional) and the sex variable (male-female). Thus, each coefficient of affinity was determined by use of a two-by-two frequency table. Formulas and computing procedures are presented elsewhere. Measures of affinity for the time

period (1940, 1950, and 1960) were used to determine the relationship of observed trends in occupational categories to selected demographic variables.

Labor force participants are those persons who were classed as employed, unemployed, or members of the Armed Forces. As it was stated above, those persons not in the labor force were usually classified as housewives, students, inmates of institutions, and others. Labor force participation was measured by the percentage of persons in the labor force.

The social class determinants of income, education, and occupation were used as the bases for dividing the nonagricultural occupational categories into three status groups. The Bureau of the Census (1963, Working Paper No. 15) developed a socioeconomic status score using the above variables. The score was a simple average of the scores for each variable. These socioeconomic status scores were the objective basis for the division of the occupational categories into three status groups. The high-status occupational group was comprised of the categories of professional, technical, and kindred workers and managers, officials, and proprietors. The middle-status group was composed of the categories of sales, clerical, and kindred workers, craftsmen and kindred workers, and operatives and kindred workers. The low-status group was comprised of private household workers, service workers, other laborers,

and workers with occupations not reported. Theoretically each status group is made up of occupations with similar educational requirements, prestige, and salary or income received, but in reality, each occupation has a distribution of these variables.

Agricultural occupations were classified as one group for purposes of this study; although discrimination between some occupations was lost. The basic reason for this combination of these separate categories is that the concepts used in these agricultural categories do not reflect individuals of a similar grouping to permit including the class in the above system. For example, the concept of farmer in North Carolina includes owners, part-owners, tenant farmers, sharecroppers, etc. Grouping all of the agricultural occupations together permits observation of changes in this major industry and redistribution of workers in the nonagricultural occupations as a result of the major declines in number of persons involved in the agricultural industry.

Summary

The data used in this study were from the censuses of 1940, 1950, and 1960. The primary emphasis was on description by demographic variables in order to observe changes in the occupational structure. Concepts were defined primarily by the method of the Bureau of the Census.

Major statistical tools employed were percentage distribution, percentage change, differences between percentage distributions, theoretical distributions, analysis of variance techniques, components of change, and measures of affinity for occupations.

The concept and the methodology of affinity for occupations were introduced in hopes of improving the methods of measuring changes in the occupational structure. The methodology used in breaking change into components of change corresponds to the methodology of standardizing populations to observe changes as in the total population.

THE LABOR FORCE

Labor Force Participation

Introduction

The primary purpose of this chapter is to describe and to evaluate the changes which have occurred in labor force participation in the past two decades. Since 1940, the total labor force participation rate has remained somewhat constant. However, noting changes in total categories means little without a further analysis of important changes which have occurred in specific demographic categories of the population. For example, labor force participation depends largely on the age and sex of the individual. Certain age and sex groups have relatively low participation rates and other age-sex groups have high rates. In evaluating changes in labor force participation for the state's population, it is necessary, therefore, to consider not only participation rates and changes in rates for specific groups, such as young nonwhite females, but also changes in the age-sex structure of the labor force. Thus, changes in total participation can be seen as the result of two factors: (1) changes in age-sex and other specific rates (magnitude), and (2) changes in the composition of the labor force (structure).

As it was defined previously, the labor force is comprised of all persons 14 years old and over classified as

employed, unemployed, or members of the Armed Forces. In this study, attention is focused on the civilian labor force, that is, the employed and unemployed. Those persons not in the labor force are usually classified as students, housewives, retired persons, inmates of institutions, or persons physically or mentally unable to work. For purposes of this study, labor force participation is measured by the percentage of the population in specific demographic categories who are in the labor force. For example, the labor force participation rate of white females in 1960 was 36.7 per cent; thus, of all white females 14 years of age and over in 1960, 36.7 per cent were in the labor force.

It is not the purpose of this study to discover causes of changes in the labor force. However, some general hypotheses and interpretive explanations will be stated. In general, many forces affecting occupational changes are well known.

Age seems to be the factor most highly associated with labor force participation. Thus, the distribution of the population by age for the decades represented in this study would illuminate variations in the supply of potential workers in different age groups. For example, if the distribution "aged" in a time period--that is, if more of the population were in the older age groups than were in these age groups the preceding decade--then the change in the

distribution of the population by age could be a factor affecting change in total labor force participation.

Many economic factors are important influences in labor force participation. Inherent in this discussion is the concept of an economically active population. Basically, the economically active are the employed persons. Thus, the proportion of persons in the economically active population would influence the percentage of persons in the labor force. Therefore, participation in the labor force may vary from category to category of the population.

Another factor which may influence labor force participation is the phenomenon of two-income families. There has been an increase of families with both mates working. Varied reasons could be offered in an attempt to explain the increase--from a monetary need to a psychological need for work. And yet, the family cycle determines in many cases the decision to work. The family with no small children may have both mates working; while if there are small children in the home, only the father may work. The key factors influencing the decision for both mates to work seem to be need (psychological and financial) and family cycle.

Closely related to age and family cycle is the phenomenon of early retirement. The emphasis on early retirement and the numerous retirement plans permit and encourage early exit from the labor force. Also, the increased

coverage of persons by retirement plans, for example the coverage of farmers and self-employed persons by Old Age Survivors Insurance, has encouraged early retirement. Thus, early retirement may be a major influence in labor force participation of older persons.

A factor influencing the labor force participation of younger persons is the increased emphasis on education. The longer that the individual stays in school means a later entrance in the labor force. A decrease in secondary school dropouts and an increase in college enrollments implies that fewer young persons will seek to enter the labor force, or in other words, their entry into the labor force is postponed until completion of their education. Thus, the late entry of young persons in the labor force is a factor which might influence labor force participation of categories of the population.

The phenomenon of migration crosses all age classes. However, migration affects age and sex classes differently. Migration is a major means of redistribution of the population to provide actual and potential manpower for the labor force. During a time period, migration can be an important factor in labor force participation.

General Changes In Labor Force Participation Rates

Since 1940, labor force participation among the total population has changed very little. In 1940, 53.5 per cent

of all persons 14 years of age and over were in the labor force. In 1960, this percentage was still only 56.3, a small increase compared with the increase in population size of 27.6 per cent between 1940 and 1960.

From Appendix Table 1, we see that although there was a slight increase in the total participation rate, there was a decrease in the rate for males as opposed to a sharp increase in the participation rate for females where the rate increased from 27.7 to 37.5 per cent. These same changes are seen in the rates of white and nonwhite participants although the decrease for nonwhite males was sharper and the increase for nonwhite females was less than the changes in white female participation rates.

The same changes--decreases for males and increases for females in participation rates--are seen in all residence-color groups except for nonwhite females in urban and rural-nonfarm areas where their participation rate declined rather than increased.

Labor force participation rates by age, sex, and color are presented in Appendix Table 2. Two important changes are seen in participation rates of the total population by different age classes. First, in the age class of persons 45 to 54 years, there was an increase in the participation rate from 57.8 to 68.9 per cent. Secondly, there was a decrease in the participation rate of the age class from 65 to 74 years of 10.5 per cent. Thus, there has been an

increase in participation in the older age classes before retirement age and a decrease in participation rates after the age of 65.

Data in Appendix Table 1 were analyzed to determine the variation contributed by each variable and the interaction variables. Interaction, say between sex and time, would not be present if the rates and the differences between male and female rates remained the same throughout the time span. If differences existed, then interaction would be present. Results of the analysis are presented in Appendix Table 3. The sex variable accounted for 86 per cent of the total variation. Interactions with the sex variable were highly significant. Also, the interaction between time and color was significant.

In summary, the total rate of participation in the labor force has increased very little, an increase of only 2.8 per cent in twenty years. However, the participation rates of males have decreased, while participation rates of females in the labor force have risen sharply. And yet, the participation rates of females are less than half the male participation rates; thus, the sex variable contributes the majority of variation in labor force participation rates.

The change in the rates of labor force participation can be separated into two components: (1) change due to changes in the age structure of the labor force, and (2) change due to changes in age-specific participation rates.

in demographic categories. If there had been no changes in the age structure of the labor force, then the total change would be due to changes in the magnitude or size of the demographic categories. If there were no changes in the magnitude or size of the classes, then the total change could be due to changes in the age structure of the demographic categories. In any case, the sum of the components of change is equal to the total change.

From Appendix Table 4, we see that the change in the total participation was the result of the change in the specific rates of age classes with a decrease in the change due to the age structure causing a smaller net change. This means that the changes in the age-specific rates caused the increase in total labor force participation, whereas, the change in age structure contributed a negative quantity, thus causing the smaller net change.

Participation in the Labor Force by Age-Sex Classes

Participation in the labor force has changed significantly in specific demographic categories. Age and sex are important variables in attempting to understand changes in labor force participation. As seen in Appendix Table 2, different age-sex classes have differential rates of participation. Also, from one decade to the next, the distribution of the population by age and sex may vary.

Distributions of the population by age, color, and sex were presented for 1940 and 1960 in Appendix Table 5. Two important changes in the distributions, which are presented graphically in Figures 1 and 2, have occurred in all sex-color classes. First, there has been a decrease in the proportion of persons between the ages of 15 and 35. Secondly, there has been an increase in the percentage of persons above the age of 35. The net effects of these changes has been an "aging" of the population, that is, a greater proportion of the population is in the older age classes in 1960 than were in these classes in 1940. Thus, the results of the "aging" of the population are fewer potential and actual young labor force participants and more older potential and actual labor force participants.

As it was noted above, the participation rate of males in the labor force has declined. Although the rate has declined in all age classes, major decreases were in the classes under 25 years and those 65 years and older. For females in this time period, the changes were the opposite. The participation rates of females increased in all classes; but the smallest changes were in the age classes under 25 and in those 65 years and over. Thus, the rates of participation for the most active working years for females increased sharply, whereas, the rates for males in these ages declined slightly. In the age class from 45 to 54 years, the participation rate for females rose from 23.5

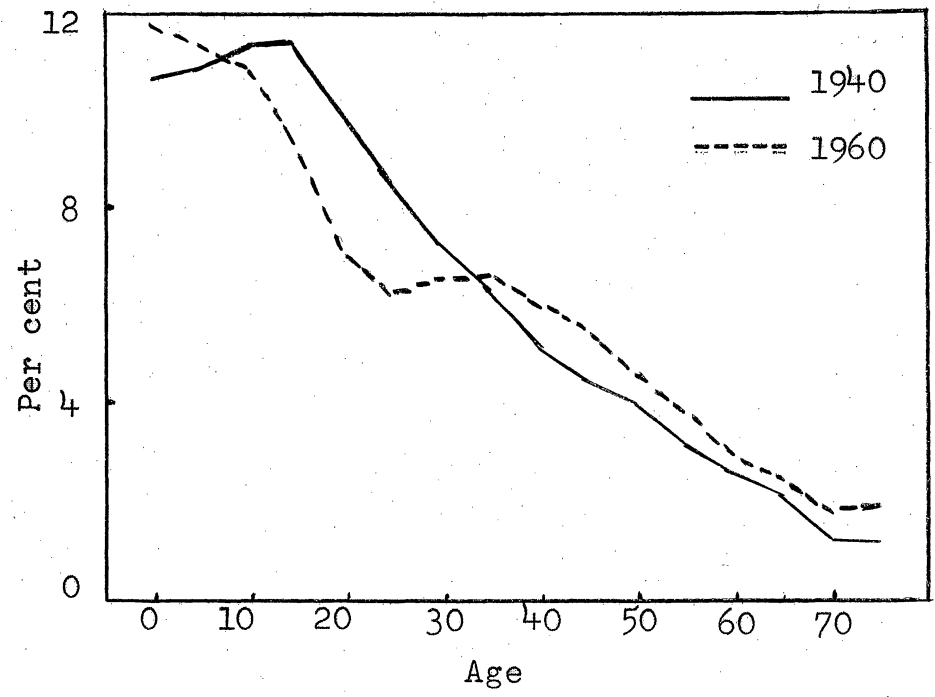


Figure 1. Distribution of males by age, North Carolina, 1940 and 1960

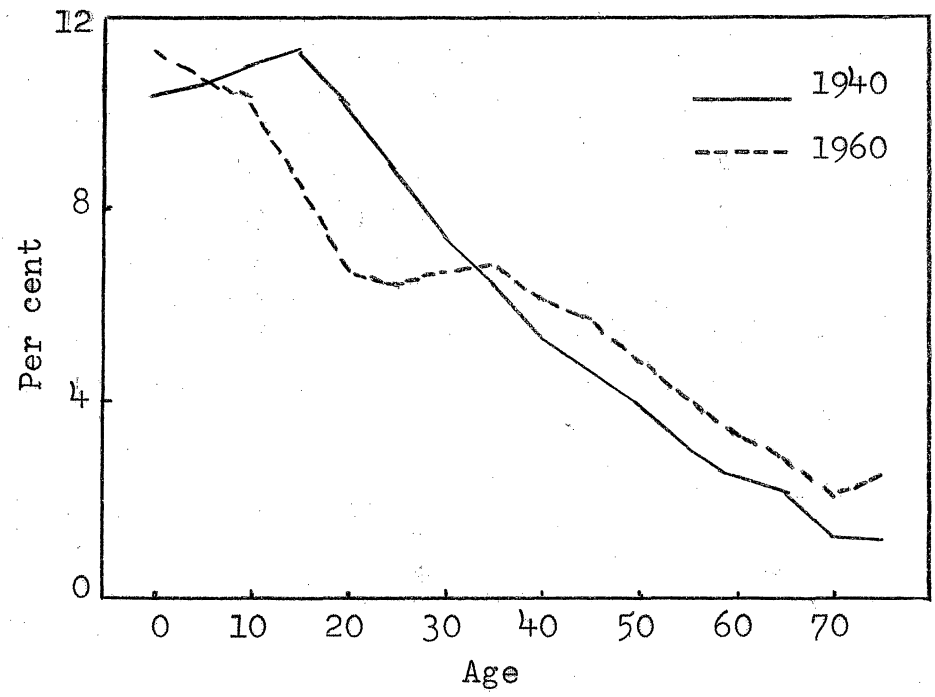


Figure 2. Distribution of females by age, North Carolina, 1940 and 1960

to 48.2 per cent, almost 25 per cent; whereas, the rate for males in this age class decreased from 92.4 to 90.9 per cent. In the age class from 65 to 74 years, the participation rate of males decreased from 61.8 to 38.9 per cent, but the participation rate of females in this age class increased from 7.9 to 12.1 per cent.

The components of the total change by age-sex classes in Appendix Table 6 reveal striking differences for males and females. For males, the specific rates accounted for the majority of the change with the structure contributing only a small portion. However, for females, the specific rates contributed all the change with a negative quantity due to structure causing a smaller net change.

In summary, between 1940 and 1960, two important changes were observed in rates of labor force participation of males and females. First, the participation rates of males declined in all age classes with the greatest decreases in the classes below 25 years and above 65 years. Secondly, the participation rates of females increased in all age classes with the greatest increases in the age classes from 25 to 65 years. Thus, males lost some ground in participation rates, and females had rapid increases in participation rates. Although fewer females than males participated in the labor force, the major change in labor force participation was the increase of female labor force participants in all age and color classes.

Participation in The Labor Force by Color Classes

Since 1940, the degree of participation in the labor force by white and nonwhite males has been nearly the same with the nonwhite rate lower in 1960. The changes that were seen above are operating here--decreases for males but sharper for nonwhite males than white males. For example, major changes in participation rates of nonwhite males occurred in the age classes of 14 to 19 and 60 to 64 where rates decreased 16.7 and 17.2 per cent, respectively. The participation rates of white males in these age classes decreased .9 and 8.5 per cent, respectively. The participation rate of white males in the age class from 65 to 74 decreased from 61.7 to 39.0, and the rate of nonwhite males in this age class decreased from 62.1 to 38.4.

The degree of participation in the labor force has been higher for nonwhite females than white females. The rate of participation in the labor force has increased for white and nonwhite females. However, the increases in rates for nonwhite females were not as sharp as in the rates of white females. Major changes in participation rates were in the age classes from 45 to 54 where rates increased 27.4 and 17.8 per cent for white and nonwhite females, respectively. There were decreases in the rates of participation of nonwhite females in the age classes from 14 to 24 years of age.

As in the case of total males, the change in total rates of participation for white and nonwhite males was due largely to changes in specific rates with a small change due to changes in structure, (Appendix Table 6). However, for females, changes in participation rates for white and nonwhite females were due to changes in specific rates with a negative change in structure causing a smaller net change.

In summary, the pattern of major changes in labor force participation by color classes is the same as for total classes. Participation rates of males declined with the nonwhite male rates declining more sharply than white male rates, and participation rates of females increased with rates of white females increasing more sharply than those of nonwhite females.

Participation in The Labor Force by Residence Classes

Another important variable in analyzing changes in the labor force participation rates is residence. Unfortunately, data by residence in Appendix Table 7 were not available for 1940 and only for the total and nonwhite populations in 1950 and 1960. However, with the exception of rural-farm females, the changes noted above are seen in all residence groupings by color, sex, and age. For males, the major changes were decreases in all age classes, particularly above 55 years. For example, the greatest changes were in the age group from 65 to 69 years, where the

participation rate for urban nonwhite males decreased 13.8 per cent. Also, the rate for rural-farm males in the age group from 60 to 64 decreased 21.2 per cent, while the rate for rural-farm nonwhite males decreased 26.8 per cent.

The participation rate for females has increased in all residence groupings. For urban and rural-nonfarm females, the major changes were in the age classes from 45 to 64 years, but for rural-farm females, the changes were in the age groups from 20 to 64 years. The participation rates for all these groups increased more than 10 per cent in this decade for rural-farm females.

In summary, the same trends were seen in all residence classes as for the total population. Major changes were decreases in participation rates for males and increases for females. Major changes were in the older age classes except in the case of rural-farm females where their participation rates increased sharply in all age classes.

Participation in the Labor Force by Marital Status

The number of females in the labor force depends on their marital status to a certain degree. However, since 1940, there has been an increase of female workers who make up two-income families. Data for this section are found in Appendix Tables 8 and 9.

About one-fifth of the employed females in the state's labor force are females who are married, with spouse absent,

widowed, or divorced. This proportion has held since 1940. The distribution of married females with spouse present has increased greatly. In 1940, the females married with spouse present constituted 39.2 per cent of the employed females; but in 1960, this percentage had risen to 62.7. The proportion of single girls in the female labor force has decreased since 1940. In 1940, 39.9 per cent of the female labor force was made up of single girls; but in 1960, this proportion had fallen to 17.5 per cent.

The presence of small children in the home affects the participation of their mothers in the labor force. In 1960, 20.2 per cent of all women in the labor force had small children under six years of age. The corresponding percentages for white and nonwhite females were 20.0 and 20.6, respectively. Corresponding percentages for urban and rural areas were 18.0 and 22.3, respectively.

The marital status of males is an important factor affecting their presence in the labor force. Males married with spouse present are expected to make up the greatest portion of the male labor force. In 1940, the married males with spouse present made up 65.7 per cent of the male labor force. In 1960, this percentage had risen to 74.7. Single males make up a declining proportion of the labor force. In 1940, they constituted 28.4 per cent of the labor force, but in 1960, they constituted only 18.8 per cent of

the labor force. As in the case of females, the proportion of males separated, widowed, or divorced has remained relatively constant.

In the male and female labor force, the proportion of married persons with the spouse present has increased in the older age classes. The increases are notable for females over the age of 35. Females above this age probably have no young children at home and are able to work.

Also in both the male and female labor force, the proportion of single persons has declined. The greatest decreases were in the ages from 14 to 24 years. Reasons for this factor could be a declining birth rate and the significance of younger people remaining in school, thus postponing their entrance in the labor force.

In summary, the major change in labor force participation by marital status classes has been the increase of married persons with spouse present participating in the labor force. This factor was true for males and females.

Unemployment

The primary emphasis of this study is on the employed segment of the labor force. However, the counterpart of the employed--the unemployed--is important socially and economically. The economy of any vast industrial country depends to some extent on rates of unemployment. Socially, unemployment is an important force affecting the roles of individuals and their adjustment to society.

As defined previously, unemployed persons are those persons not "at work" but looking for work.

Unfortunately, data from the decennial censuses do not reflect true levels of unemployment. The current concept of unemployment measures only the individuals with no other work. Unfortunately also, the timing of the census enumeration affects the level of unemployment. The census data do not reflect seasonal employment and unemployment.

The data in this study may not reflect the true extent of unemployment. The timing of the censuses affects the representativeness of the data in that the data provide a picture of the situation for a one- to two-week period.

The data for 1940 unemployment must include a measure of persons on public emergency work since these persons would otherwise be unemployed.

From the available data, it appears that rates of unemployment have decreased since 1940. However, economic cycles, timing of the census, and natural fluctuations may influence the rates.

Data for unemployment by residence and color are presented in Appendix Table 10. Urban and rural-nonfarm areas have the highest percentages of unemployment. Also, the rates are higher for the nonwhite persons in all residence groupings. The rural-farm areas may have lower rates because of least diversity of occupations. Discrimination may be an influencing factor in the higher rates for nonwhite persons.

Data for unemployment by sex and color are presented in Appendix Table 11. Rates are higher for females in both color groups. Discrimination may be a factor here also, and the shorter period of employment for females may be pertinent. Usually, females are employed for shorter periods; thus, at the times of censuses, unemployment may have been high.

Data for unemployment by sex, color, and selected age groups are presented in Appendix Table 12. For males, the highest rates of unemployment are in the younger and older age groups. Males are expected to have least unemployment in the ages from 25 to 64 years when they are heads of households. For females, the levels of unemployment decrease with an increase in age. This phenomenon may be explained by the fact that women in the older age groups have left the labor force and moved to a segment of the population not in the labor force, such as housewives.

Generally, the percentage of unemployed persons in the state has decreased in all variable groupings. Percentages of unemployment are higher for females and nonwhite persons. Also, the percentages are higher for younger and older age groups and for urban areas. Definite statements as to trends are hard to make because of the timing of the decennial censuses. For example, levels of employment and unemployment may be affected by an inaccurate count at the

time of the census of seasonal workers, such as migratory workers and students in part-time or temporary jobs.

Summary

In evaluating and describing the changes in the labor force for the past twenty years, it was necessary to divide the changes into components of change. Thus, participation rates in the labor force were seen as the result of two factors: (1) changes in magnitude, and (2) changes in structure.

Although there was little change in the total participation rates, the rates for males declined sharply, and the rates for females increased even more rapidly. These results were seen for white and nonwhite workers in all residence groupings. Sharpest increases in participation rates were for rural-farm females.

Generally, the labor force participation rates have decreased in the youngest and oldest age groupings of labor force participants. Also, there has been a rapid increase of married persons with the spouse present in the labor force.

The civilian labor force consists of the employed and the unemployed. Unemployment is hard to measure because of large fluctuations. Generally, unemployment has decreased since 1940. Highest rates of unemployment were seen among

the younger and older age groupings, among females, and among nonwhite persons.

Although the net change in labor force participation rates was small, large changes were seen in specific demographic categories.

CHANGES IN THE OCCUPATIONAL STRUCTURE OF THE NORTH CAROLINA LABOR FORCE

Introduction

For purposes of this study, a trend was defined as a prevailing inclination or tendency. A change in an occupational category operating in the same direction throughout the time period would represent a trend. Also, changes in occupational categories may indicate whether individuals have or have not improved their social and economic status. Ideally, a vertical movement up the socioeconomic classes represents an improvement in status.

The purpose of this section is to describe the general occupational structure of the state by observing and evaluating changes which have taken place during the past two decades. The remaining part of the chapter describes the structural changes in more detail in relation to several demographic variables: age, sex, residence, and color.

General Trends by Occupation

As in the case of changes in labor force participation, changes in the number of workers by occupation in the state may be divided into two components: (1) changes in the magnitude, and (2) changes in the structure. Changes in magnitude reflect the component of the total change which is due to the general increase in the number of workers. It is the change in number of workers by occupation that would

have occurred if the percentage distribution of workers by occupation, i.e., structure, had remained constant. The magnitude component may be determined by comparing the actual number of workers in 1940 with the expected number of workers in 1960. See Appendix Table 13, columns 1, 3, and 5. Footnote ^a for Appendix Table 13 describes the use of "expected" number of workers.

The structural component reflects the change in occupation attributable only to change in the percent distribution of workers by occupation between 1940 and 1960. It is determined by comparing the distribution of expected number of workers in 1960 with the distribution of the actual number of workers in 1960. See Appendix Table 13, columns 2, 3, and 6.

Columns 4 and 7 of Appendix Table 13 show the absolute and relative changes, between 1940 and 1960, in the number of North Carolina workers by major occupation class. The total increase was 396,788, or 32.8 per cent of the 1940 figure. The greatest increase in numbers of workers occurred among workers classed as: clerical (149,769), operatives (140,388), craftsmen (99,772), whereas, the greatest percentage increases occurred among the clerical (142.1), professional (115.2), and craftsmen (114.2). The per cent increase among operatives was only 54.3.

Balancing these unusual increases are decreases among farmers (122,795, or 49.7 per cent) and farm laborers (82,104,

or 52.7 per cent). There were some small decreases among private household workers and other laborers.

A comparison of columns 5 and 6 and 8 and 9, which show the magnitudinal and structural components, absolutely and relatively, is interesting and illuminating. Consider, for example, the increase of 149,769 (142 per cent) in clerical and kindred workers, wherein the magnitude component was only 34,591 (32.8 per cent) and the structural component was 115,178 (109.3 per cent). Now contrast the operatives with the clerical class. Among operatives, the magnitude component was 84,832 (32.8 per cent) as compared with the structural component of 55,556 (21.5 per cent).

This type of component analysis emphasizes the importance of the changes in the occupational structure of the state. It is interesting to note, for example, that the structural component for farmers and farm laborers is even more negative than the total change of columns 4 and 7.

Another way of showing structural changes is illustrated in columns 10, 11, and 12. Note that column 12 is one of differences and not change ratios. Here again it is seen that in terms of structure, the greatest increases occurred among workers classed as clerical (7.2 per cent), craftsmen (4.4 per cent), operatives (3.5 per cent), and professional (3.0 per cent); and that there were structural declines among farmers, farm laborers, private household workers, and other laborers.

In summary, between 1940 and 1960, the major changes have been a rapid decrease in agricultural occupations and a more rapid increase in the numbers of workers classed as clerical and kindred workers, craftsmen, operatives and kindred workers. Thus, the decline in agricultural occupations has been offset by increases in these nonagricultural occupations.

Changes by Socioeconomic Status

Because occupations have become important in determining social class, an analysis of the occupations by socioeconomic status classes provides an interesting and illuminating picture of whether individuals have or have not improved their socioeconomic positions in the social structure of the state.

For the component analysis of change in Appendix Table 14, occupations were classed as agricultural and nonagricultural. Next, the nonagricultural occupations were divided into three categories: high, middle, and low. The method of grouping has been used widely. Edwards (1943) was one of the first researchers to develop and classify occupations in regard to socioeconomic status classes. Recently, the Bureau of the Census (1963, Working Paper 15) has developed socioeconomic status scores which leads further objective basis for a classificatory scheme.

The high-status occupational categories include workers classed as: professional, technical, and kindred workers; and managers, officials, and proprietors. Major occupations in this class in North Carolina include teachers, engineers, and managers. The middle-status occupational categories include workers classed as: clerical, sales and kindred workers; craftsmen and kindred workers; and operatives and kindred workers. Major occupations of this class in the state include secretaries, sales persons, mechanics and repairmen, and textile workers. The low-status occupational categories include workers classed as: service workers, private household workers, other laborers except farm and mine, and persons not reporting an occupation. Major occupations include firemen, policemen, household workers, and manufacturing and construction laborers. The agricultural occupations include workers classed as: farmers and farm managers and farm laborers.

The total change (396,788, or 32.8 per cent) seen in column 4 or Appendix Table 14 is the result of the large increase in nonagricultural occupations (601,687, or 74.7 per cent) and of the decrease in agricultural occupations (204,899, or 50.8 per cent). The increase in nonagricultural occupations was due primarily to the large increase (389,929, or 86.4 per cent) in the middle-status occupational categories of workers classed as clerical, sales, craftsmen, operatives, and kindred workers.

Absolute and relative changes are seen in columns 4, 5, 6, 7, and 8. It is interesting to note that the change in the high- and middle-status occupational categories was due mainly to the changes in structure, while the change in the low-status occupational category was due primarily to change in the magnitudinal component. For example, the increase in the middle-status occupational category (389,929, or 86.4 per cent) was due to the increase in the magnitudinal component³ (148,100, or 32.8 per cent) and the structural component (241,829, or 53.6 per cent). Conversely, the increase (99,772, or 43.0 per cent) in the low-status occupations may be divided into the increase due to the magnitudinal component (76,138, or 32.8 per cent) and the structural component (23,634, or 10.2 per cent).

The decrease in agricultural occupations (204,899, or 50.8 per cent) also was due largely to the decrease in the structural component (337,233, or 83.7 per cent).

To summarize: the major changes in the socioeconomic structure of the state have been in the middle-status occupational categories of workers classed as: clerical, sales, craftsmen, operatives, and kindred workers. Smaller gains were made in the high- and low-status categories of occupations, and large decreases were observed in the

³By definition of the expected estimate, all magnitudinal components have a relative increase of 32.8 per cent

agricultural occupations composed of farmers, farm managers, and farm laborers. The analysis of components of change presented an encouraging picture for the changes in the high- and middle-status classes were the result, primarily, of changes in the structure, while the changes in the low-status class were the result of changes in the magnitudinal component. This analysis suggests an improvement of the social structure because of the movement of workers in the structure to high- and middle-status occupations rather than just an increase in the magnitude or size of the occupational categories.

Changes by Sex and Color

In a previous section, changes in the number of workers by occupation were divided into two components: (1) change in magnitude, and (2) change in structure.

In sex, color, and residence data by major occupational category in Appendix Tables 15 to 30, changes in the magnitudinal component are divided further into two parts: (1) a magnitude component due to the general increase in the number of total workers, and (2) a magnitude component due to general increase in the number of workers in a specific sex, color-residence class such as white males or white urban males. The first magnitude component is determined in the same manner as described in the previous sections. The second magnitude component is the change in the number of

workers by occupation in a specific sex-color-residence class that would have occurred if the percentage distribution of workers by occupation in that class had remained constant. This magnitude component may be determined by comparing two estimates of the expected number of workers in the particular class in 1960: (1) estimate of expected workers by the increase in all workers, and (2) estimate of expected workers by the increase of workers in the specific sex-color-residence class. For example, see Appendix Table 15, columns 1, 3, 4, and 7.

Absolute and relative changes are shown in columns 5 and 9 in Appendix Tables 15, 16, 17, and 18, between 1940 and 1960, in the number of North Carolina workers by major occupational class, color, and sex.

For white males, the total increase was 227,266, 34.0 per cent of the 1940 number, as opposed to a decrease of 9,960, or 4.3 per cent for nonwhite males. The greatest increase in numbers of white male workers occurred among workers classed as: craftsmen (86,670), operatives (57,824), and clerical (48,629). The categories of professional workers and managers had increases of 36,003 and 35,343, respectively. The greatest percentage increases occurred among the professionals (156.9), crafts (111.7), clerical (76.9), and managers (63.4). The per cent increase among workers classed as operatives was only 42.5.

The greatest increases for nonwhite male workers occurred among workers classed as: craftsmen (9,028), operatives (21,570), and service (6,352), whereas, greatest percentage increases occurred among the clerical (173.7), craftsmen (107.4), and operatives (92.0). The per cent increase among service workers was only 38.4.

Balancing these increases for white and nonwhite male workers were decreases among farmers (white, 91,587, or 51.2 per cent; and nonwhite, 31,736, or 52.7 per cent) and farm laborers (white, 46,187, or 67.7 per cent; and nonwhite, 30,325, or 49.0 per cent). There were small decreases among other laborers for both color groups and among private household workers for nonwhite males.

The total increase for white female workers (227,697) was close to that of white males (227,266) and much larger than the increase for nonwhite female workers (25,705), but the relative change for white females was 112.8 per cent as compared to 34.0 per cent for white males, 23.7 per cent for nonwhite females, and a decrease of 4.3 per cent for nonwhite males.

Major increases for white females were in the number of workers classed as: clerical (95,140), operatives (57,464), professional (24,313), and service (20,926). Major changes for nonwhite females were also among workers in these classes with increases in the categories of service (14,599), professional (4,845), operatives (3,530), and clerical (2,762).

The numbers of white and nonwhite females classed as private household workers and farm laborers and the number of nonwhite female workers classed as farmers and other laborers decreased in this time period.

A comparison of columns 6, 7, and 8, 10, 11, and 12 in Appendix Table 15 which shows the magnitudinal and structural components, absolutely and relatively, is interesting and illuminating. Consider the increase in white male workers classed as craftsmen (86,670, or 111.7 per cent), wherein the magnitude component due to increase in all workers was 25,480 (32.8 per cent), and the structural component was 60,264 (77.6 per cent) with the magnitude component due to increase in workers in the specific class being only 926 (1.2 per cent). As opposed to this relationship, in the category of operatives, the increase was 57,824 (42.5 per cent). The magnitude component due to increases in all workers was 44,692 (23.4 per cent), the magnitude component due to increases in workers in the specific class was 1,625 (1.2 per cent), and the structural component was 11,507 (8.4 per cent).

In contrast, the changes for nonwhite males in the categories of craftsmen and operatives had the same directional relationship as for the category of craftsmen for white males. However, the magnitudinal component due to increase in workers in the specific class contributed a negative quantity.

In the case of white females, major changes were due to change in the magnitude component resulting from increases in workers in the specific classes except in the case of clerical workers where the change (95,140, or 240.8 per cent) was due to change in the magnitude component resulting from changes in all workers (12,971, or 32.8 per cent), change in the magnitude component resulting from changes in workers in the specific class (31,578, or 79.9 per cent), and change in the structural component (50,591, or 128.0 per cent). In the case of nonwhite female workers, changes were due to changes in the structure except for the category of operatives which was due to increases in the total numbers of workers.

Structural changes are seen in columns 13, 14, and 15 of the tables. Here again, the structural changes for both white and nonwhite males were increases in the categories of workers classed as clerical, craftsmen, operatives, professionals, and decreases in farmers and farm laborers. Conversely, major structural changes for both white and nonwhite females were increases in the categories of clerical (white, 11.8 per cent; and nonwhite, 1.9 per cent) and service workers (white, 1.8 per cent; and nonwhite, 9.5 per cent), and also increases for nonwhite females in the category of professionals and decreases for both in the categories of farmers, farm laborers, private household workers, and other laborers. There were also decreases for white

female workers in the categories of workers classed as professionals and operatives.

To summarize: two major changes were seen in all sex-color classes: (1) an increase of workers in the middle-status occupational categories, and (2) a decrease of workers in agricultural occupations. The number of workers increased in all sex-color classes except nonwhite males. The rapid increase of white female workers was the greatest change among the sex-color classes. This rapid increase of white females was seen in the change resulting from increases in the specific class. However, the largest class (clerical workers) was the increase in the size, which was due to changes in structure; that is, there was a shifting of female workers in the structure. Such was the case in the other sex-color classes, where the changes were the result of changes in the structure. The rapid increase of workers in the middle-status occupational categories offset the decreases in the number of agricultural workers except in the case of nonwhite male workers.

Changes by Residence Classes

As in previous sections, changes in the number of workers by occupational category, sex, color, and residence are divided into components in Appendix Tables 19 to 30.

Note from column 5 of the tables that there have been total increases for all color-sex classes in urban and rural-

nonfarm areas and decreases in all color-sex classes except for white females in rural-farm areas. However, the increase in the number of white female workers in rural-farm areas was only 8,267 (20.6 per cent) as compared to a total increase of 227,697 (112.8 per cent) of white female workers in the state.

The major changes in occupational categories in these tables have been in the middle- and high-status occupational categories of workers classed as: professionals, clerical and sales, craftsmen, and operatives. For example, the greatest increase for white female workers in all residence classes was in the numbers of workers classed as: clerical, operatives, and service workers. The number of white female workers classed as professionals increased largely in urban areas. Likewise, the number of nonwhite female workers classed as operatives and service workers increased in all residence classes with the exception of operatives in urban areas. Major decreases were observed in the number of nonwhite female workers classed as private household workers in urban (3,580--9.7 per cent) and rural-farm (1,877--25.2 per cent) areas. White female workers classed as private household workers decreased also in rural-farm areas (1,616--54.7 per cent), and nonwhite female workers classed as farm laborers decreased by 6,887 (48.0 per cent) in rural-farm areas.

White male workers classed as professionals, managers, clerical, craftsmen, and operatives increased mainly in urban and rural-nonfarm areas with a large increase in clerical workers (1,185--18.8 per cent) and large decreases in farmers (100,754--58.1 per cent) and farm laborers (48,841--78.0 per cent) in rural-farm areas. Major increases for nonwhite males were in categories of workers classed as craftsmen, and operatives in urban and rural-nonfarm areas and in agricultural occupations in rural-nonfarm areas. In rural-farm areas, major increases for nonwhite male workers were in the category of operatives and major decreases were in the agricultural occupations of farmers and farm laborers.

Absolute and relative magnitudinal and structural changes are shown in columns 6, 7, 8, and 10, 11, 12 in Appendix Tables 19 to 30. Change in the number of white workers by occupational category with the exception of rural-farm females was due largely to changes in the magnitudinal component which was obtained by the estimate of the number of workers in a specific sex-color-residence class by assuming no change in the percentage distribution of that class. For example, the increase in urban white male workers classed as craftsmen (34,526--104.5 per cent) may be divided into the magnitudinal component due to the increase in total workers (10,850--32.8 per cent), the magnitudinal component due to the increase of workers in the

specific class (17,230--52.1 per cent), and the structural component (6,446--19.5 per cent). In the case of rural-farm white female workers such as those classed as clerical workers, the increase (6,675--167.9 per cent) may be divided into the magnitudinal component due to increases in total workers (1,305--32.8 per cent), magnitudinal component due to increases in the specific class (-488, or -12.3 per cent), and the structural component (5,858--147.4 per cent).

The increases in the number of nonwhite workers were due largely to the structural component except in the case of the category of operatives. For example, the increase in the number of urban nonwhite males classed as craftsmen (4,911--95.8 per cent) may be divided into the magnitudinal component due to increases in total workers (1,682--32.8 per cent), the magnitudinal component due to increases in the specific class (101--2.0 per cent), and the structural component (3,128--61.0 per cent). However, in the case of the category of operatives, change was due largely to change in the total number of workers without regard to sex or color. For example, the increase in the number of urban nonwhite males classed as operatives (7,689--50.4 per cent) may be divided into the magnitudinal component due to increases in the total number of workers (5,005--32.8 per cent), the magnitudinal component due to increases in the specific class (300--2.0 per cent), and the structural component (2,384--15.6 per cent).

Structural changes are seen also in columns 13, 14, and 15 of Appendix Tables 19 to 30. Major increases in clerical workers are seen in all female color-residence classes. Major decreases among white workers classed as operatives were seen in urban and rural-nonfarm areas. Another major change for white females was a decrease in private household workers. Likewise, there were decreases in the numbers of nonwhite female workers classed as private household workers. An increase in the number of nonwhite male workers classed as craftsmen was in all residence groups. In rural-farm areas, there was a decrease of workers in agricultural occupations in all color-sex classes. In rural-nonfarm areas, there was an increase in workers classed as clerical and sales workers in all sex-color classes.

To summarize: as in previous sections, the increase of workers in middle-status occupational categories and the decrease of agricultural workers have been in major changes in the time period of this study. The increase of female workers in the clerical occupations was seen in all color-residence classes. Increases in numbers of workers classed as operatives and craftsmen were observed also in all residence classes. The number of workers in all color classes in rural-farm areas decreased with the exception of white female workers. Changes were seen to be caused primarily by the movement of workers in the structure rather than by general increases in the numbers of workers.

Changes in Specific Affinity Coefficients
Relating Major Occupational Classes
to Specific Demographic Categories

Affinity by Color Classes

Traditionally, nonwhite workers have occupied lower status job than white workers in the state's occupational structure. In considering differences between employed white and nonwhite workers, one must consider that the nonwhite workers have been limited in their participation in the labor force by tradition, prejudice, education, and other factors.

There are two simple ways to show the relationship of color to occupation. First, there is the percentage distribution of workers by occupation within each color class (vertical distribution); and secondly, there is the percentage distribution of workers by color within each occupational category (horizontal distribution).

A measure of affinity of color for occupation was developed which incorporates both of the above distributions. It is a measure of the correlation or association between occupation and color. The regression of a given occupational class on color is the simple difference between the proportions of white and nonwhite workers in the occupation; that is the difference between the two vertical distribution percentages by color. On the other hand, the regression of color on an occupation is the simple difference

in the percentage of workers in a given occupation who are colored and the percent of workers in all other occupations who are colored; that is, the difference between the two horizontal distribution percentages.

The square root of the product of the two regression coefficients gives the correlation between occupation and color, i.e., $r = \sqrt{b_{xy} \cdot b_{yx}}$. The correlation measure presented in this study represents the affinity of nonwhite workers for each major occupational class. Changing the sign of the correlation measure shows the affinity between white workers and major occupational class.

Tables showing occupational percentage distributions by color and color percentage distributions by occupation were used in computing affinity coefficients. The occupational percentage distributions by color, the vertical distributions, are found in Appendix Tables 13 to 30. These data have already been discussed. The color percentage distributions by occupation, the horizontal percentages, are shown in Appendix Table 31. Similarly, the sex percentage distributions by occupation are shown in Appendix Table 34.

Before presenting the affinity coefficients, it will be helpful to summarize the horizontal percentages of Appendix Table 31.

The proportion of employed nonwhite workers of total employed persons approximates their proportion of the total

population. Since 1940, the proportion of all employed persons who were nonwhite has decreased from 28.0 to 21.7 per cent. Correspondingly, the proportion of white workers has risen from 72.0 to 78.3 per cent.

Between 1940 and 1960, the number of nonwhite workers increased by only 9,228, or 2.7 per cent. White workers increased from 869,970 to 1,257,530, or 44.5 per cent. A sharp decline in agricultural jobs and rapid urbanization were major factors affecting the nonwhite occupational structure. Paradoxically, migration within the state did not change significantly the proportion of nonwhite workers in agriculture. On the other hand, migration from North Carolina and from the South did change the proportion of Negroes in agriculture in the nation.⁴ In North Carolina, the decrease in nonwhite agricultural workers was not offset by increases of nonwhite workers in other occupational categories as was the case for white agricultural workers. The number of nonwhite male workers in the state decreased 7.4 per cent, while the number of white male workers increased 24.0 per cent. Corresponding percentage increases for females were 112.4 and 23.6 for white and nonwhite, respectively.

Data in Appendix Table 31 show the per cent of workers classed as white and nonwhite by major occupational category.

⁴Hamilton, C. Horace, 1964. "The Negro Leaves the South," Demography, 1:273-95. Negroes constituted 96.4 per cent of the nonwhite population in N. C. in 1960, 97.1 in 1950, and 98.1 in 1940

The percentage of all workers who are nonwhite serves as a means for determining whether nonwhite workers are over or underrepresented in the several occupational categories. For example, in 1940, 28.0 per cent of all workers were nonwhite; thus, if the percentage of nonwhite workers in an occupational category exceeds this percentage, we shall say that nonwhite workers are overrepresented in that category. By this criterion, nonwhite workers were found to be overrepresented in the occupational categories of private household workers, service workers, farm laborers, other laborers, and in the category of farmers--except in 1940. Conversely, white workers are overrepresented in the remaining occupational categories. Although nonwhite workers have been a declining percentage of all workers since 1940, they have made gains in the category of workers classed as clerical workers wherein the percentage of workers nonwhite increased from 2.5 to 3.4. The largest percentage increase was in the category of nonwhite workers classed as farm laborers. Smaller increases were seen also for nonwhite workers in the categories of workers classed as service workers and operatives. Thus, the nonwhite workers have had small decreases in percentages of all workers; but the increase in low-status occupational categories has offset losses in the middle- and high-status categories, with the result that the nonwhite workers continue to maintain closely their low occupational status of 1940.

The measures of affinity of color for occupation are presented in Appendix Table 32 for the state. The nonwhite workers have positive measures for only the low-status occupations. Conversely, the white workers have positive measures of affinity for the high- and middle-status classes.

For the state, there have been few changes in the affinity of color for occupation since 1940. Only two major changes appear to be evident. First, the positive measure of affinity for the service occupations has increased for the nonwhite; thus, there has been a decrease in the affinity of white workers for these occupations. Secondly, the negative measure of affinity for operative occupations has declined for nonwhite workers, indicating an increase for the nonwhite in these occupations and a decrease in affinity of white workers for these occupations.

Measures of affinity of color for occupation by residence and sex are presented in Appendix Table 33. In each case, the measure of affinity was determined by comparing the same sex and color in each year and residence class. For example, the measure of affinity of urban nonwhite males in 1940 was determined by comparing white and nonwhite males by occupational category in urban areas in 1940.

For urban males, major changes for the nonwhite workers were in the categories of clerical, sales, craftsmen, private household workers, and other laborers.

The negative measure of affinity of the nonwhite males for the category of clerical, sales and kindred workers decreased, indicating a gain for the nonwhite and a decline for white workers. The measure increased from $-.23$ to $-.16$. The nonwhite males had a similar gain in the category of craftsmen where the measure changed from $-.12$ to $-.09$ between 1940 and 1960. However, in the categories of household workers and other laborers, the changes were in the opposite direction. The positive measure for the nonwhite in the category of private household workers decreased from $.19$ to $.09$, indicating a decline in emphasis for nonwhite workers and an increase for white workers. Also in the category of other laborers, the measure decreased from $.40$ to $.32$, indicating an increase for white workers in this class. On the whole, it can be said that nonwhite workers in North Carolina urban areas have improved their social status with increases in the middle-status occupational categories of clerical and craftsmen coupled with decreases in the low-status categories of private household workers and other laborers.

Urban nonwhite female workers had similar changes in the categories of professional, technical, clerical, sales, operatives, private household workers, and service workers. In the professional class, the affinity measure increased from $-.12$ to $-.05$, indicating an increase for the nonwhite females and a decrease for the white female workers. Similar

changes occurred in the categories of clerical, sales, and kindred workers and operatives and kindred workers where there were changes of .02 and .10, respectively, in the measures of affinity. Of all sex-color classes, nonwhite females had the highest positive affinity for private household work, but from 1940 to 1950, the measure decreased from .67 to .57. However, the affinity coefficient of .57 is still abnormally high. Nonwhite females made a substantial gain in service work wherein the affinity coefficient moved from .03 in 1940 to .18 in 1960. Just as in the case of urban nonwhite males, there has been an improvement in the social status structure of urban nonwhite females who gained ground in the high- and middle-status occupational categories coupled with losses in low-status occupational categories.

For rural-nonfarm males, major changes in color-occupation correlation were found in the categories of operatives, private household workers, service workers, and other laborers. For nonwhite males, affinity coefficients increased in the categories of operatives and service workers. Conversely, the coefficients of white males in these categories decreased and increased in affinity for the low-status occupational categories of private household workers and other laborers. On the other hand, nonwhite males had decreases in affinity for private household workers and other laborers.

For rural-nonfarm females major changes in color-occupation correlation were found in the categories of professional, technical, clerical, sales, operatives, private household workers, service workers, and farm laborers. Nonwhite females experienced increases in affinity for the categories of professional, technical, operatives, service workers, and farm laborers, but declined in affinity for the categories of clerical and private household workers. White females had increases in the categories of clerical, sales, and private household workers, but decreases in the classes of professionals, operatives, service workers, farmers, and farm laborers. The correlation of nonwhite females with operative occupations increased .19 between 1940 and 1960. The correlation between white females and the category of clerical, sales, and kindred workers increased from .18 to .24 in this period. On the whole, nonwhite rural-nonfarm females have made gains and made improvements throughout the social structure, particularly in the class of occupations of operatives and service workers, whereas, the majority of change in affinity of white females had been in the category of clerical occupations with some increase in the low-status category of private household workers.

For rural-farm males, major changes in affinity coefficients were in the categories of clerical, sales, operatives, private household workers, farm laborers, and other

laborers. Nonwhite males had increases in affinity in the categories of operatives, farm and other laborers; and had decreases in affinity for all other categories--though some of the decreases were small. White males had affinity increases in the categories of clerical, sales, and private household workers, and decreases in such low status categories as farm and other laborers. Major changes for rural-farm females were in the categories of professional, clerical, sales, operatives, and private household workers. White females had an increase in affinity in the clerical category and losses in the other categories. Conversely, rural-farm nonwhite females had a substantial decrease in the affinity for the clerical category and substantial increases in affinity for the categories of operatives and private household workers, and, they had smaller affinity increases in the categories of professionals, farmers, and managers.

In summary, between 1940 and 1960, there has been an improvement in the nonwhite social structure with increases in the middle-status occupational categories and increases in the affinity coefficients in these categories. Major changes in affinity coefficients for nonwhite males have been increases in clerical, sales, operatives, service workers, and laborers. White males had major changes in affinity coefficients in the occupational categories of private household workers, laborers, and clerical occupations.

Major changes in affinity coefficients for nonwhite females have been increases in the categories of professional, technical, operatives, service, clerical, sales, and kindred workers. Conversely, by definition, white female workers have decreases in these categories. Major changes in the middle-status occupations coupled with losses in the low-status occupational categories indicate an improvement in the nonwhite occupational structure. However, the measures of affinity still indicate a negative correlation between nonwhite workers and occupations of high- and middle-status classes although there have been increases for nonwhite workers in these occupations.

Affinity by Sex Classes

Traditionally, fewer women than men have been employed in the labor force of the state. Generally, the expected role of the woman was that of housewife, with the man occupying the role of breadwinner. Numerous factors have been operating to change this traditional role of the female. The last war speeded the change and brought many women into the labor force. With the close of the war, many people thought that the proportion of females in the labor force would decrease; but such has not been the case. In fact, the proportion of females in the labor force continues to rise.

And yet, certain occupations do not attract female workers and certain other occupations do not attract males.

Therefore, a separation of employed males and females would illuminate important differences in the distribution of workers by occupation. One of the most important differences between employed males and females is the distinctive ways they are distributed among the major occupational classes.

There are two simple ways to show the relationship of sex to occupation. First, there is the percentage distribution of workers by occupation within sex groups (vertical distribution); and secondly, there is the percentage distribution of workers by sex in each occupational category (horizontal distribution). For example, see Appendix Tables 15 and 34.

Correlation analysis was also used to determine the affinity of the two sex groups for major occupational classes. In each case, the measure of affinity was determined by comparing the males and females by color and residence class for each year. For example, the measure of affinity for nonwhite urban females in 1940 was determined by comparing nonwhite males and females in urban areas in 1940.

Since 1940, employed females have gained ground in proportion of total employed workers. In 1940, only 25.7 per cent of the state's workers were females; but in 1960, the per cent of female workers had risen to 35.1 per cent. See Appendix Table 34. The proportion of all workers who

are female has increased in all occupational categories. On the basis of the total per cent of all workers who are female, females are overrepresented in the categories of workers classed as professionals, clerical, sales, operatives, private household workers, and service workers. Since 1940, the proportion of females in these categories has continued to increase with the exception of the category of professional workers where the proportion of female workers decreased from 55.0 to 48.6 per cent of all workers in that category. Conversely, male workers are overrepresented in the categories of workers classed as farmers, managers, craftsmen, farm laborers, and other laborers. On the whole, the greatest changes have been the increases of female workers in all occupational categories and the increasing proportions of female workers of all workers.

In Appendix Table 35, the measures of affinity of sex for occupations are presented. In the category of professional workers, females have positive but decreasing affinity; and, conversely, males have a negative but increasing affinity. The decrease in professional female affinity is offset by the sharp increase in the affinity between female sex and clerical, sales, and kindred worker categories; wherein correlation rose from .09 to .17 between 1940 and 1960. Another smaller increase occurred in the affinity of females for the service worker category. Males

continue to be concentrated in the categories of farmers, managers, and laborers. Since 1940, females have had decreasing positive measures of affinity in the categories of professional, technical, operatives, and private household workers; but positive increasing affinity for the categories of clerical, sales, and service workers has increased. The changes are the opposite for males; thus, they had increases in affinity for the professional, technical, operatives, and private household categories and decreases for the clerical, sales, and services.

Measures of affinity between female sex and occupation, by residence and color, are presented in Appendix Table 36.

Between 1940 and 1960, the major change in the affinity coefficients of urban white females was in the category of clerical, sales, and kindred workers, wherein the measure of affinity increased from +.08 to +.20. Conversely, male workers experienced a decrease in affinity for this category. However, white male workers experienced positive changes in affinity for the categories of workers classed as professional, operatives, and private household workers, and conversely, females had decreases in these categories. The major change in affinity coefficients was in the professional category where the measure of affinity decreased from +.12 to +.04.

For urban nonwhite females, the major changes were increases in affinity for the categories of professional,

clerical, and other laborers. Urban nonwhite males had major changes in the categories of operatives, private household workers, and service workers. In the category of service workers, the measure of affinity of nonwhite males rose from $-.13$ to $-.03$, and conversely, that of nonwhite females dropped from $+.13$ to $+.03$. Thus, in urban areas, major changes in affinity coefficients have been in the middle-status categories for white workers and in the low-status categories for nonwhite workers. Major increases for white females were in clerical occupations, for white males in professional occupations, for nonwhite males in service occupations, and for nonwhite females in professional occupations.

The major changes in affinity coefficients of rural-nonfarm white females were increases in the categories of workers classed as clerical and service workers. The correlation coefficients rose from $.04$ to $.20$ and from $-.03$ to $.10$ for the clerical and service occupations, respectively. Rural-nonfarm white males had increases in the same categories as urban white males plus an increase in the category of craftsmen. Rural-nonfarm nonwhite females had increases only in the categories of service workers and laborers. Nonwhite males, however, had changes in the categories of craftsmen, operatives, and private household workers which meant increases. On the whole, major changes for rural-nonfarm workers in affinity coefficients were in

the middle and low-status occupational categories of craftsmen, operatives, clerical, service, and laborers.

White male and female workers in rural-farm areas had significant changes in affinity in all categories except those of managers, proprietors, and officials. While female workers experienced increases in affinity in the same categories as did rural-nonfarm females, i.e., clerical and service workers. White male workers had increases in the remaining classes particularly in the category of craftsmen where there was an increase of .08 in the measure of affinity. The only category showing a positive increase for rural-farm nonwhite females was that of service workers where the measure increased from .07 to .13 in this time period. Major increases in affinity coefficients of rural-farm nonwhite males were in the categories of craftsmen, operatives, and laborers. Thus, the decline in workers in agricultural occupations and their entrance into other occupations is reflected in the increases in affinity of white workers in all occupational categories in rural-farm areas. Major changes for white workers were in the occupational categories of clerical and service workers, whereas major changes for nonwhite workers were in the classes of service, operatives, and laborers.

In summary, the major changes in affinity measures of white females have been in the categories of clerical, sales, and service workers. For white males, increases were in the

categories of professional, technical, operatives, and craftsmen. Changes for nonwhite females were increases in the categories of professional, technical, clerical, sales, and service workers. For nonwhite males, the major changes were increases in the categories of operatives, craftsmen, and laborers. Thus, the general trends have continued to show an increase in the affinity of females for the clerical occupations and the increase of males in the professional and skilled craftsmen occupations.

Affinity by Age Classes

As noted in an earlier section, the percentage of younger workers in the labor force is decreasing, while the percentage of older workers has risen slightly. The result of these factors is an increase in the median age of employed workers. Appendix Table 37 contains the age description of all workers from the standpoint of median age by major occupational category.

Between 1940 and 1960, the median age of employed males increased from 34.1 to 38.8 years, an increase of 4.7 years. The median age of females rose from 30.6 to 38.1 years, a gain of 7.5 years. Thus, in 1960, the median age of female workers was very close to that of male workers.

As in the analysis of other demographic classifications, there are two simple ways to show the relationship of age to occupation. First, there is the percentage distribution of

workers in each age group by occupation (vertical distribution); and secondly, there is the percentage distribution of workers by age in each occupational category (horizontal distribution). The correlation measure was also used to show affinity between specific age classes and major occupational classes.

Measures of affinity of age groups for occupation by sex are presented in Appendix Table 38. The measure of affinity for each age class was determined by comparing each age class with the sum of the remaining classes. For example, the measures of affinity of the age class 14 to 24 years was determined using this age class and the sum of the age classes 25-44, 45-64, and 65 and over. In each case, the age class was compared to the sum of the remaining three age classes.

For males between the ages of 14 and 24, two major changes are observed. First, the negative affinity of young men for the occupational category of farmers and farm managers has increased, moving from $-.21$ in 1940 to $-.05$ in 1960. Second, there has been a major decline in the affinity of this age group for farm labor, dropping from $.37$ in 1940 to $.16$ in 1960. Even in 1960, however, young men had a higher affinity for farm labor than for any other occupation; but had the lowest affinity for the managerial occupation, closely followed by the farmer categories.

In the age group from 14 to 24 years, females had three important changes in the affinity of age for occupation. First, there was an increase in the affinity for the category of farmers and farm managers moving the measure closer to zero correlation; it was $-.10$ in 1940 and $-.03$ in 1960. Secondly, their affinity for the clerical occupation increased from $.05$ to $.13$. Thirdly, their affinity for farm labor dropped from $.13$ to $.02$. On the whole, the major change for young females has been the drop in unskilled labor and the rise in middle-status occupational category of clerical workers.

The negative affinity of 25-44 year old males for the category of farmers and farm managers decreased from $-.05$ to $-.09$ between 1940 and 1960. There was also a decrease in the positive affinity of the same group for the category of craftsmen where the measure moved from $.10$ in 1940 to $.05$ in 1960. The negative affinity of this age-sex group for the service occupations increased from $-.17$ to $-.08$ for males. Thus, the major changes for males 25-44 years have been in the low-status occupations and the agricultural occupations.

For females from 25 to 44 years, major changes were in the affinity for the categories of professionals and farm laborers. The low positive affinity of this age group for the professional category dropped to a low negative correlation; moving from $.07$ to $-.02$. The negative affinity of

this age-sex group for the category of farm laborers changed in the opposite direction, rising from $-.10$ to $-.02$. In 1960, very little difference exists between male and female workers in regards to the drawing power of the occupational category of farm laborers. The decline in emphasis of the professional category was seen in this age-sex group of females also.

Males in the age group from 45 to 64 had the same changes as males in the age group from 25 to 44 except for the category of craftsmen where the negative affinity increased from $-.12$ to $-.06$. Thus, the major affinity changes for males in the working years 25 to 64 have been in the low-status and agricultural occupations.

Females in the age group from 45 to 64 years had major affinity changes in the categories of professionals, farmers and farm managers, clerical workers, and operatives. In the professional occupations the affinity of this age-sex group moved upward from $-.01$ to $+.05$. Also, in the category of operatives, the negative affinity coefficient moved from $-.09$ in 1940 to $-.03$ in 1960. The positive affinity of females 45 to 64 for the category of farmers and farm managers decreased from $.18$ to $.05$. The affinity of this age-sex group for the category of clerical occupations decreased from $-.05$ to $-.09$. Thus, in this older group of females, the reverse of previous changes are seen. First, there is the decrease in the affinity for clerical and agricultural

occupations; and secondly, there is the increase in affinity for professional occupations. These changes are reversed from previous sections where there was a decrease in affinity for professional occupations and increases for clerical occupations.

For males 65 years and over, there was one major change in the affinity for occupations. In the category of service workers, the measure moved from $-.048$ to $-.002$, or very close to zero correlation. For females 65 years and over, the major changes were in the categories of farmers and farm managers and private household workers. The affinity of older women for the agricultural occupations decreased from $.15$ in 1940 to $.07$ in 1960; but the affinity for private household workers increased from $.03$ to $.06$ in this time period. Thus, since 1940, there have been few changes in the affinity of older persons for occupations, with the largest changes in the low-status and agricultural occupations.

Comparing the affinity coefficients of age groups in each occupational class provides an illuminating picture as to where the changes are occurring in the occupational structure. In the category of professionals, the affinity measures decreased in all age groups except from 45 to 64 for males and 25 to 44 for females. Increases in affinity measures for male age groups 14 to 24 and female age groups 14 to 44 were seen in the category of farmers and farm

managers with decreases in the other age groups. Among male workers classed as managers and clerical workers and female workers classed as managers, there were increases in affinity coefficients for the youngest and oldest age groups with decreases for the rest. Among male service workers and female operatives, there were decreases in affinity measures in the age classes up to 44, and increases after the age of 45. Among workers classed as farm laborers, the changes in affinity measures were the opposite for males and females. Among males there were increases only in the youngest age group while among females there were increases in all age groups except the youngest one. In the category of other laborers there were increases in all age groups in the affinity measures for males and females except for the age group from 25 to 44. On the whole, there were no prevalent trends in affinity measures by age for males and females. Also there were no trends observable by age groups in occupational status classes.

In summary, the major changes in the affinity of age classes for occupations were in the high- and middle-status and agricultural occupations. An interesting finding of this section is the smallness of changes in affinity measures of age classes for occupations, except in the case of young males 14 to 24 years in the categories of farmers and farm laborers where there were decreases of .11 and .21, respectively. As in previous sections, changes in professional

professional, clerical, and agricultural workers were seen in occupational categories by age classes in considering changes in affinity measures. On the whole, major changes in the affinity measures of females 14-24 in clerical occupations and males and females 45-64 in operative occupations indicate some improvement in the social structure of the state.

Changes in

Changes in Occupational Categories by Educational Attainment

Educational attainment is increasingly becoming an important factor in the location of a worker in the occupational structure. An equally important factor is the fact that the occupational structure supports differentiated levels of educational attainment. Occupations requiring little education are just as important to the structure and economy of the state as occupations requiring the highest degrees of educational attainment. In support of human dignity of the individual, the need for every person to seek the most education that he is capable of exists.

Data concerning educational attainment for the nation and the South are used to base generalizations about the educational attainment of workers in the state's occupational structure.

The level of educational attainment for the nation and the South is rising. However, increases in median years of

school completed in the South are not as great as increases for the nation.

Data are presented for total and nonwhite workers in Appendix Table 39. Precise comparisons between whites and nonwhites are not possible in this case. However, the differences between all employed persons and nonwhite workers are instructive and suggestive. The medians for total nonwhite workers have risen since 1950. The medians for the sub-group totals such as for total males can be used as a reference point for examining the differences among the major occupations in the median years of schooling completed by the different sub-groups.

The majority of the professional occupations require extensive academic training. This requirement is reflected in a median of 16 or more years of schooling by all groups.

In the categories of managers and clerical workers, the median years of school completed is around 12 with the nonwhite being below these figures. The nonwhite are under-represented in both categories, however. For the nonwhite alone, only those in the clerical category possess a median close to the total group median.

Nonwhite workers in the category of sales workers have a higher median than the remaining classes. In the category of managers, officials, and proprietors, nonwhite workers are behind the total median. This factor suggests a low concentration of nonwhite workers in this category.

In all of the remaining categories the median is below a high school education. The medians for nonwhite workers are from one to one and one-half years below those of the total workers. The lowest median for total workers was in the category of farm laborers. Lowest medians for nonwhite workers were in agricultural occupations.

To summarize, the educational structure of the state approximates that of the South. The median years of schooling completed are expected to approximate those of the South; thus, the medians would be slightly below the national medians.

The relationship between occupational status and educational attainment can readily be observed. Of course, the concept of status includes educational attainment, income, and prestige. Data in this study support Edwards' classificatory scheme of increase in educational attainment with steps up the occupational categories. The upper status occupational categories of professionals, managers, officials, and proprietors have the highest medians of schooling completed. The middle-status categories follow in the median years, while the low-status occupational categories have the lowest medians.

The nonwhite population has lower medians than the total population. This fact may be explained by the amount of schooling that the nonwhite are able and encouraged to take.

The median years of schooling completed have increased for all groups and sexes. The medians for nonwhite workers are lower than for the total population, but the nonwhite workers have made significant advances.

Changes in Income Classes by Occupational Categories

The earning power of males and females as well as of whites and nonwhites differs significantly. The general argument in this case is that discrimination against females and nonwhite workers causes the difference in incomes.

Females work in smaller proportions than males and are often employed for shorter periods of time. Traditionally, females have been paid lower salaries than men in the same occupations. Females have been found to accept jobs in smaller concerns and at lower pay than males. These reasons could account for some of the differences in the earning power of males and females.

In the case of nonwhite workers, discrimination is not as obvious. In the majority of cases, the form of discrimination is indirect. The low income status of the categories in which the nonwhite workers find their chief employment is due to both a cause or an effect of the present distribution of the nonwhite labor force. On one hand, discrimination operates to bar the entrance or preparation for better paying occupations. On the other hand, the

concentration of nonwhites in the least exacting lines of work further depresses the relative income positions of these occupations.

Between 1950 and 1960, the median income of males rose from 1,739 dollars to 2,974 dollars, or 71 per cent. In this period, the median income of females rose from 1,205 to 1,820 dollars, or 51 per cent. In 1950 the median income of males was 534 dollars, or 44 per cent higher than the median of females. In 1960, the median for males was 1,154 dollars, or 63 per cent higher than the median for females. The increase in the difference between males and females was due to the higher percentage change in the median of males between 1950 and 1960.

Between 1950 and 1960, the median income of all occupational categories increased except for female workers classed as farmers and farm managers. For males, the best paying occupations (those with medians above the total median) were the occupational categories of professional, technical, managers, officials, proprietors, clerical, sales, craftsmen, and kindred workers. The medians of the high-status occupations were more than two thousand dollars above the median for all occupations. The category of operatives and the low-status occupational categories were below the total median. The categories of farm laborers and private household workers were more than one thousand dollars below the total median. In 1960, the range between

the highest (managers) and the lowest (farm laborers) paid categories was 4,697 dollars. The median of the category of managers, officials, and proprietors was more than seven times higher than the median of farm laborers.

In 1960, the median incomes of seven of the occupational categories of nonwhite male workers were higher than the median income of all nonwhite male workers. These categories, shown in Appendix Table 40, included workers classed as professional, technical, managerial, clerical, craftsmen, operatives, service, and other laborers. Thus, the highest median incomes of nonwhite workers were in all status groupings (high, middle, and low). However, the category of other laborers is close to the total median. The median income for nonwhite female workers of the same categories of nonwhite male workers except the category of other laborers were above the total nonwhite female median income.

In 1960, the median income of nonwhite male workers was 1,555 dollars, but that of nonwhite female workers was only 754 dollars. The male median was 106 per cent higher than the female median. The discrimination between males and females is very evident in this case.

In summary, median income increased as steps up the occupational structure were taken. Also, discrimination against females and nonwhite workers was still present. The discrimination, however, was associated with many factors. Median incomes for all categories improved; yet,

although there appears to have been a general improvement of the state's income structure, increased dollar income does not indicate changes in real buying power during two decades.

Caution in comparing median incomes is appropriate. First, the occupational categories contain occupations which vary greatly in earning power. Secondly, the workers work varying periods of time. Thirdly, noncash benefits are not included in the total income. Also, changes in income between two dates does not indicate changes in the actual buying power of money.

Changes by Industrial Classifications

As in previous sections, changes in the numbers of workers by industrial classes are divided into two components: (1) change in magnitude, and (2) change in structure. The change in magnitude was divided into (1) changes in total numbers of workers, and (2) change due to changes in number of workers by specific sex class.

Columns 5 and 9 of Appendix Tables 41 and 42 show the absolute and relative changes, between 1940 and 1960, in the number of North Carolina workers by major industry class and sex. The total increase in male workers was 144,215, 16.1 per cent of the 1940 number. The greatest increases in numbers of male workers occurred among workers in the industrial classes of: wholesale trade (71,484), construction

(48,986), professional services (31,361), and transportation (25,234), whereas, the greatest percentage increases occurred in professional services (124.1), finance (109.1), and construction (105.4).

The total increase in female workers was 252,573, 81.4 per cent of the 1940 number. The greatest increases in numbers of female workers occurred in the industrial classes of: manufacturing (79,122), professional services (59,858), and wholesale trade (59,061), whereas, the greatest percentage increases occurred in business (499.1), construction (451.6), and finance (366.7). The increase in the class of professional service was 155.8 per cent; in wholesale trade, 221.8 per cent; and in manufacturing, only 79.1 per cent.

Balancing the increases for male workers was a decrease in agricultural workers (196,880, or 52.6 per cent). For female workers in this class, there was a decrease of 4,152, or 12.1 per cent.

A comparison of columns 6, 7, 8 and 10, 11, 12, which show magnitudinal and structural components, absolutely and relatively, is interesting. Consider, for example, the increase of 104,532 (46.4 per cent) in male workers in manufacturing, wherein the magnitudinal component due to increases in total workers was 74,024 (32.8 per cent), the magnitudinal component due to increases in the specific sex class was -37,824 (-16.8 per cent), and the structural

component was 68,332 (30.3 per cent). Now contrast male workers in the wholesale trade class. Among male workers in this class, the magnitudinal component due to increases in total workers was 32,857 (32.8 per cent), the magnitudinal component due to increases in specific sex class was -16,789 (-16.8 per cent), and the structural component was 55,416 (55.4 per cent).

In the case of female workers, the magnitudinal component due to specific sex class was the major component. For example, in the manufacturing industry, the total increase (79,122, or 79.1 per cent) may be divided into the magnitudinal component due to increases in total workers (32,844, or 32.8 per cent), the magnitudinal component due to increases in the specific sex class (48,568, or 48.5 per cent), and the structural component (-2,290, or -2.3 per cent).

Another way of showing structural changes is illustrated in columns 13, 14, and 15 of Appendix Tables 41 and 42. Here again, it is seen that in terms of structure, the greatest increases occurred among male workers in the industrial classes of manufacturing (6.6 per cent), wholesale trade (5.3 per cent), and construction (4.0 per cent). There was a decrease of 24.7 per cent in the class of agriculture and a decrease of .3 per cent in the class of personal services.

The greatest increases occurred among female workers in the industrial classes of wholesale trade (6.6 per cent), professional services (5.1 per cent), and finance (2.1 per cent). There were decreases in the classes of personal services (12.1 per cent), agriculture (5.7 per cent), and manufacturing (.4 per cent).

To summarize: as in the case of the occupational structure, a major change in the industrial classificatory structure has been the change in the class of agriculture where there were decreases for males (52.6 per cent) and females (12.1 per cent). Major increases in numbers of male and female workers were in the classes of wholesale trade and professional services. The rapid increase in numbers of workers was evident in all classes. On the whole, the decline in agricultural workers has been more than offset by the increase of workers in the skilled industrial classifications.

Summary

Two major techniques were used in this chapter to describe and evaluate changes in the occupational structure of the state. Changes were evaluated by means of components of change and measures of affinity. Components of change were based on changes in structure and magnitude. Measures of affinity illustrated extent and direction of changes of persons who were not only in the i^{th} category, but also the j^{th} occupational class.

The greatest changes have been increases in workers in the occupational categories of workers classed as clerical workers, craftsmen, and operatives. Balancing these increases were decreases in the number of workers in agricultural occupations.

The division of occupational categories into socio-economic classes revealed the greater growth in the middle-status categories of clerical workers, craftsmen, and operatives. These same changes were seen in all sex, color, and residence groupings, accompanied also by increases in service workers and decreases in agricultural workers.

Changes in affinity measures between 1940 and 1960 were small with the major changes the same as those noted above. The greatest change has been the rapid increase of female workers.

Since 1940, there has been an increase in the level of educational attainment and median incomes of employed workers. Smaller changes for females and nonwhite workers indicated a continued discrimination.

Similar changes were observed in the industrial classificatory structure as in the occupational classificatory structure. Major increases were in the classes of wholesale trade and professional service. On the whole, the decline in agricultural workers has been more than offset by the increase of workers in the skilled industrial classifications.

SUMMARY AND IMPLICATIONS

Summary

The general purpose of this study was to describe and to evaluate the social and economic changes which have occurred in the labor force of North Carolina since 1940. The methodological orientation of the study was descriptive and demographic.

Sociological interest in occupations stems from the attempt to locate an individual's place in the stratification system of society. The occupation of an individual has become important as a means of determining the position of an individual in the social structure.

Occupational trends within an area's structure represent an important means of measuring changes and determining the use society makes of its workers. Occupational trends have been used as bases for conclusions of changes in the social structure.

Demography is a branch of science which is a special part of sociology. It is very useful in explaining phenomena in the societal structure. Demographic variables were used in this study in order to make comparisons and interpretations about sections of the state's working force. An accurate assessment of the facts regarding numbers and characteristics of employed workers is indispensable to the evaluation of change.

Secondary data from census materials were employed in the study. The occupational classifications were from the system developed by the Bureau of the Census.

The labor force of the state has remained generally constant in relation to the population 14 years and over in age. The increased participation of females has been the major factor of change. Labor force participation by younger and older males has decreased, while participation by females increased with an increase in age. Participation by nonwhite workers has declined in the past two decades. Possible reasons for declines in participation rates of nonwhite workers were changes in the age distribution of the nonwhite population and migration from the state as a result of the decline in agricultural jobs.

A division of the nonagricultural occupational categories into three status groupings revealed greater growth in the middle and high status categories of workers classed as professionals, managers, clerical, sales, craftsmen, operatives, and kindred workers. The agricultural groupings of farmers, farm managers, and farm laborers declined by approximately 50 per cent in the past two decades.

Changes in numbers of workers were divided into two components of change: (1) change in magnitude, and (2) change in structure. Major changes were increases in middle-status occupations and decreases in agricultural occupations. The changes in structure were encouraging in that there has

been a movement of workers from agricultural and low-status occupations to middle and high status occupational categories, indicating some improvement in the social structure of the state.

A measure of affinity of an independent variable for an occupation was developed in order to observe changes in the time period and in order to measure the drawing power or correlation of the independent variable with the occupation. The measure was introduced in hopes of overcoming shortcomings of previously used measures of change such as percentage change and theoretical distributions. An interesting finding of this study is the small amount of change that has occurred in the occupational structure as measured by the affinity coefficients.

The middle-status occupational categories of workers classed as clerical, sales, craftsmen, operatives, and kindred workers were changing more than the other status categories by residence classes. There was a definite change in the distribution of workers by residence.

The proportion of nonwhite workers approximates their proportion in the total population. The rate of change for nonwhite workers has been less than for white workers, but a definite improvement in socioeconomic status was noted. The bulk of nonwhite workers continue to be in the low-status occupational categories, where major change has taken place in the past two decades. Smaller increases were noted in the middle-status occupations.

The increase of female workers in the state has been phenomenal in the past two decades. The percentage increase of females (81.4) in the labor force was much higher than the increase of males (16.1). Greatest numbers and increase for female workers were in the category of clerical, sales and kindred workers. An increase in the number of females married with spouse present in the labor force indicated an increase in the number of two-income families.

The median ages of male and female workers were not very different. The median ages in all occupational categories increased in the two decades. This factor indicates that the entry age in the labor force is older. The median ages in the low-status occupational categories increased more than median ages in the other categories. This factor suggested improvement in that fewer persons who are in the younger age groups are entering these categories. With respect to age groups and their affinity for occupations, major changes were in the categories of farmers and farm managers and service workers.

Generalizations from national and regional data indicated a general improvement in educational attainment of employed workers in all occupational categories. Educational attainment is closely associated with status in the social structure for higher levels of educational attainment of workers, as seen in the high-status categories, and vice versa, lower levels of educational attainment in the low-status occupational categories.

The median income of all categories increased, but it is difficult to compare median incomes for two decades because changes in real buying power are not evident.

Trends in the industrial structure indicate similar results as occupational trends. There has been a sharp decline in the agricultural classification and increases in the skilled industrial classifications.

Implications and Suggestions for Research

The findings of this study indicate a continued discrimination against female and nonwhite workers. Although certain categories such as the craftsmen category do not require equal numbers of female workers, there tends to be a great disparity in the categories employing females. For example, the proportion of female workers in the managerial occupations is far less than the proportion of female workers in clerical, sales, and operative occupations. Likewise, discrimination against nonwhite workers is not direct in most cases, but the results from observed differences indicate the presence of discrimination. Location and understanding of discrimination are important if differences between sex and color are to be less significant.

The lack of education among white and nonwhite workers is evident. Before there is successful competition between color groups, the nonwhite individual and the white individual have to be encouraged and motivated to seek the

highest levels of development that they are capable of obtaining.

Care must be taken in comparing broad occupational categories. The specific occupations within a single broad category are highly varied in character and in relation to demographic variables and trends. There is much need for further research here.

Occupational research is a field of vast opportunities for sociologists. Each section of this general study needs complete and detailed research. It is imperative that facts concerning numbers and characteristics of workers be understood if we are to develop a systematic method of locating the approximate position of an individual in the social structure.

Since the social class of an individual determines and affects the occupational choice of that individual, it is imperative that we understand the forces that influence the selection of particular occupational categories.

The measure of affinity between demographic and occupational categories in this study is a useful tool which combines two types of information and is a most effective instrument for the study of trends and the relative drawing power of occupations. An application of this measure to detailed occupations would yield a more accurate analysis of trends and the correlation between occupation and certain demographic characteristics of individuals in the occupational structure.

This study can be used by many different persons. The development of the measure of affinity has implications for those persons interested in the methodology and development of techniques for use with occupational statistics. The description of the occupational changes has implications for vocational counselors in advising persons with regard to occupational choice, for economic planners in developing the manpower of an area, and for educators in training individuals for jobs that are essential for the welfare of society.

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A P P E N D I X

Appendix Table 1. Per cent labor force participation by residence, sex, and color for North Carolina, 1940, 1950, and 1960^a

Residence and color	Percentage								
	1940			1950			1960		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
State									
Total	53.5	80.1	27.7	55.1	80.4	30.9	56.3	76.1	37.5
White	52.2	80.3	24.6	54.6	80.7	29.4	56.9	78.0	36.7
Nonwhite	57.1	79.5	35.9	56.4	79.5	35.2	54.0	69.4	40.0
Urban									
Total	60.6	81.4	42.7	59.8	80.3	42.4	59.9	77.9	44.3
White	57.8	81.4	36.8	59.0	80.9	40.2	59.9	79.8	42.5
Nonwhite	67.2	81.3	55.7	62.0	78.3	48.9	59.8	71.7	50.1
Rural nonfarm									
Total	54.0	77.6	31.2	53.8	78.4	29.3	55.6	75.7	35.3
White	54.0	79.1	29.7	54.2	79.8	28.4	56.8	78.0	35.2
Nonwhite	54.0	72.1	36.6	52.3	72.5	32.8	50.7	66.1	35.6
Rural farm									
Total	48.4	80.8	14.2	51.0	82.5	18.2	49.4	72.8	25.8
White	47.3	80.5	12.2	50.0	81.5	16.7	49.8	73.7	25.7
Nonwhite	51.2	81.6	19.2	53.5	85.2	21.7	48.3	70.4	26.0

^aSource: U. S. Censuses of Population of 1940, 1950, and 1960. 1940 - Labor Force, N. C., Table 1; 1950 - N. C., Detailed Characteristics, Table 66; 1960 - N. C., General Social and Economic Characteristics, Table 52

Appendix Table 2. Per cent labor force participation by age, sex, and color for North Carolina for 1940, 1950, and 1960^a

Age	Total			White			Nonwhite		
	1940	1950	1960	1940	1950	1960	1940	1950	1960
Total									
Total	53.5	55.1	56.3	52.2	54.6	56.9	57.1	56.4	54.0
14-19	30.4	31.8	28.2	28.4	31.0	29.9	35.2	33.9	23.9
20-24	64.3	63.1	67.0	64.1	64.7	69.0	64.6	58.7	60.3
25-34	65.3	64.1	68.7	64.4	63.9	69.4	67.8	64.6	66.3
35-44	62.0	66.5	70.9	60.2	65.7	70.9	67.2	69.0	71.0
45-54	57.8	62.6	68.9	55.8	61.3	68.5	64.2	67.1	70.5
55-59	54.0	54.7	59.7	51.9	53.0	58.9	61.5	61.0	62.6
60-64	48.3	48.2	47.3	46.3	46.7	47.0	55.6	53.8	48.2
65-74	34.7	31.9	24.2	33.5	30.6	23.4	38.2	36.5	27.5
75 & over	13.4	12.5	9.4	13.1	12.0	9.0	14.5	14.5	10.8
Male									
Total	80.1	80.4	76.1	80.3	80.7	78.0	79.5	79.5	69.4
14-19	53.3	45.8	37.8	40.6	43.7	39.7	49.7	51.4	33.0
20-24	89.3	85.2	85.8	89.7	85.7	87.3	88.1	83.8	80.4
25-34	94.5	92.5	93.6	95.5	93.6	95.2	91.8	89.0	87.0
35-44	94.3	94.9	93.6	94.8	95.4	95.0	92.6	93.2	88.4
45-54	92.4	92.4	90.9	92.7	92.5	92.1	91.6	91.9	86.6
55-59	89.5	86.7	83.7	89.6	86.5	84.7	89.4	87.2	80.2
60-64	82.6	80.8	72.3	82.2	80.6	73.7	83.8	81.7	66.6
65-74	61.8	58.4	38.9	61.7	57.9	39.0	62.1	60.0	38.4
75 & over	26.3	25.1	17.5	26.3	24.5	17.6	26.3	27.5	17.2

Appendix Table 2 (continued)

Age	Total			White			Nonwhite		
	1940	1950	1960	1940	1950	1960	1940	1950	1960
Female									
Total	27.7	30.9	37.5	24.6	29.4	36.7	35.9	35.2	40.0
14-19	17.6	17.5	17.9	16.1	17.5	19.2	21.0	17.4	14.7
20-24	40.6	41.4	47.4	39.6	43.1	49.6	43.0	36.8	40.4
25-34	37.4	36.8	45.4	34.3	35.0	44.4	45.5	42.3	48.9
35-44	31.2	40.0	49.4	26.3	37.6	47.6	44.5	47.3	55.7
45-54	23.5	34.7	48.2	18.7	31.8	46.1	38.0	44.2	55.8
55-59	17.6	24.3	37.8	13.7	21.4	35.3	31.5	35.2	46.6
60-64	13.7	17.7	26.2	10.4	15.5	24.2	25.9	26.3	33.7
65-74	7.9	8.6	12.1	5.6	6.9	10.5	14.6	14.9	18.1
75 & over	2.4	2.3	3.5	1.8	2.0	3.0	4.4	3.6	5.8

^aSource: U. S. Censuses of Population of 1940, 1950, and 1960. 1940 - Labor Force, N. C., Table 5; 1950 - N. C., Detailed Characteristics, Table 66; 1960 - N. C., Detailed Characteristics, Table 115

Appendix Table 3. Source of variation in labor force participation by time, sex, color, and residence, North Carolina

Source	Sums of squares	Per cent of total
Total	20,604.66	100.0
Sex	17,773.34	86.3
Residence	1,012.93	4.9
Time x sex	221.42	1.1
Time x residence	74.80	0.1
Sex x color	249.10	1.2
Sex x residence	1,002.75	4.9
Error	270.32	1.5

Appendix Table 4. Components of change of total labor force participation rates, North Carolina, 1940 and 1960

Age class	Participation rates		Change
	1940	1960	1960 - 1940
Total			
Unadjusted	.535	.563	.028
Adjusted ^a	.532	.566	.034
Unadjusted-adjusted	+.003	-.003	-.006
14-19	.304	.282	-.022
20-24	.643	.670	.027
25-34	.653	.687	.034
35-44	.620	.709	.089
45-54	.578	.689	.111
55-59	.540	.597	.057
60-64	.483	.473	-.010
65-74	.347	.242	-.105
75+	.134	.094	-.040

^aAdjusted to average age distribution of 1940 and 1960 populations 14 years and over

Appendix Table 5. Distribution of the population by age color, and sex, North Carolina 1940 and 1960^a

	Total		White		Nonwhite	
	1940	1960	1940	1960	1940	1960
Males - total	100.0	100.0	100.0	100.0	100.0	100.0
Under 5	10.7	11.9	10.3	10.9	11.8	14.8
5-9	10.9	11.5	10.5	10.4	12.0	14.5
10-14	11.4	11.0	11.2	10.3	12.2	13.1
15-19	11.4	9.4	11.0	9.1	12.2	10.1
20-24	9.8	7.2	9.5	7.4	10.4	6.4
25-29	8.6	6.3	8.7	6.7	8.6	5.2
30-34	7.2	6.6	7.5	7.1	6.6	5.3
35-39	6.3	6.7	6.4	7.1	5.8	5.5
40-44	5.2	6.1	5.5	6.4	4.7	5.2
45-49	4.5	5.6	4.8	5.9	3.8	5.0
50-54	4.0	4.7	4.2	5.0	3.5	4.0
55-59	3.2	3.9	3.4	4.0	2.6	3.4
60-64	2.5	2.9	2.7	3.1	1.9	2.3
65-69	2.1	2.5	2.1	2.6	2.0	2.2
70-74	1.2	1.8	1.2	1.9	1.0	1.5
75+	1.1	1.9	1.1	2.0	.9	1.5
Females - total	100.0	100.0	100.0	100.0	100.0	100.0
Under 5	10.4	11.3	9.9	10.3	11.4	14.1
5-9	10.6	10.8	10.1	9.9	11.7	13.7
10-14	11.0	10.4	10.7	9.7	11.9	12.2
15-19	11.3	8.6	11.1	8.3	12.0	9.4
20-24	10.2	6.8	9.9	7.0	10.8	6.2
25-29	8.9	6.5	8.9	6.8	8.9	5.7
30-34	7.4	6.8	7.7	7.1	6.7	6.0
35-39	6.5	6.9	6.6	7.3	6.3	6.0
40-44	5.3	6.2	5.5	6.5	4.9	5.5
45-49	4.6	5.8	4.8	6.0	4.0	5.1
50-54	3.9	4.9	4.1	5.2	3.4	4.1
55-59	3.0	4.1	3.3	4.4	2.3	3.5
60-64	2.4	3.3	2.7	3.6	1.8	2.7
65-69	2.1	2.9	2.1	3.0	1.9	2.4
70-74	1.2	2.1	1.2	2.3	1.0	1.6
75+	1.2	2.5	1.3	2.8	1.0	1.8

^aSource: U. S. Census of Population, 1960 General Population Characteristics, N. C., Table 17

Appendix Table 6. Components of change of labor force participation rates by color, sex, and age, North Carolina, 1940 and 1960

Age, sex, color	Participation rates		Change 1960-1940	Age, sex, color	Participation rates		Change 1960-1940
	1940	1960			1940	1960	
Total males (total)				White females (total)			
Unadjusted	.801	.761	-.040	Unadjusted	.246	.367	.121
Adjusted	.803	.761	-.042	Adjusted ^a	.236	.372	.136
Unadjusted- adjusted	-.002	.000	+.002	Unadjusted- adjusted	.010	-.005	-.015
14-19	.433	.378	-.055	14-19	.161	.192	.031
20-24	.893	.858	-.035	20-24	.396	.496	.100
25-34	.945	.936	-.009	25-34	.343	.444	.101
35-44	.943	.936	-.007	35-44	.263	.476	.213
45-54	.924	.909	-.015	45-54	.187	.461	.274
55-59	.895	.837	-.058	55-59	.137	.353	.216
60-64	.826	.723	-.103	60-64	.104	.242	.138
65-74	.618	.389	-.229	65-74	.056	.105	.049
75+	.263	.175	-.088	75+	.018	.030	.012
Total females (total)				Nonwhite males (total)			
Unadjusted	.277	.375	.098	Unadjusted	.795	.694	-.101
Adjusted	.267	.378	.111	Adjusted	.793	.699	-.094

Appendix Table 6 (continued)

Age, sex, color	Participation rates		Change 1960-1940	Age, sex, color	Participation rates		Change 1960-1940
	1940	1960			1940	1960	
Unadjusted- adjusted	.010	-.003	-.013	Unadjusted- adjusted	.002	-.005	-.007
14-19	.176	.179	.003	14-19	.497	.330	-.167
20-24	.406	.474	.068	20-24	.881	.804	-.077
25-34	.374	.454	.080	25-34	.918	.870	-.048
35-44	.312	.494	.182	35-44	.926	.884	-.042
45-54	.235	.482	.247	45-54	.916	.866	-.050
55-59	.176	.378	.202	55-59	.894	.802	-.092
60-64	.137	.262	.125	60-64	.838	.666	-.172
65-74	.079	.121	.042	65-74	.621	.384	-.237
75+	.024	.035	.011	75+	.263	.172	-.091
White males (total)				Nonwhite females (total)			
Unadjusted	.803	.780	-.023	Unadjusted	.359	.400	.041
Adjusted	.807	.781	-.026	Adjusted	.354	.398	.044
Unadjusted- adjusted	-.004	-.001	+.003	Unadjusted- adjusted	.005	.002	-.003
14-19	.406	.397	-.009	14-19	.210	.147	.063
20-24	.897	.873	-.024	20-24	.430	.404	-.026
25-34	.915	.952	-.003	25-34	.455	.489	.034
35-44	.948	.950	.002	35-44	.445	.557	.112
45-54	.927	.921	-.006	45-54	.380	.558	.178
55-59	.896	.847	-.049	55-59	.315	.466	.151
60-64	.822	.737	-.085	60-64	.259	.337	.078
65-74	.617	.390	-.227	65-74	.146	.131	-.015
75+	.263	.176	-.087	75+	.044	.058	.014

^aAdjusted to average age distribution of 1940 and 1960 populations, 14 years and over

Appendix Table 7. Per cent labor force participation by age, sex, color, and residence for North Carolina, 1950 and 1960^a

Age	Urban total		Urban non-white total		Rural non-white total		Rural nonfarm nonwhite		Rural farm total		Rural farm nonwhite	
	1950	1960	1950	1960	1950	1960	1950	1960	1950	1960	1950	1960
Male												
Total	80.3	77.9	78.3	71.7	78.4	75.7	72.5	66.1	82.5	72.8	85.2	70.4
14-19	37.1	34.9	37.3	28.6	44.5	40.9	43.0	33.0	52.1	36.1	62.3	37.5
20-24	76.1	79.7	76.4	78.0	87.6	90.1	79.6	81.0	93.1	86.3	92.8	83.3
25-29	89.9	93.2	86.2	88.6	89.6	92.4	81.0	81.5	95.4	91.0	95.6	88.2
30-34	94.6	95.6	90.6	90.6	91.6	93.9	82.7	85.0	96.2	93.5	96.6	90.4
35-39	95.2	95.4	93.2	91.2	92.9	93.0	87.3	84.1	97.0	93.3	97.7	91.1
40-44	95.2	94.7	94.5	90.5	92.4	91.7	86.0	84.0	96.8	93.0	97.3	91.1
45-49	93.7	93.4	92.3	89.3	90.6	90.7	86.1	84.2	96.1	92.4	97.2	90.1
50-54	91.8	91.4	90.8	87.6	86.4	86.9	84.3	79.5	93.8	90.5	96.0	88.8
55-59	87.0	86.5	85.8	81.8	80.1	79.9	79.1	74.8	91.1	85.0	93.3	84.7
60-64	80.7	75.5	79.0	66.9	72.0	65.4	72.7	60.4	86.7	77.3	89.4	74.6
65-69	61.1	46.1	56.1	47.3	53.0	35.1	54.6	38.3	77.5	56.3	83.6	56.8
70-74	43.5	30.6	41.2	25.6	34.3	23.2	37.2	24.9	60.5	43.1	63.6	44.7
75 & over	22.5	17.6	24.1	16.1	16.1	12.2	19.0	15.8	33.8	25.8	37.3	21.7
Female												
Total	42.4	44.3	48.9	50.1	29.3	35.3	32.8	35.6	18.2	25.8	21.7	26.0
14-19	24.5	21.8	21.0	17.6	15.9	16.6	15.7	13.4	13.2	13.6	16.0	12.8
20-24	52.9	51.9	48.1	46.1	37.2	44.6	33.2	38.2	28.4	40.7	27.4	31.6
25-29	48.1	50.6	54.5	56.9	33.5	42.0	38.7	40.4	22.6	35.6	24.6	32.4
30-34	49.1	51.3	61.3	63.6	34.8	43.6	42.5	44.2	22.5	34.6	24.7	34.1
35-39	53.6	54.8	64.8	67.2	38.5	46.5	43.1	50.0	22.8	35.9	25.9	33.3
40-44	53.9	58.6	64.0	70.0	39.0	48.1	45.3	51.8	22.5	36.0	24.6	36.7

Appendix Table 7 (continued)

Age	Urban total		Urban non-white total		Rural non-white total		Rural nonfarm nonwhite		Rural farm total		Rural farm nonwhite	
	1950	1960	1950	1960	1950	1960	1950	1960	1950	1960	1950	1960
45-49	51.4	60.2	61.8	69.0	36.9	47.4	43.9	57.7	20.0	33.5	25.3	36.1
50-54	43.9	56.5	55.7	65.2	30.2	42.1	37.8	48.7	16.9	29.7	25.2	33.4
55-59	34.6	47.6	45.8	56.7	24.4	33.7	37.8	41.0	12.9	23.9	21.1	31.2
60-64	25.7	34.2	36.0	41.6	16.5	22.1	25.0	29.9	10.2	16.3	15.6	20.7
65-69	14.2	19.2	20.8	26.5	9.6	12.2	17.2	20.0	7.2	10.1	14.1	14.8
70-74	7.3	10.5	11.0	15.0	5.4	6.7	12.7	10.2	4.3	7.2	6.6	9.4
75 & over	2.9	4.2	4.8	6.6	1.8	2.7	2.6	5.5	2.2	3.8	3.3	4.3

^aSource: U. S. Censuses of Population of 1950 and 1960. 1950 - N. C., Detailed Characteristics, Table 66; 1960 - N. C., Detailed Characteristics, Table 115

Appendix Table 8. Percentage distribution of persons by marital status and sex in the labor force of North Carolina, 1940, 1950, 1960^a

Sex and marital status	Percentage			Change 1960-1940
	1940	1950	1960	
Male				
Single	28.4	22.0	18.8	-9.6
Married, spouse present	65.7	71.7	74.7	9.0
Other ^b	6.0	6.3	6.5	.5
Female				
Single	39.9	25.2	17.5	-22.4
Married, spouse present	39.2	54.3	62.7	23.5
Other ^b	20.8	20.5	19.8	-1.0

^aSource: U. S. Censuses of Population of 1940, 1950, and 1960. 1940 - N. C., The Labor Force, Table 8; 1950 - N. C., Detailed, Table 70; 1960 - N. C., Detailed, Table 116

^bIncludes married, spouse absent

Appendix Table 9. Percentage distribution of persons by marital status, sex, and age in the labor force of North Carolina, 1940, 1950, and 1960^a

Marital status, age, and sex	Percentage			Change 1960-1940
	1940	1950	1960	
<u>Married, spouse present</u>				
Male				
14-24	6.3	6.6	6.1	-2.2
25-34	20.0	21.1	19.3	-.7
35-44	16.6	19.4	20.7	4.1
45 & over	22.8	24.7	28.6	5.8
Female				
14-24	7.7	9.4	8.3	.6
25-34	16.3	17.5	17.2	.9
35-44	9.7	16.3	18.7	9.0
45 & over	5.6	11.1	18.5	12.9
<u>Single</u>				
Male				
14-24	19.6	15.5	13.2	-6.4
25-34	5.7	3.8	2.9	-2.8
35-44	1.7	1.4	1.3	-.4
45 & over	1.4	1.3	1.4	0
Female				
14-24	23.8	14.0	9.4	-14.4
25-34	10.0	5.2	2.9	-7.1
35-44	3.6	3.0	2.0	-1.6
45 & over	2.6	2.9	3.2	.6

^aSource: U. S. Censuses of Population of 1940, 1950, and 1960. 1940 - N. C., The Labor Force, Table 8; 1950 - N. C., Detailed, Table 70; 1960 - N. C., Detailed, Table 116

Appendix Table 10. Per cent of the labor force unemployed by residence and color for North Carolina, 1940, 1950, 1960^a

Residence and color	1940		1950	1960
	On public emergency work	Seeking work	Unemployed	Unemployed
State				
Total	4.0	5.4	3.2	4.3
Urban	3.6	8.1	4.8	4.6
Rural nonfarm	5.3	6.3	3.3	4.4
Rural farm	3.4	2.6	1.0	2.9
White				
Total	4.2	4.3	2.5	3.4
Urban	3.2	5.1	3.2	3.4
Rural nonfarm	5.3	5.6	2.9	3.8
Rural farm	4.1	2.6	1.0	2.6
Nonwhite				
Total	3.4	8.3	5.3	7.3
Urban	4.5	14.0	9.1	8.8
Rural nonfarm	5.1	9.1	5.1	7.2
Rural farm	1.7	2.4	1.0	3.8

^aSource: U. S. Censuses of Population of 1940, 1950, and 1960. 1940 - N. C. Labor Force, Table 1; 1950 - N. C., Detailed, Table 66; 1960 - N. C., Detailed, Table 115

Appendix Table 11. Per cent of labor force unemployed by sex and color for North Carolina, 1940, 1950, 1960^a

Color and sex	1940		1950	1960
	On public emergency work	Seeking work	Unemployed	Unemployed
Total				
Males	4.0	4.7	2.5	3.4
Females	3.8	7.5	4.9	6.0
White				
Males	3.9	3.8	2.1	2.7
Females	4.9	5.6	3.5	4.9
Nonwhite				
Males	4.3	7.0	3.8	5.8
Females	1.7	11.0	8.3	9.6

^aSource: U. S. Censuses of Population of 1940, 1950, and 1960. 1940 - N. C. Labor Force, Table 1; 1950 - N. C., Detailed, Table 66; 1960 - N. C., Detailed, Table 115

Appendix Table 12. Per cent of the labor force unemployed by sex, color, and selected age groups for North Carolina, 1940, 1950, 1960^a

Age and color	1940		1950	1960
	On public emergency work	Seeking work	Unemployed	Unemployed
----- Male -----				
State	4.0	4.7	2.5	3.4
14-19	4.2	11.5	5.1	6.3
25-34	3.8	3.8	2.3	2.6
35-44	4.0	3.2	1.8	2.7
65 & over	2.3	2.5	1.8	3.2
White	3.9	3.8	2.1	2.7
14-19	5.0	11.4	5.1	5.6
25-34	3.7	3.0	1.8	2.1
35-44	3.7	2.4	1.5	2.1
65 & over	2.0	1.8	1.2	2.4
Nonwhite	4.3	7.0	3.8	5.8
14-19	2.8	11.5	4.9	8.4
25-34	4.2	6.3	4.1	5.0
35-44	4.7	5.8	2.9	5.0
65 & over	3.2	4.6	3.7	6.2
----- Female -----				
State	3.8	7.5	4.9	6.0
14-19	5.9	17.5	9.9	10.6
25-34	2.0	5.7	4.6	6.2
35-44	3.7	5.5	4.0	5.4
65 & over	2.7	4.0	3.8	4.8
White	4.9	5.6	3.5	4.9
14-19	7.9	16.9	8.9	9.2
25-34	2.4	3.4	3.0	4.9
35-44	4.8	3.3	2.5	4.2
65 & over	4.3	2.2	2.4	3.3

Appendix Table 12 (continued)

Age and color	1940		1950	1960
	On public emergency work	Seeking work	Unemployed	Unemployed
Nonwhite	1.7	11.0	8.3	9.6
14-19	2.4	18.7	12.4	15.4
25-34	1.2	10.2	8.6	10.0
35-44	1.8	8.9	7.4	8.7
65 & over	.8	6.0	5.9	8.3

^aSource: U. S. Censuses of Population of 1940, 1950, and 1960. 1940 - N. C. Labor Force, Table 5; 1950 - N. C., Detailed, Table 66; 1960 - N. C., Detailed, Table 115

Appendix Table 13. Change and components of change in the occupational structure, North Carolina, 1940 and 1960

Occupational class	Number of workers			Change in number of workers		
	Actual		Expected ^a	Total	Magnitude	Structure
	1950 (1)	1960 (2)	1960 (3)	(2)-(1) (4)	(3)-(1) (5)	(2)-(3) (6)
Total	1,208,690	1,605,478	1,605,487	396,788	396,788	--
Professional	58,750	126,421	78,036	67,617	19,286	48,385
Farmers	247,202	124,407	328,353	-122,795	81,151	-203,946
Managers	63,760	108,075	84,691	44,315	20,931	23,384
Clerical	105,371	255,140	139,962	149,769	34,591	115,178
Craftsmen	87,354	187,126	116,031	99,772	28,677	71,095
Operatives	258,415	398,803	343,247	140,388	84,832	55,556
Private household	76,904	70,995	102,150	-5,909	25,246	-31,155
Service	58,323	104,730	77,469	46,407	19,146	27,261
Farm laborers	155,909	73,805	207,091	-82,104	51,182	-133,286
Other laborers	86,173	80,973	114,462	-5,200	28,289	-33,489
Not reported ^b	10,529	75,003	13,985	64,474	3,456	61,018

Appendix Table 13 (continued)

Occupational class	Relative changes			Per cent distribution		
	Total (4)/(1).100 (7)	Magnitude (5)/(1).100 (8)	Structure (6)/(1).100 (9)	1940 (10)	1960 (11)	Change (11)-(10) (12)
Total	32.83	32.83	--	100.00	100.00	--
Professional	115.18	32.83	82.35	4.86	7.87	3.01
Farmers	-49.67	32.83	-82.50	20.45	7.75	-12.70
Managers	69.50	32.83	36.67	5.28	6.73	1.45
Clerical	142.13	32.83	109.30	8.72	15.89	7.17
Craftsmen	114.22	32.83	81.39	7.23	11.66	4.43
Operatives	54.33	32.83	21.50	21.38	24.84	3.46
Private household	-7.68	32.83	-40.51	6.36	4.42	-1.94
Service	79.57	32.83	46.74	4.83	6.52	1.69
Farm laborers	-52.66	32.83	-85.49	12.90	4.60	-8.30
Other laborers	-6.03	32.83	-38.86	7.13	5.04	-2.09
Not reported	612.35	32.83	579.52	.87	4.67	3.80

^aThe number of expected workers assumes that the total number of workers in 1960 were distributed by occupation in the same proportions as were the 1940 workers

^bThe rapid increase in the category of not reported stems from a change in procedure by the Bureau of Census. In 1960, self-administered questionnaires replaced interviewing by census enumerators concerning economic characteristics

Appendix Table 14. Changes and components of change in nonagricultural occupations by socioeconomic status class and in agricultural occupations, North Carolina, 1940 and 1960

Socio-economic status	Number of workers			Changes			Per cent change	
	Actual		Expected	Total	Magnitude	Struct.	Total	Structure
	1940 (1)	1960 (2)	1960 (3)	(2)-(1) (4)	(3)-(1) (5)	(2)-(3) (6)	(4)/(1).100 (7)	(6)/(1).100 (8)
Total	1,208,680	1,605,478	1,605,478	396,788	396,788	--	32.8	22.7
Nonagricultural	805,579	1,407,266	1,070,034	601,687	264,455	337,232	74.7	41.9
High	122,510	234,496	162,728	111,986	40,218	71,768	91.4	58.6
Middle	451,140	841,069	599,240	389,929	148,100	241,829	86.4	53.6
Low	231,929	331,701	308,067	99,772	76,138	23,634	43.0	10.2
Agricultural	403,111	198,212	535,445	-204,899	132,334	-337,233	-50.8	-83.7

Appendix Table 15. Change and components of change in the occupational structure of white males, North Carolina, 1940 and 1960

Occupational class	Number of workers				Total (2)-(1) (5)	Changes		
	Actual		Expected			Magnitude		Structure (2)-(4) (8)
	1940 (1)	1960 (2)	Total ratio (3)	Sex ratio (4)		Total ratio (3)-(1) (6)	Sex ratio (4)-(3) (7)	
Total	668,015	895,281	887,311	895,266	227,266	219,296	7,970	--
Professional	22,942	58,945	30,473	30,747	36,003	7,531	274	28,198
Farmers	178,827	87,240	237,532	239,666	-91,587	58,705	2,134	-152,426
Managers	55,768	91,111	74,076	74,741	35,343	18,308	665	16,370
Clerical	63,238	111,867	83,998	84,752	48,629	20,760	754	27,115
Craftsmen	77,616	164,286	103,096	104,022	86,670	25,480	926	60,264
Operatives	136,141	193,965	180,833	182,458	57,824	44,692	1,625	11,507
Private household	425	529	565	570	104	140	5	-41
Service	22,502	27,032	29,889	30,157	4,530	7,387	268	-3,125
Farm laborers	68,263	22,076	90,672	91,487	-46,187	22,409	815	-69,411
Other laborers	37,061	35,255	49,227	49,670	-1,806	12,166	443	-14,415
Not reported	5,232	36,334	6,950	7,012	31,102	1,718	62	29,322

Appendix Table 15 (continued)

Occu- pational class	Relative changes				Per cent distributions		
	Total	Magnitude		Structure	1940	1960	Change
	(5)/(1).100 (9)	Total ratio (6)/(1).100 (10)	Sex ratio (7)/(1).100 (11)	(8)/(1).100 (12)	(13)	(14)	(15)
Total	34.02	32.83	1.19	--	100.00	100.00	---
Professional	156.93	32.83	1.19	122.91	3.43	7.11	3.68
Farmers	-51.22	32.83	1.19	-85.24	26.77	10.53	-16.24
Managers	63.38	32.83	1.19	29.35	8.35	11.00	2.65
Clerical	76.90	32.83	1.19	42.88	9.47	13.50	4.03
Craftsmen	111.67	32.83	1.19	77.64	11.62	19.83	8.21
Operatives	42.47	32.83	1.19	8.45	20.38	23.41	3.03
Private house- hold	24.47	32.83	1.19	-9.65	.06	.06	--
Service	20.13	32.83	1.19	-13.89	3.37	3.26	-.11
Farm laborers	-67.66	32.83	1.19	-101.68	10.22	2.66	-7.56
Other laborers	-4.87	32.83	1.19	-38.90	5.55	4.25	-1.30
Not reported	594.46	32.83	1.19	560.44	.78	4.38	3.60

Appendix Table 16. Change and components of change in the occupational structure of white females, North Carolina, 1940 and 1960

Occu- pational class	Number of workers				Total (2)-(1) (5)	Changes		Struct. (2)-(4) (8)
	Actual		Expected			Magnitude		
	1940	1960	Total ratio	Sex ratio		Total ratio	Sex ratio	
	(1)	(2)	(3)	(4)		(6)	(7)	
Total	201,955	429,652	268,253	429,652	227,697	66,298	161,399	--
Professional	25,869	50,182	34,361	55,035	24,313	8,492	20,674	-4,853
Farmers	5,367	6,099	7,129	11,418	732	1,762	4,289	-5,319
Managers	5,598	13,424	7,436	11,910	7,826	1,838	4,474	1,514
Clerical	39,513	134,653	52,484	84,062	95,140	12,971	31,578	50,591
Craftsmen	1,218	4,918	1,618	2,991	3,700	400	973	2,327
Operatives	88,627	146,091	117,721	188,550	57,464	29,094	99,923	-42,459
Private house- hold	9,839	9,184	13,069	20,932	-655	3,230	7,863	-11,748
Service	11,595	32,521	15,401	24,668	20,926	3,806	9,267	7,853
Farm laborers	9,715	8,084	12,904	20,668	-1,631	3,189	7,764	-12,584
Other laborers	1,835	2,323	2,437	3,904	488	602	1,467	-1,581
Not reported	2,779	21,411	3,691	5,912	18,632	912	2,221	15,499

Appendix Table 16 (continued)

Occu- pational class	Relative changes				Per cent distributions		
	Total	Magnitude		Structure	1940	1960	Change
	(5)/(1).100 (9)	(6)/(1).100 (10)	(7)/(1).100 (11)	(8)/(1).100 (12)	(13)	(14)	(14)-(13) (15)
Total	112.75	32.83	79.92	--	100.00	100.00	--
Professional	93.98	32.83	79.92	-18.76	12.81	11.70	-1.11
Farmers	13.64	32.83	79.92	-99.10	2.66	1.42	-1.24
Managers	139.80	32.83	79.92	27.05	2.77	3.13	.36
Clerical	240.78	32.83	79.92	128.04	19.57	31.39	11.82
Craftsmen	303.78	32.83	79.92	191.05	.60	.15	.55
Operatives	64.84	32.83	79.92	-47.91	43.88	34.06	-9.82
Private house- hold	-6.66	32.83	79.92	-119.40	4.87	2.14	-2.73
Service	180.47	32.83	79.92	67.73	5.74	7.58	1.84
Farm laborers	-16.79	32.83	79.92	-29.53	4.81	1.88	-2.93
Other laborers	26.59	32.83	79.92	-86.16	.91	.54	-.37
Not reported	670.46	32.83	79.92	557.72	1.38	4.99	3.61

Appendix Table 17. Change and components of change in the occupational structure of nonwhite males, North Carolina, 1940 and 1960

Occupational class	Number of workers				Total (2)-(1) (5)	Changes		Struct. (2)-(4) (8)
	Actual		Expected			Magnitude		
	1940	1960	Total ratio	Sex ratio		Total ratio	Sex ratio	
	(1)	(2)	(3)	(4)		(6)	(7)	
Total	230,281	220,321	305,878	220,321	-9,960	75,597	-85,557	--
Professional	3,523	6,033	4,680	3,371	2,510	1,157	-1,309	2,662
Farmers	60,253	28,517	80,033	57,647	-31,736	19,780	-22,386	-29,130
Managers	1,951	2,538	2,591	1,867	587	640	-724	671
Clerical	1,864	5,102	2,476	1,783	3,238	612	-693	3,319
Craftsmen	8,408	17,436	11,168	8,044	9,028	2,760	-3,124	9,392
Operatives	23,433	45,003	31,126	22,420	21,570	7,693	-8,706	22,583
Private household	5,075	1,774	6,741	4,856	-3,301	1,666	-1,885	-3,082
Service	16,525	22,877	21,950	15,810	6,352	5,425	-6,140	7,067
Farm laborers	61,917	31,592	82,243	59,239	-30,325	20,326	-23,004	-27,647
Other laborers	45,755	41,010	60,775	43,776	-4,745	15,020	-16,999	-2,766
Not reported	1,577	11,089	2,095	1,509	9,512	518	-586	9,580

Appendix Table 17 (continued)

Occu- pational class	Relative changes				Per cent distributions		
	Total	Magnitude		Structure	1940	1960	Change
	(5)/(1).100 (9)	Total ratio (6)/(1).100 (10)	Sex ratio (7)/(1).100 (11)	(5)/(1).100 (12)	(13)	(14)	(14)-(13) (15)
Total	-4.33	32.83	-37.16	--	100.00	100.00	--
Professional	71.25	32.83	-37.16	75.56	1.53	2.82	1.29
Farmers	-52.67	32.83	-37.16	-48.35	26.16	13.33	-12.83
Managers	30.09	32.83	-37.16	34.39	.85	1.19	.34
Clerical	173.71	32.83	-37.16	178.06	.81	2.39	1.58
Craftsmen	107.37	32.83	-37.16	111.70	3.65	8.15	4.50
Operatives	92.05	32.83	-37.16	96.37	10.18	21.04	10.86
Private household	-65.04	32.83	-37.16	-60.73	7.20	.83	-1.37
Service	38.44	32.83	-37.16	42.77	7.18	10.70	3.52
Farm laborers	-48.98	32.83	-37.16	-44.65	26.89	14.77	-12.12
Other laborers	-10.37	32.83	-37.16	-6.05	19.87	19.60	-.27
Not reported	603.17	32.83	-37.16	607.48	.68	5.18	4.50

Appendix Table 18. Change and components of change in the occupational structure of nonwhite females, North Carolina, 1940 and 1960

Occu- pational class	Number of workers				Total (2)-(1) (5)	Changes		Struct. (2)-(4) (8)
	Actual		Expected			Total (3)-(1) (6)	Magnitude (4)-(3) (7)	
	1940 (1)	1960 (2)	Total (3)	Sex ratio (4)				
Total	108,439	134,144	144,037	134,144	25,705	35,598	-9,893	--
Professional	6,416	11,261	8,522	7,937	4,845	2,106	-585	3,324
Farmers	2,755	2,551	3,659	3,408	-204	904	-251	-857
Managers	443	1,002	588	548	559	145	-40	454
Clerical	756	3,518	1,004	935	2,762	248	-69	2,583
Craftsmen	112	486	149	139	374	37	-10	347
Operatives	10,214	13,744	13,567	12,635	3,530	3,353	-932	1,109
Private house- hold	61,565	59,508	81,776	76,159	-2,057	20,211	-5,617	-16,651
Service	7,701	23,300	10,229	9,527	14,599	2,528	-702	12,773
Farm laborers	16,014	12,053	21,271	19,810	-3,961	5,257	-1,461	-7,757
Other laborers	1,522	1,485	2,022	1,883	-37	500	-139	-398
Not reported	941	6,169	1,250	1,164	5,228	309	-86	5,005

Appendix Table 18 (continued)

Occu- pational class	Relative changes				Per cent distribution		
	Total	Magnitude		Structure	1940	1960	Change
	(5)/(1).100 (9)	Total ratio (6)/(1).100 (10)	Sex ratio (7)/(1).100 (11)	(8)/(1).100 (12)	(13)	(14)	(14)-(13) (15)
Total	23.70	32.83	-9.13	--	100.00	100.00	--
Professional	75.51	32.83	-9.13	51.81	5.92	8.40	2.48
Farmers	-7.40	32.83	-9.13	-31.11	2.54	1.90	-.64
Managers	126.19	32.83	-9.13	102.48	.41	.75	.34
Clerical	365.34	32.83	-9.13	341.67	.70	2.62	1.92
Craftsmen	333.93	32.83	-9.13	309.82	.10	.36	.26
Operatives	34.56	32.83	-9.13	10.86	9.42	10.25	.83
Private house- hold	-3.34	32.83	-9.13	-27.05	56.77	44.38	-12.39
Service	189.57	32.83	-9.13	165.86	7.10	16.63	9.53
Farm laborers	-24.73	32.83	-9.13	-48.44	14.77	8.99	-5.78
Other laborers	-2.43	32.83	-9.13	-26.15	1.40	1.11	-.29
Not reported	555.58	32.83	-9.13	531.88	.87	4.60	3.73

Appendix Table 19. Change and components of change in the occupational structure of urban white males, North Carolina, 1940 and 1960

Occupational class	Number of workers				Changes			Struct. (2)-(4) (8)
	Actual		Expected		Total (2)-(1) (5)	Magnitude		
	1940 (1)	1960 (2)	Total ratio (3)	Sex ratio (4)		Total ratio (3)-(1) (6)	Sex ratio (4)-(3) (7)	
Total	183,861	340,067	244,219	340,067	156,206	60,358	95,848	--
Professional	12,525	37,134	16,637	23,166	24,609	4,112	6,529	13,968
Farmers	835	1,584	1,109	1,544	749	274	435	40
Managers	29,233	53,444	38,830	54,069	24,211	9,597	15,239	-625
Clerical	39,227	64,345	52,104	72,554	25,118	12,877	20,450	-8,209
Craftsmen	33,051	67,577	43,901	61,131	34,526	10,850	17,230	6,446
Operatives	49,954	72,857	66,353	92,394	22,903	16,399	26,041	-19,537
Private household	107	169	142	198	62	35	56	-29
Service	8,936	13,943	11,870	16,528	5,007	2,934	4,658	-2,585
Farm laborers	449	882	596	830	433	147	234	52
Other laborers	8,006	10,718	10,634	14,808	2,712	2,628	4,174	-4,090
Not reported	1,538	17,414	2,043	2,845	15,876	505	802	14,569

Appendix Table 19 (continued)

Occu- pational class	Relative change			Per cent distribution			
	Total	Magnitude		Structure	1940	1960	Change
	(5)/(1).100 (9)	Total Ratio	Sex ratio	(8)/(1).100 (12)	(13)	(14)	(14)-(13) (15)
	(6)/(1).100 (10)	(7)/(1).100 (11)					
Total	84.96	32.83	52.13	--	100.00	100.00	--
Professional	196.48	32.83	52.13	111.52	6.81	10.92	4.11
Farmers	89.70	32.83	52.13	4.79	.45	.47	.02
Managers	82.82	32.83	52.13	-2.14	15.90	15.72	-.18
Clerical	64.03	32.83	52.13	-20.93	21.34	18.92	-2.42
Craftsmen	104.46	32.83	52.13	19.50	17.98	19.87	1.89
Operatives	45.85	32.83	52.13	-39.11	27.17	21.42	-5.75
Private house- hold	57.94	32.83	52.13	-27.10	.06	.05	-.01
Service	56.03	32.83	52.13	-28.93	4.86	4.10	-.76
Farm laborers	96.44	32.83	52.13	11.58	.24	.26	.02
Other laborers	33.87	32.83	52.13	-51.09	4.35	3.15	-1.20
Not reported	1,032.25	32.83	52.13	947.27	.84	5.12	4.28

Appendix Table 20. Change and components of change in the occupational structure of urban white females, North Carolina, 1940 and 1960

Occu- pational class	Number of workers				Changes			
	Actual		Expected		Magnitude			
	1940	1960	Total ratio	Sex ratio	Total	Total ratio	Sex ratio	Struct.
	(1)	(2)	(3)	(4)	(2)-(1) (5)	(3)-(1) (6)	(4)-(3) (7)	(2)-(4) (8)
Total	92,012	209,550	122,218	209,550	117,538	30,206	87,332	--
Professional	13,066	29,148	17,355	29,757	16,082	4,289	12,402	-609
Farmers	42	108	56	96	66	14	40	12
Managers	2,758	7,502	3,663	6,281	4,744	905	2,618	1,221
Clerical	26,704	77,627	35,470	60,816	50,923	8,766	25,346	16,811
Craftsmen	721	2,479	958	1,642	1,758	237	684	837
Operatives	37,346	61,174	49,606	85,053	23,828	12,260	35,447	-23,879
Private house- hold	2,882	3,454	3,828	6,564	572	946	2,736	-3,110
Service	7,008	16,076	9,309	15,960	9,068	2,301	6,651	116
Farm laborers	45	122	60	102	77	15	42	20
Other laborers	597	1,029	793	1,360	432	196	567	-331
Not reported	843	10,831	1,120	1,920	9,988	277	800	8,911

Appendix Table 20 (continued)

Occu- pational class	Relative changes			Per cent distribution			
	Total	Magnitude		Structure	1940	1960	Change
	(5)/(1).100 (9)	Total ratio (6)/(1).100 (10)	Sex ratio (7)/(1).100 (11)	(8)/(1).100 (12)	(13)	(14)	(14)-(13) (15)
Total	127,74	32.83	94.91	--	100.00	100.00	--
Professional	123.08	32.83	94.91	-4.66	14.20	13.91	.29
Farmers	157.14	32.83	94.91	28.57	.05	.05	--
Managers	172.01	32.83	94.91	44.27	3.00	3.58	.58
Clerical	190.69	32.83	94.91	62.95	29.02	37.05	8.03
Craftsmen	243.83	32.83	94.91	116.09	.78	1.18	.40
Operatives	63.80	32.83	94.91	-63.94	40.59	29.19	-11.40
Private house- hold	19.85	32.83	94.91	-107.91	3.13	1.65	-1.48
Service	129.39	32.83	94.91	1.66	7.62	7.67	.05
Farm laborers	171.11	32.83	94.91	44.44	.05	.06	.01
Other laborers	72.36	32.83	94.91	-55.44	.65	.49	-.16
Not reported	1,184.82	32.83	94.91	1,057.06	.92	5.17	4.25

Appendix Table 21. Change and components of change in the occupational structure of urban nonwhite males, North Carolina, 1940 and 1960

Occu- pational class	Number of workers				Changes			
	Actual		Expected		Total (2)-(1) (5)	Magnitude		Struct. (2)-(4) (8)
	1940 (1)	1960 (2)	Total (3)	Sex ratio (4)		Total (3)-(1) (6)	Sex ratio (4)-(3) (7)	
Total	64,755	87,289	86,013	87,289	22,534	21,258	1,276	--
Professional	2,177	4,137	2,892	2,935	1,960	715	43	1,202
Farmers	272	304	361	367	32	89	6	-63
Managers	1,236	1,657	1,642	1,666	421	406	24	-9
Clerical	1,435	3,486	1,906	1,934	2,051	471	28	1,552
Craftsmen	5,125	10,036	6,807	6,908	4,911	1,682	101	3,128
Operatives	15,245	22,934	20,250	20,550	7,689	5,005	300	2,384
Private house- hold	3,222	1,080	4,280	4,343	-2,142	1,058	63	-2,263
Service	12,211	15,597	16,220	16,460	3,386	4,009	240	-863
Farm laborers	1,190	1,128	1,581	1,604	-62	391	23	-476
Other								
laborers	22,053	20,653	29,293	29,727	-1,400	7,240	434	-9,074
Not reported	589	6,277	782	794	5,688	193	12	5,483

Appendix Table 21 (continued)

Occu- pational class	Relative changes				Per cent distribution		
	Total	Magnitude		Structure	1940	1960	Change
	(5)/(1).100 (9)	Total ratio (6)/(1).100 (10)	Sex ratio (7)/(1).100 (11)	(8)/(1).100 (12)	(13)	(14)	(14)-(13) (15)
Total	34.80	32.83	1.97	--	100.00	100.00	--
Professional	90.03	32.83	1.97	55.21	3.36	4.74	1.38
Farmers	11.76	32.83	1.97	-23.16	.42	.35	.07
Managers	34.06	32.83	1.97	-.73	1.91	1.90	-.01
Clerical	142.93	32.83	1.97	108.15	2.22	3.99	1.77
Craftsmen	95.82	32.83	1.97	61.03	7.91	11.50	3.59
Operatives	50.44	32.83	1.97	15.64	23.54	26.27	2.73
Private house- hold	-66.48	32.83	1.97	-101.27	4.98	1.24	-3.74
Service	27.73	32.83	1.97	-7.07	18.86	17.87	-.99
Farm laborers	-5.21	32.83	1.97	-40.00	1.84	1.29	-.55
Other laborers	-6.35	32.83	1.97	-41.15	34.06	23.66	-10.40
Not reported	965.70	32.83	1.97	930.90	.91	7.19	6.28

Appendix Table 22. Change and components of change in the occupational structure of urban nonwhite females, North Carolina, 1940 and 1960

Occupational class	Actual		Expected		Changes				
	1940	1960	Total	ratio	Total	Total	ratio	Sex ratio	Struct.
	(1)	(2)	(3)	(4)	(2)-(1)	(3)-(1)	(4)-(3)	(2)-(4)	(8)
Total	58,068	73,668	77,131	73,668	15,600	19,063	-3,463	--	
Professional	3,677	7,399	4,884	4,665	3,722	1,207	-219	2,734	
Farmers	10	29	13	13	19	3	0	16	
Managers	306	664	406	388	358	100	-18	276	
Clerical	625	2,481	830	793	1,856	205	-37	1,688	
Craftsmen	93	321	124	118	228	31	-6	203	
Operatives	8,915	9,222	11,842	11,310	307	2,927	-532	-2,088	
Private household	37,069	33,489	49,238	47,028	-3,580	12,169	-2,210	-13,539	
Service	5,557	14,933	7,381	7,050	9,376	1,824	-331	7,883	
Farm laborers	319	292	424	405	-27	105	-19	-113	
Other laborers	1,126	1,023	1,496	1,428	-103	370	-68	-405	
Not reported	371	3,815	493	471	3,444	122	-22	3,344	

Appendix Table 22 (continued)

Occu- pational class	Relative changes				Per cent distribution		
	Total	Magnitude		Structure	1940	1960	Change
	(5)/(1).100 (9)	Total ratio (6)/(1).100 (10)	Sex ratio (7)/(1).100 (11)	(8)/(1).100 (12)	(13)	(14)	(14)-(13) (15)
Total	26.87	32.83	-5.96	--	100.00	100.00	--
Professional	101.22	32.83	-5.96	74.35	6.33	10.04	3.71
Farmers	190.00	32.83	-5.96	160.00	.02	.04	.02
Managers	116.99	32.83	-5.96	90.20	.53	.90	.37
Clerical	296.96	32.83	-5.96	270.08	1.08	3.37	2.29
Craftsmen	245.16	32.83	-5.96	218.28	.16	.44	.28
Operatives	3.44	32.83	-5.96	-23.42	15.35	12.52	-2.83
Private household	-9.67	32.83	-5.96	-36.52	63.84	45.46	-18.38
Service	168.72	32.83	-5.96	141.86	9.57	20.27	10.70
Farm laborers	-8.46	32.83	-5.96	-35.42	.55	.40	-.15
Other laborers	-9.15	32.83	-5.96	-35.97	1.94	1.39	-.55
Not reported	928.30	32.83	-5.96	901.35	.64	5.18	4.54

Appendix Table 23. Change and components of change in the occupational structure of rural-nonfarm white males, North Carolina, 1940 and 1960

Occupational class	Number of workers				Changes			
	Actual		Expected		Magnitude			
	1940	1960	Total ratio	Sex ratio	Total	Total	Sex ratio	Struct.
(1)	(2)	(3)	(4)	(2)-(1)	(3)-(1)	(4)-(3)	(2)-(4)	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Total	179,045	345,412	237,822	345,412	166,367	58,777	107,590	--
Professional	8,264	19,468	10,977	15,943	11,204	2,713	4,966	3,525
Farmers	4,444	12,862	5,903	8,573	8,418	1,459	2,670	4,289
Managers	19,921	32,586	26,461	38,431	12,665	6,540	11,970	-5,845
Clerical	17,714	40,044	23,529	34,174	22,330	5,815	10,645	5,870
Craftsmen	30,572	83,251	40,608	58,979	52,679	10,036	18,371	24,272
Operatives	62,723	102,658	83,314	121,005	39,935	20,591	37,691	-18,347
Private household	210	308	279	405	98	69	126	-97
Service	11,447	11,244	15,205	22,083	-203	3,758	6,878	-10,839
Farm laborers	5,156	7,377	6,849	9,947	2,221	1,693	3,098	-2,570
Other laborers	16,631	20,100	22,091	32,084	3,469	5,460	9,993	-11,984
Not reported	1,963	15,514	2,607	3,787	13,551	644	1,180	11,727

Appendix Table 23 (continued)

Occu- pational class	Relative changes				Per cent distribution		
	Total	Magnitude		Structure	1940	1960	Change
		Total ratio	Sex ratio				
	(5)/(1).100 (9)	(6)/100.100 (10)	(7)/(1).100 (11)	(8)/(1).100 (12)	(13)	(14)	(14)-(13) (15)
Total	92.92	32.83	60.09	--	100.00	100.00	--
Professional	135.58	32.83	60.09	42.65	4.62	5.64	1.02
Farmers	189.42	32.83	60.09	96.51	2.48	3.72	1.24
Managers	63.58	32.83	60.09	-29.34	11.13	9.43	-1.70
Clerical	126.06	32.83	60.09	33.14	9.89	11.59	1.70
Craftsmen	172.31	32.83	60.09	79.39	17.08	24.10	7.02
Operatives	63.67	32.83	60.09	-29.25	35.03	29.72	-5.31
Private house- hold	46.67	32.83	60.09	-46.19	.12	.09	-.03
Service	-1.77	32.83	60.09	-94.69	6.39	3.26	-3.13
Farm laborers	43.08	32.83	60.09	-49.84	2.88	2.14	-.74
Other laborers	20.86	32.83	60.09	-72.06	9.29	5.82	-3.47
Not reported	690.32	32.83	60.09	597.40	1.10	4.49	3.39

Appendix Table 24. Change and components of change in the occupational structure of rural-nonfarm white females, North Carolina, 1940 and 1960

Occupational class	Number of workers				Changes			
	Actual		Expected		Total	Magnitude		Struct.
	1940	1960	Total ratio	Sex ratio		Total ratio	Sex ratio	
(1)	(2)	(3)	(4)	(2)-(1) (5)	(3)-(1) (6)	(4)-(3) (7)	(2)-(4) (8)	
Total	69,739	170,869	92,633	170,869	101,130	22,894	78,236	--
Professional	8,721	16,556	11,584	21,367	7,835	2,863	9,783	-4,811
Farmers	173	803	230	424	630	57	194	379
Managers	2,068	4,969	2,747	5,067	2,901	679	2,320	-98
Clerical	8,834	46,376	11,734	21,644	37,542	2,900	9,910	24,732
Craftsmen	341	1,998	453	835	1,657	112	382	1,163
Operatives	40,280	71,374	53,503	98,691	31,094	13,223	45,188	-27,317
Private household	4,005	4,394	5,320	9,813	389	1,315	4,493	-5,419
Service	3,287	13,468	4,366	8,054	10,181	1,079	3,688	5,414
Farm laborers	252	1,462	335	617	1,210	83	282	845
Other laborers	767	1,106	1,019	1,879	339	252	860	-773
Not reported	1,011	8,363	1,343	2,477	7,352	332	1,134	5,886

Appendix Table 24 (continued)

Occu- pational class	Relative changes				Per cent distribution		
	Total	Magnitude		Structure	1940	1960	Change
	(5)/(1).100 (9)	Total ratio (6)/(1).100 (10)	Sex ratio (7)/(1).100 (11)	(8)/(1).100 (12)	(13)	(14)	(14)-(13) (15)
Total	145.01	32.83	112.18	--	100.00	100.00	--
Professional	89.84	32.83	112.18	-55.17	12.51	9.69	-2.82
Farmers	364.16	32.83	112.18	219.08	.25	.47	.22
Managers	140.28	32.83	112.18	-4.74	2.97	2.91	-.06
Clerical	424.97	32.83	112.18	279.96	12.67	27.14	14.47
Craftsmen	485.92	32.83	112.18	341.06	.49	1.17	.68
Operatives	77.19	32.83	112.18	-67.82	57.76	41.77	-15.99
Private house- hold	9.71	32.83	112.18	135.31	5.74	2.57	-3.17
Service	309.74	32.83	112.18	164.71	4.71	7.88	3.17
Farm laborers	480.16	32.83	112.18	335.32	.36	.86	.50
Other laborers	44.20	32.83	112.18	-100.78	1.10	.65	-.45
Not reported	727.20	32.83	112.18	582.20	1.45	4.89	3.44

Appendix Table 25. Change and components of change in the occupational structure of rural-nonfarm nonwhite males, North Carolina, 1940 and 1960

Occupational class	Number of workers				Total (2)-(1) (5)	Changes		Struct. (2)-(4) (8)
	Actual		Expected			Magnitude		
	1940 (1)	1960 (2)	Total ratio (3)	Sex ratio (4)		Total ratio (3)-(1) (6)	Sex ratio (4)-(3) (7)	
Total	41,408	72,879	55,001	72,879	31,593	13,593	17,878	--
Professional	905	1,602	1,202	1,593	697	297	391	9
Farmers	1,574	5,066	2,091	2,770	3,492	517	679	2,296
Managers	554	735	736	975	181	182	239	-240
Clerical	342	1,352	454	602	1,010	112	148	750
Craftsmen	2,428	6,106	3,225	4,273	3,678	797	1,048	1,833
Operatives	6,026	17,968	8,004	10,606	11,942	1,978	2,602	7,362
Private house- hold	1,401	596	1,861	2,466	-805	460	605	-1,870
Service	3,714	6,332	4,933	6,537	2,618	1,219	1,604	-205
Farm laborers	8,055	12,198	10,699	14,177	4,143	2,644	3,478	-1,979
Other laborers	15,912	17,328	21,136	28,005	1,416	5,224	6,869	-10,677
Not reported	497	3,596	660	875	3,099	163	215	2,721

Appendix Table 25 (continued)

Occu- pational class	Relative change			Per cent distribution			
	Total	Magnitude		Structure	1940	1960	Change
	(5)/(1).100 (9)	Total ratio (6)/(1).100 (10)	Sex ratio (7)/(1).100 (11)	(8)/(1).100 (12)	(13)	(14)	(14)-(13) (15)
Total	76.00	32.83	43.17	--	100.00	100.00	--
Professional	77.02	32.83	43.17	.99	2.19	2.20	.01
Farmers	221.86	32.83	43.17	145.87	3.89	6.95	3.15
Managers	32.67	32.83	43.17	-43.32	1.34	1.01	-.33
Clerical	295.32	32.83	43.17	219.30	.83	1.85	1.02
Craftsmen	151.48	32.83	43.17	75.49	5.86	8.38	2.52
Operatives	198.17	32.83	43.17	122.17	14.55	24.65	10.10
Private house- hold	-57.46	32.83	43.17	-133.48	3.38	.82	-2.56
Service	70.49	32.83	43.17	-5.52	8.97	8.69	-2.28
Farm laborers	51.43	32.83	43.17	-24.57	19.45	16.74	-2.71
Other laborers	8.90	32.83	43.17	-67.10	38.43	23.78	-14.65
Not reported	623.54	32.83	43.17	547.48	1.20	4.93	3.73

Appendix Table 26. Change and components of change in the occupational structure of rural-nonfarm nonwhite females, North Carolina, 1940 and 1960

Occupational class	Number of workers				Total (2)-(1) (5)	Changes		Struct. (2)-(4) (8)
	Actual		Expected			Magnitude		
	1940 (1)	1960 (2)	Total ratio (3)	Sex ratio (4)		Total ratio (3)-(1) (6)	Sex ratio (4)-(3) (7)	
Total	23,542	41,498	31,270	41,498	17,956	7,728	10,288	--
Professional	1,613	3,016	2,143	2,843	1,403	530	700	173
Farmers	84	570	112	148	486	28	36	422
Managers	104	258	138	183	154	34	45	75
Clerical	99	825	131	175	726	32	44	650
Craftsmen	12	119	16	21	107	4	5	98
Operatives	1,077	3,659	1,431	1,898	2,582	354	467	1,761
Private house- hold	17,059	20,462	22,659	30,070	3,403	5,600	7,411	-9,608
Service	1,585	6,100	2,105	2,794	4,515	520	689	3,306
Farm laborers	1,335	4,288	1,773	2,353	2,953	438	580	1,935
Other laborers	287	381	381	506	94	94	125	-125
Not reported	287	1,820	381	506	1,533	94	125	1,314

Appendix Table 26 (continued)

Occu- pational class	Relative changes				Per cent distribution		
	Total	Magnitude		Structure	1940	1960	Change
		Total ratio	Sex ratio				
(5)/(1).100 (9)	(6)/(1).100 (10)	(7)/(1).100 (11)	(8)/(1).100 (12)	(13)	(14)	(14)-(13) (15)	
Total	77.76.27	32.83	43.44	--	100.00	100.00	--
Professional	86.98	32.83	43.44	10.73	6.85	7.27	.42
Farmers	578.57	32.83	43.44	502.38	.36	1.37	1.01
Managers	148.08	32.83	43.44	72.12	.44	.62	.18
Clerical	733.33	32.83	43.44	656.57	.42	1.98	1.56
Craftsmen	891.67	32.83	43.44	816.67	.05	.29	.24
Operatives	239.74	32.83	43.44	163.51	4.57	8.82	4.25
Private house- hold	19.95	32.83	43.44	-56.32	72.46	49.31	-23.15
Service	284.86	32.83	43.44	208.58	6.73	14.70	7.97
Farm laborers	221.20	32.83	43.44	144.94	5.67	10.33	4.66
Other laborers	32.75	32.83	43.44	-43.55	1.22	.92	-.30
Not reported	534.15	32.83	43.44	457.84	1.22	4.39	3.17

Appendix Table 27. Change and components of change in the occupational structure of rural-farm white males, North Carolina, 1940 and 1960

Occupational class	Number of workers				Changes			Struct.
	Actual		Expected		Total	Magnitude		
	1940	1960	Total ratio	Sex ratio		Total ratio	Sex ratio	
(1)	(2)	(3)	(4)	(2)-(1) (5)	(3)-(1) (6)	(4)-(3) (7)	(2)-(4) (8)	
Total	305,109	143,161	405,270	143,161	-161,948	100,161	-262,109	--
Professional	2,153	2,343	2,860	1,010	190	707	-1,850	1,333
Farmers	173,548	72,794	230,520	81,430	-100,754	56,972	-149,090	-8,636
Managers	6,614	5,081	8,785	3,103	-1,533	2,171	-5,682	1,978
Clerical	6,297	7,478	8,364	2,955	1,181	2,067	-5,409	4,523
Craftsmen	13,993	13,458	18,587	6,566	-535	4,594	-12,021	6,892
Operatives	23,464	18,450	31,167	11,010	-5,014	7,703	-20,157	7,440
Private house- hold	108	52	143	51	-56	35	-92	1
Service	2,119	1,845	2,815	994	-274	696	-1,821	851
Farm laborers	62,658	13,817	83,227	29,400	-48,841	20,569	-53,827	-15,583
Other laborers	12,424	4,437	16,503	5,829	-7,987	4,079	-10,674	-1,392
Not reported	1,731	3,406	2,299	812	1,675	568	-1,487	2,594

Appendix Table 27 (continued)

Occu- pational class	Relative changes			Per cent distribution			
	Total	Magnitude		Structure	1940	1960	Change
	(5)/(1).100 (9)	Total ratio (6)/(1).100 (10)	Sex ratio (7)/(1).100 (11)	(8)/(1).100 (12)	(13)	(14)	(14)-(13) (15)
Total	-53.08	32.83	-85.91	--	100.00	100.00	----
Professional	8.82	32.83	-85.91	61.91	.71	1.64	.93
Farmers	-58.06	32.83	-85.91	-4.98	56.88	50.85	-6.03
Managers	-23.18	32.83	-85.91	29.91	2.17	3.55	1.38
Clerical	18.75	32.83	-85.91	71.83	2.06	5.22	3.16
Craftsmen	-3.82	32.83	-85.91	49.25	4.59	9.40	4.81
Operatives	-21.37	32.83	-85.91	31.71	7.69	12.89	5.20
Private house- hold	-51.85	32.83	-85.91	.93	.04	.04	--
Service	-12.93	32.83	-85.91	40.16	.69	1.29	.60
Farm laborers	-77.95	32.83	-85.91	-24.87	20.54	9.65	-10.89
Other laborers	-64.29	32.83	-85.91	-11.20	4.07	3.10	-.97
Not reported	96.76	32.83	-85.91	149.86	.57	2.38	1.81

Appendix Table 28. Change and components of change in the occupational structure of rural-farm white females, North Carolina, 1940 and 1960

Occu- pational class	Number of workers				Changes			Struct. (2)-(4) (8)
	Actual		Expected		Total	Magnitude		
	1940	1960	Total ratio	Sex ratio	(2)-(1) (5)	Total ratio	Sex ratio	
		(3)	(4)		(3)-(1) (6)	(4)-(3) (7)		
Total	40,204	48,471	53,402	48,471	8,267	13,198	-4,931	--
Professional	4,082	4,478	5,422	4,921	396	1,340	-501	-443
Farmers	5,152	5,188	6,843	6,211	36	1,691	-632	-1,023
Managers	722	953	1,025	931	181	253	-94	22
Clerical	3,975	10,650	5,280	4,792	6,675	1,305	-488	5,858
Craftsmen	156	441	207	188	285	51	-19	253
Operatives	11,001	13,543	14,612	13,263	2,542	3,611	-1,349	280
Private house- hold	2,952	1,336	3,921	3,559	-1,616	969	-362	-2,223
Service	1,300	2,977	1,727	1,567	1,677	427	-160	1,410
Farm laborers	9,418	6,500	12,510	11,355	-2,918	3,092	-1,155	-4,855
Other laborers	471	188	626	568	-283	155	-58	-380
Not reported	925	2,217	1,229	1,115	1,292	304	-114	1,102

Appendix Table 28 (continued)

Occu- pational class	Relative changes			Per cent distribution			
	Total	Magnitude		Structure	1940	1960	Change
	(5)/(1).100 (9)	Total ratio (6)/(1).100 (10)	Sex ratio (7)/(1).100 (11)	(8)/(1).100 (12)	(13)	(14)	(14)-(13) (15)
Total	20.56	32.83	-12.27	--	100.00	100.00	--
Professional	9.70	32.83	-12.27	-10.85	10.15	9.24	-.91
Farmers	.70	32.83	-12.27	-19.86	12.81	10.70	-2.11
Managers	23.45	32.83	-12.27	2.85	1.92	1.97	.05
Clerical	167.92	32.83	-12.27	147.37	9.89	21.98	12.09
Craftsmen	182.69	32.83	-12.27	162.18	.39	.91	.52
Operatives	23.11	32.83	-12.27	2.55	27.36	27.94	.58
Private house- hold	-54.74	32.83	-12.27	-75.30	7.34	2.76	-4.58
Service	129.00	32.83	-12.27	108.46	3.23	6.14	2.91
Farm laborers	-30.98	32.83	-12.27	-51.55	23.43	13.41	-10.02
Other laborers	-60.08	32.83	-12.27	-80.68	1.17	.39	-.78
Not reported	139.68	32.83	-12.27	119.14	2.30	4.57	2.27

Appendix Table 29. Change and components of change in the occupational structure of rural-farm nonwhite males, North Carolina, 1940 and 1960

Occupational class	Number of workers				Total	Changes		Struct. (2)-(4) (8)	
	Actual		Expected			Total	Magnitude		
	1940	1960	Total ratio	Sex ratio			Total ratio		Sex ratio
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)		
Total	124,118	53,703	164,863	53,703	-70,415	40,745	111,160	--	
Professional	441	294	586	191	-147	145	-395	103	
Farmers	58,407	23,147	77,581	25,272	-35,260	19,174	-52,309	-2,125	
Managers	161	146	214	70	-15	53	-144	76	
Clerical	87	264	116	38	177	29	-78	226	
Craftsmen	855	1,294	1,136	370	439	281	-766	924	
Operatives	2,162	4,101	2,872	935	1,939	710	-1,937	3,166	
Private house- hold	452	98	600	196	-354	148	-404	-98	
Service	600	949	797	260	348	197	-537	688	
Farm laborers	52,672	18,266	69,963	22,790	-34,406	17,291	-47,173	-4,524	
Other laborers	7,790	3,929	10,347	3,371	-3,861	2,557	-6,976	558	
Not reported	491	1,216	652	212	725	161	-440	1,004	

Appendix Table 29 (continued)

Occu- pational class	Relative changes				Per cent distribution		
	Total	Magnitude		Structure	1940	1960	Change
	(5)/(1).100 (9)	Total ratio (6)/(1).100 (10)	Sex ratio (7)/(1).100 (11)	(8)/(1).100 (12)	(13)	(14)	(14)-(13) (15)
Total	-56.73	32.83	-89.56	--	100.00	100.00	--
Professional	-33.33	32.83	-89.56	23.36	.36	.55	.19
Farmers	-60.37	32.83	-89.56	-3.64	47.06	43.10	-3.96
Managers	-9.32	32.83	-89.56	47.20	.13	.27	.14
Clerical	203.45	32.83	-89.56	259.77	.07	.49	.42
Craftsmen	51.35	32.83	-89.56	108.07	.69	2.41	1.72
Operatives	89.69	32.83	-89.56	146.44	1.74	7.64	5.90
Private house- hold	-78.32	32.83	-89.56	-21.68	.36	.18	-.18
Service	58.00	32.83	-89.56	114.67	.48	1.77	1.29
Farm laborers	65.32	32.83	-89.56	-8.59	42.44	34.01	-8.43
Other laborers	-49.56	32.83	-89.56	7.16	6.28	7.32	1.04
Not reported	147.66	32.83	-89.56	204.48	.40	2.26	1.86

Appendix Table 30. Change and components of change in the occupational structure of rural-farm nonwhite females, North Carolina, 1940 and 1960

Occu- pational class	Number of workers				Changes			Struct. (2)-(4) (8)
	Actual		Expected		Total	Magnitude		
	1940 (1)	1960 (2)	Total ratio (3)	Sex ratio (4)	(2)-(1) (5)	Total ratio (3)-(1) (6)	Sex ratio (4)-(3) (7)	
Total	26,829	18,914	35,636	18,914	-7,915	8,807	-16.722	--
Professional	1,126	846	1,496	794	-280	370	-702	52
Farmers	2,661	1,952	3,535	1,876	-709	874	-1,659	76
Managers	33	80	44	23	47	11	-21	57
Clerical	32	212	43	23	180	11	-20	189
Craftsmen	7	46	9	5	39	2	-4	41
Operatives	222	863	295	157	641	73	-138	706
Private house- hold	7,437	5,560	9,878	5,243	-1,877	2,441	-4,635	317
Service	559	1,267	743	394	708	184	-349	873
Farm laborers	14,360	7,473	19,074	10,124	-6,887	4,714	-8,950	-2,651
Other laborers	109	81	145	77	-28	36	-68	4
Not reported	283	534	376	200	251	93	-176	334

Appendix Table 30 (continued)

Occu- pational class	Relative changes			Per cent distribution			
	Total	Magnitude		Structure	1940	1960	Change
	(5)/(1).100 (9)	Total ratio (6)/(1).100 (10)	Sex ratio (7)/(1).100 (11)	(8)/(1).100 (12)	(13)	(14)	(14)-(13) (15)
Total	-29.50	32.83	-62.33	--	100.00	100.00	--
Professional	-24.87	32.83	-62.33	4.62	4.20	4.47	.27
Farmers	-26.64	32.83	-62.33	2.86	9.92	10.32	.40
Managers	142.42	32.83	-62.33	172.73	.12	.42	.30
Clerical	562.50	32.83	-62.33	590.62	.12	1.12	1.00
Craftsmen	557.14	32.83	-62.33	585.71	.03	.24	.21
Operatives	288.74	32.83	-62.33	318.02	.83	4.56	3.73
Private house- hold	-25.24	32.83	-62.33	4.26	27.72	29.40	1.68
Service	126.65	32.83	-62.33	156.17	2.08	6.70	4.62
Farm laborers	-47.96	32.83	-62.33	-18.46	53.52	39.51	-14.01
Other laborers	-25.69	32.83	-62.33	3.67	.41	.43	.02
Not reported	88.69	32.83	-62.33	118.02	1.05	2.82	1.77

Appendix Table 31. Per cent of workers classed white and nonwhite, by major occupational class, North Carolina, 1940, 1950, and 1960^a

Employment and occupational class	1940		1950		1960	
	White	Nonwhite	White	Nonwhite	White	Nonwhite
Total	77.0	28.0	75.0	25.0	78.3	21.7
Professional	83.1	16.9	84.9	15.1	86.3	13.7
Farmers	74.5	25.5	70.2	29.8	75.0	25.0
Managers	96.2	3.8	95.6	4.4	96.7	3.3
Clerical	97.5	2.5	96.5	3.5	96.6	3.4
Craftsmen	90.2	9.8	89.7	10.3	90.4	9.6
Operatives	87.0	13.0	83.7	16.3	85.3	14.7
Private household	13.3	86.7	10.4	89.6	13.7	86.3
Service	58.5	41.5	54.3	45.7	56.9	43.1
Farm laborers	50.0	50.0	51.2	48.8	40.9	59.1
Other laborers	45.1	54.9	43.8	56.2	46.4	53.6
Not reported	76.1	23.9	73.7	26.3	77.0	23.0

^aSource: U. S. Census of Population of 1940, 1950, and 1960. 1940 - N. C., The Labor Force, Table 13; 1950 - N. C., General Population Characteristics, Table 28; 1960 - N. C., General Social and Economic Characteristics, Table 58

Appendix Table 32. Changes in affinity of color classes for major occupational categories, North Carolina, 1940, 1950, and 1960^a

Occupational category	1940	1950	1960
Professional	-.0561	-.0571	-.0567
Farmers	-.0286	-.0471	-.0232
Managers	-.1279	-.1250	-.1200
Clerical	-.1754	-.1881	-.1929
Craftsmen	-.1139	-.1160	-.1066
Operatives	-.1740	-.1132	-.0970
Private household	+.3405	+.2978	+.3370
Service workers	+.0682	+.1135	+.1378
Farm laborers	+.1888	+.1718	+.1989
Other laborers	+.1660	+.1783	+.1787
Not reported	-.0091	+.0036	+.0074

^aThe plus signs indicate a positive affinity and the minus signs indicate negative affinity of nonwhite workers for specific occupational classes. The opposite signs indicate positive and negative affinity of white workers for specific occupational classes

Appendix Table 33. Changes in the affinity of color classes for major occupational categories by residence and sex, North Carolina, 1940, 1950, and 1960^a

Residence and occupational category	Male			Female		
	1940	1950	1960	1940	1950	1960
Urban						
Professional	-.0647	-.0735	-.0844	-.1220	-.0703	-.0508
Farmers	-.0039	-.0060	-.0072	.0000	-.0117	-.0022
Managers	-.1873	-.1760	-.1662	-.0856	-.0698	-.0705
Clerical	-.2268	-.1873	-.1647	-.3524	-.3334	-.3281
Craftsmen	-.1228	-.1014	-.0876	-.0405	-.0380	-.0320
Operatives	-.0366	+.2098	+.0468	-.2659	-.1848	-.1694
Private household	+.1874	+.1042	+.0888	+.6689	+.5944	+.5704
Service workers	+.2202	+.2111	+.2188	+.0348	+.1730	+.1770
Farm laborers	+.0866	+.0633	+.0608	+.0496	-.0350	+.0366
Other laborers	+.3998	+.3682	+.3169	+.0592	+.0532	+.0465
Not reported	+.0041	+.0127	+.0364	-.0157	-.0121	.0000
Rural nonfarm						
Professional	-.0472	-.0503	-.0593	-.0785	-.0413	-.0331
Farmers	+.0314	+.0304	+.0511	+.0122	+.0126	+.0446
Managers	-.1318	-.1257	-.1178	-.0738	-.0631	-.0587
Clerical	-.1294	-.1306	-.1240	-.1812	-.2275	-.2401
Craftsmen	-.1227	-.1461	-.1454	-.0296	-.0381	-.0356
Operatives	-.1711	-.0483	-.0425	-.4650	-.3190	-.2734

Appendix Table 33 (continued)

Residence and occupational category	Male			Female		
	1940	1950	1960	1940	1950	1960
Private household	+ .1505	+ .0726	+ .0584	+ .6936	+ .6053	+ .5762
Service workers	+ .0399	+ .0718	+ .1024	+ .0392	+ .0945	+ .0934
Farm laborers	+ .2721	+ .2159	+ .2622	+ .1782	+ .2221	+ .2306
Other laborers	+ .3207	+ .2761	+ .2389	+ .0045	+ .0308	+ .0136
Not reported	+ .0038	+ .0094	+ .0077	- .0080	.0000	- .0094
Rural farm						
Professional	- .0219	- .0374	- .0404	- .1094	- .0909	- .9797
Farmers	- .0892	+ .0146	- .0692	- .0442	+ .0533	- .0057
Managers	- .0753	- .0765	- .0912	- .0809	- .0748	- .0575
Clerical	- .0748	- .0848	- .1081	- .2022	- .2433	- .2551
Craftsmen	- .0967	- .1154	- .1184	- .0379	- .0401	- .0362
Operatives	- .1143	- .1009	- .0738	- .3485	- .3203	- .2558
Private household	+ .0456	+ .0182	+ .0195	+ .2761	+ .2701	+ .3999
Service workers	- .0117	- .0053	+ .0184	- .0336	- .0166	+ .0107
Farm laborers	+ .2239	+ .1641	+ .2940	+ .3081	+ .3310	+ .2892
Other laborers	+ .0471	+ .0463	+ .0929	- .0414	- .0069	.0000
Not reported	- .0117	- .0092	- .0031	- .0450	+ .0091	- .0403

^aMeasures are for nonwhite; change of sign gives measure for white

Appendix Table 34. Percentages of employed persons by sex in the major occupational categories in North Carolina, 1940, 1950, and 1960^a

Employment and occupational class	1940		1950		1960	
	Male	Female	Male	Female	Male	Female
Total	74.3	25.7	71.4	28.6	64.9	35.1
Professional	45.0	55.0	48.9	51.1	51.4	48.6
Farmers	96.7	3.3	97.4	2.6	93.0	7.0
Managers	90.5	9.5	87.7	12.3	86.7	13.3
Clerical	61.8	38.2	51.3	48.7	45.8	54.2
Craftsmen	98.5	1.5	97.6	2.4	97.1	2.9
Operatives	61.8	38.2	62.9	37.1	59.9	40.1
Private household	7.2	92.8	4.3	95.7	3.2	96.8
Service workers	66.9	33.1	54.7	45.3	47.7	52.3
Farm laborers	83.5	16.5	74.7	25.3	72.7	27.3
Other laborers	96.1	3.9	96.2	3.8	95.3	4.7
Not reported	64.7	35.3	59.2	40.8	63.2	36.8

^aSource: U. S. Censuses of Population of 1940, 1950, and 1960. 1940 - N. C., The Labor Force, Table 13; 1950 - N. C., General Population Characteristics, Table 28; 1960 - N. C., General Social and Economic Characteristics, Table 58

Appendix Table 35. Changes in the affinity of sex classes for major occupational categories, North Carolina, 1940, 1950, and 1960^a

Occupational category	1940	1950	1960
Professional	+ .1510	+ .1256	+ .0829
Farmers	- .2612	- .2461	- .1710
Managers	- .0896	- .0951	- .1223
Clerical	+ .0892	+ .1681	+ .1745
Craftsmen	- .1533	- .1979	- .2445
Operatives	+ .1479	+ .1057	+ .0605
Private household	+ .4014	+ .2966	+ .2785
Service workers	+ .0412	+ .0871	+ .0949
Farm laborers	- .0816	- .0225	- .0350
Other laborers	- .1397	- .1357	- .1464
Not reported	+ .0260	+ .0334	+ .0084

^aPlus signs indicate positive affinity between female sex and occupation and minus signs indicate negative affinity. Change of sign gives the same measure for males

Appendix Table 36. Changes in the affinity of sex classes for major occupational categories by residence and color, North Carolina, 1940, 1950, and 1960^a

Residence and occupational category	White			Nonwhite		
	1940	1950	1960	1940	1950	1960
Urban						
Professional	.1202	.0853	.0447	.0699	.1014	.1022
Farmers	-.0378	-.0337	-.0365	-.0419	-.0386	-.0340
Managers	-.1902	-.1918	-.1877	-.0625	-.0511	-.0418
Clerical	.0847	.1766	.2014	-.0436	-.0066	-.0165
Craftsmen	-.2476	-.2714	-.2721	-.1912	-.2171	-.2246
Operatives	.1357	.1055	.0878	-.1024	-.1383	-.1714
Private household	.1382	.0940	.0960	.6254	.5619	.5365
Service workers	.0551	.0513	.0765	.1319	.0099	.0303
Farm laborers	-.0220	-.0285	-.0228	-.0588	-.0425	-.0476
Other laborers	-.1019	-.0849	-.0892	-.4103	-.3494	-.3253
Not reported	.0045	.0137	.0010	-.0162	-.0139	-.0414
Rural nonfarm						
Professional	.1405	.1085	.0749	.1154	.1325	.1237
Farmers	-.0754	-.0833	-.0953	-.1042	-.1048	-.1240
Managers	-.1285	-.1106	-.1183	-.0431	-.0169	-.0201
Clerical	.0408	.1576	.1961	-.0236	.0139	.0046
Craftsmen	-.2258	-.2641	-.2908	-.1467	-.1584	-.1715
Operatives	.2078	.1545	.1198	-.1535	-.1843	-.1946

Appendix Table 36 (continued)

Residence and occupational category	White			Nonwhite		
	1940	1950	1960	1940	1950	1960
Private house-						
hold	.1953	.1168	.1228	.7364	.6245	.6015
Service workers	-.0321	.0737	.1019	-.0397	.0978	.0929
Farm laborers	-.0772	-.0398	-.0465	-.1878	-.0779	-.0878
Other laborers	-.1442	-.1274	-.1226	-.4128	-.3209	-.3038
Not reported	.0135	.0240	.0089	.0000	.0136	-.0123
Rural farm						
Professional	.2284	.1829	.1785	.1460	.1343	.1386
Farmers	-.2821	-.3573	-.3549	-.2894	-.3802	-.3020
Managers	-.0058	-.0020	-.0393	.0000	.0110	.0119
Clerical	.1476	.2275	.2487	.0000	.0302	.0343
Craftsmen	-.0678	-.0945	-.1423	-.0346	-.0437	-.0707
Operatives	.2108	.2004	.1753	-.0279	-.0340	-.0533
Private house-						
hold	.2501	.1254	.1395	.4694	.3642	.4787
Service workers	.08.6	.1057	.1345	.0701	.0983	.1260
Farm laborers	.0231	.0926	.0531	.0843	.1325	.0505
Other laborers	-.0488	-.0615	-.0767	-.1010	-.0954	-.1323
Not reported	.0631	.0914	.0564	.0364	.1175	.0161

^a Measures are for females; change of sign gives measure for males

Appendix Table 37. Median age of employed workers by occupational category, sex, and color for North Carolina, 1940, 1950, and 1960^a

Occupational category and sex	1940			1950			1960		
	Total	white	Non-white	Total	White	Non-white	Total	White	Non-white
Male									
Total	34.1	b	b	36.4	36.8	35.1	38.8	39.0	38.2
Professional	38.6			38.4	38.2	39.9	37.5	37.2	40.1
Farmers	43.5			43.1	43.9	41.2	47.9	45.4	45.8
Managers	42.1			42.4	42.3	44.1	44.0	43.9	48.2
Clerical	33.2			33.7	33.7	34.9	36.4	36.5	35.1
Craftsmen	38.4			37.5	37.5	37.8	39.7	39.7	40.0
Operatives	30.5			33.2	32.9	34.3	35.5	35.2	36.7
Private household	32.3			41.1	41.9	40.9	43.9	44.3	43.8
Service	32.8			38.2	39.9	36.5	39.9	40.5	39.2
Farm laborers	22.3			22.4	22.5	22.4	28.8	27.9	29.4
Other laborers	31.1			33.7	32.1	34.9	35.7	33.0	37.7
Not reported	29.5			33.7	34.2	32.1	34.3	34.2	34.7
Female									
Total	30.6			34.2	33.8	35.3	38.1	37.7	39.3
Professional	31.6			36.7	37.1	35.1	40.1	40.6	38.2
Farmers	50.5			49.5	50.9	47.8	48.7	49.9	45.4
Managers	42.0			42.9	43.0	42.2	47.1	47.2	47.0
Clerical	28.8			29.1	29.1	30.6	33.8	33.8	34.1

Appendix Table 37 (continued)

Occupational category and sex	1940			1950			1960		
	Total	White	Non-white	Total	White	Non-white	Total	White	Non-white
Craftsmen	33.6			36.3	36.3	36.3	40.0	40.2	38.0
Operatives	30.1			34.7	34.5	36.3	37.8	37.8	38.7
Private household	31.3			37.0	37.5	37.0	41.7	48.4	41.0
Service	31.9			33.7	33.5	34.0	39.2	39.7	38.6
Farm laborers	24.7			31.1	33.7	29.0	38.5	42.2	35.4
Other laborers	30.5			35.5	34.8	36.2	39.1	38.3	40.5

^aSource: U. S. Censuses of Population of 1940, 1950, 1960. 1940 - N. C., The Labor Force, Table 13; 1950 - N. C., Detailed Characteristics, Table 76; 1960 - N. C., Detailed Characteristics, Table 123

^bNot available

Appendix Table 38. Affinity of age class for occupation by sex,
North Carolina, 1940 and 1960

Occupational category	1940	Age							
		15 - 24		25 - 44		45 - 64		65 & over	
		1940	1960	1940	1960	1940	1960	1940	1960
Males									
Professional	-.0659	-.0507	+.0376	+.0631	+.0205	-.0291	+.0051	+.0057	
Farmers	-.2145	-.1009	-.0461	-.0862	+.1988	+.1156	+.1592	+.1412	
Managers	-.1168	-.1115	+.0259	+.0086	+.0794	+.0697	+.0204	+.0280	
Clerical	+.0076	+.0290	+.0442	+.0159	-.0087	-.0394	-.0276	-.0034	
Craftsmen	-.0975	-.0782	+.0566	+.0648	+.0450	+.0154	-.0249	-.0396	
Operatives	+.0437	+.0603	+.0962	+.0460	-.1198	-.0605	-.0801	-.0771	
Private household	+.0087	+.0047	-.0013	-.0159	-.0079	+.0090	+.0018	+.0099	
Service workers	+.0255	+.0229	-.0161	-.0373	-.0111	+.0163	-.0117	+.0116	
Farm laborers	+.3675	+.1648	-.1717	-.0825	-.1516	-.0440	-.0482	-.0025	
Other laborers	+.0360	+.0656	+.0317	-.0238	-.0556	-.0199	-.0392	-.0181	
Not reported	+.0269	+.0592	-.0109	-.0119	-.0151	-.0294	-.0002	-.0143	
Females									
Professional	-.0634	-.0365	+.0708	-.0185	-.0108	+.0497	-.0169	+.0048	
Farmers	-.0970	-.0331	-.0739	-.0426	+.1796	+.0501	+.1498	+.0692	
Managers	-.0771	-.0600	+.0010	-.0315	+.0891	+.0735	+.0299	+.0354	
Clerical	+.0459	+.1269	+.0031	-.0045	-.0523	-.0908	-.0346	-.0352	
Craftsmen	-.0178	-.0201	+.0114	+.0132	+.0076	+.0015	-.0005	+.0022	
Operatives	-.0194	-.0546	+.1006	+.0876	-.0941	-.0282	-.0641	-.0596	
Private household	+.0106	-.0325	-.0479	-.0452	+.0425	+.0557	+.0324	+.0608	
Service workers	-.0019	-.0124	-.0354	-.0026	+.0432	+.0119	+.0259	+.0041	
Farm laborers	+.1272	+.0151	-.1022	-.0157	-.0201	+.0018	-.0084	+.0064	
Other laborers	-.0025	-.0018	+.0084	-.0023	-.0067	+.0041	-.0068	-.0017	
Not reported	+.0131	+.0396	-.0237	-.0195	+.0098	-.0190	+.0178	+.0186	

Appendix Table 39. Median years of school completed by persons 25 years and over by occupational category, color, and sex^a for the United States and the South, 1950 and 1960^a

Occupation and color	United States				South			
	Male		Female		Male		Female	
	1950	1960	1950	1960	1950	1960	1950	1960
Total	8.5	11.0	11.3	12.0	8.5	9.8	10.1	11.3
Total	9.5	11.0	11.3	12.0	8.5	9.8	10.1	11.3
Professional	16.0	16.4	15.8	16.0	16.0	16.4	16.0	16.1
Farmers	8.3	8.7	8.1	8.8	6.8	7.9	6.4	8.2
Managers	12.2	12.5	12.1	12.3	12.0	12.4	11.6	12.2
Clerical	12.2	12.3	12.4	12.4	12.2	12.4	12.5	12.5
Sales	12.3	12.5	11.6	11.8	12.1	12.4	11.1	11.5
Craftsmen	9.3	10.3	9.9	10.8	8.8	9.4	10.0	10.9
Operatives	8.7	9.1	8.7	9.1	7.9	8.4	8.3	8.9
Service	8.7	9.1	9.1	9.0	8.2	8.6	8.8	8.5
Farm laborers	7.1	6.8	6.5	8.4	4.9	5.0	5.1	6.6
Other laborers	8.0	8.3	8.6	8.9	6.0	6.6	7.6	8.2
Not reported	8.8	10.5	9.8	10.7	8.4	9.9	8.8	10.3
Nonwhite								
Total	6.6	8.3	7.9	9.2	5.5	6.8	7.0	8.3
Professional	15.9	16.4	16.0	16.3	16.0	16.5	16.0	16.5
Farmers	4.1	5.2	4.8	6.3	4.1	4.8	4.7	6.1
Managers	8.4	10.6	8.6	11.0	7.4	8.6	8.0	10.1
Clerical	12.0	12.2	12.6	12.6	11.0	11.9	12.6	12.6
Sales	9.4	11.7	10.3	11.4	8.0	9.5	9.1	10.0
Craftsmen	7.8	8.7	8.9	10.6	6.5	7.6	8.5	9.7

Appendix Table 39 (continued)

Occupation and color	United States				South			
	Male		Female		Male		Female	
	1950	1960	1950	1960	1950	1960	1950	1960
Operatives	7.1	8.3	8.4	9.4	6.0	7.1	7.3	8.5
Service	8.0	8.5	8.4	8.4	7.1	8.0	7.8	7.9
Farm laborers	4.0	4.4	4.8	6.0	3.8	4.2	4.6	5.9
Other laborers	6.0	6.9	7.6	8.4	5.2	6.1	6.3	7.3
Not reported	6.7	8.7	7.1	9.0	5.7	8.0	6.2	8.4

^aSource: U. S. Censuses of Population of 1950 and 1960. 1950 - Special Report, Education, Table 11; 1960 - Special Report, Educational Attainment, Table 8

Appendix Table 40. Median income or earnings of the experienced civilian labor force by occupational category and sex, North Carolina, 1950 and 1960, and by color for 1960^a

Employment and occupational class	1950		1960			
	Total		Total		Nonwhite	
	Male	Female	Male	Female	Male	Female
Total	\$1,739	\$1,205	\$2,974	\$1,820	\$1,555	\$ 754
Professional	3,364	2,140	5,332	3,425	3,796	3,568
Farmers	1,040	734	1,313	696	774	566
Managers	3,284	1,611	5,406	2,521	2,073	1,285
Clerical	2,517	1,582	3,892	2,244	2,342	1,181
Craftsmen	2,303	1,664	3,624	2,380	2,195	1,069
Operatives	1,877	1,455	2,888	2,207	2,116	1,135
Private household	830	555	902	597	885	603
Service	1,612	774	2,352	989	1,956	891
Farm laborers	658	527	709	527	646	513
Other laborers	1,247	889	1,740	1,232	1,617	733
Not reported	1,153	716	2,806	1,811	1,990	782

^aSource: U. S. Censuses of Population for 1950 and 1960. 1950 - N. C., Detailed Characteristics, Table 78; 1960 - N. C., Detailed Characteristics, Table 124.

Appendix Table 41. Change and components of change in the industrial structure of males, North Carolina, 1940 and 1960

Industry grouping	Number of workers				Changes			
	Actual		Expected		Total	Magnitude		Struct.
	1940	1960	Total ratio	Sex ratio	(2)-(1)	(3)-(1)	(4)-(3)	(2)-(4)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Total	898,296	1,042,511	1,193,189	1,042,511	144,215	294,893	-150,678	--
Agriculture	374,670	177,790	497,667	434,820	-196,880	122,997	-62,847	-257,030
Mining	2,871	3,379	3,813	3,332	508	942	-481	47
Construction	46,469	95,455	61,724	53,929	48,986	15,255	-7,795	41,526
Manufacturing	225,490	330,022	299,514	261,690	104,532	74,024	-37,824	68,332
Transportation	37,478	62,712	49,781	43,495	25,234	12,303	-6,286	19,217
Wholesale	100,089	171,573	132,946	116,157	71,484	32,857	-16,789	55,416
Finance	11,344	23,719	15,068	13,165	12,375	3,724	-1,903	10,554
Business	12,790	24,083	16,989	14,843	11,293	4,199	-2,146	9,240
Personal	24,348	25,430	32,341	28,257	1,082	7,993	-4,084	-2,827
Entertainment	4,784	5,930	6,354	5,552	1,146	1,570	-802	378
Professional	25,271	56,632	33,567	29,328	31,361	8,296	-4,239	27,304
Public administration	21,634	35,850	28,736	25,107	14,216	7,102	-3,629	10,743
Not reported	11,058	29,936	14,688	12,833	18,878	3,630	-1,855	17,103

Appendix Table 41 (continued)

Industry grouping	Relative changes			Per cent distribution			
	Total	Magnitude		Structure	1940	1960	Change
		Total ratio	Sex ratio				
	(5)/(1).100 (9)	(6)/(1).100 (10)	(7)/(1).100 (11)	(8)/(1).100 (12)	(13)	(14)	(14)-(13) (15)
Total	16.06	32.83	-16.77	--	100.00	100.00	--
Agriculture	-52.55	32.83	-16.77	-68.61	41.71	17.05	-24.66
Mining	17.69	32.83	-16.77	1.63	.32	.32	--
Construction	105.42	32.83	-16.77	89.36	5.17	9.16	3.99
Manufacturing	46.36	32.83	-16.77	30.30	25.10	31.66	6.56
Transportation	67.33	32.83	-16.77	51.27	4.17	6.02	1.85
Wholesale	71.42	32.83	-16.77	55.36	11.14	16.46	5.32
Finance	109.09	32.83	-16.77	93.03	1.26	2.28	1.02
Business	88.30	32.83	-16.77	72.24	1.42	2.31	.89
Personal	4.44	32.83	-16.77	-11.62	2.71	2.44	-.27
Entertainment	23.95	32.83	-16.77	7.89	.53	.57	.04
Professional	124.10	32.83	-16.77	108.04	2.81	5.43	2.62
Public adminis- tration	65.71	32.83	-16.77	49.65	2.41	3.44	1.03
Not reported	170.72	32.83	-16.77	154.66	1.23	2.87	1.64

Appendix Table 42. Change and components of change in the industrial structure of females, North Carolina, 1940 and 1960

Industry grouping	Number of workers				Total (2)-(1) (5)	Changes Magnitude		Struct. (2)-(4) (8)
	Actual		Expected			Total ratio (3)-(1) (6)	Sex ratio (4)-(3) (7)	
	1940 (1)	1960 (2)	Total ratio (3)	Sex ratio (4)				
Total	310,394	562,967	412,290	562,967	252,573	101,896	150,677	--
Agriculture	34,380	30,228	45,666	62,356	-4,152	11,286	16,690	-32,128
Mining	43	152	57	78	109	14	21	74
Construction	502	2,769	667	910	2,267	165	243	1,859
Manufacturing	100,049	179,171	132,893	181,461	79,122	32,844	48,568	-2,290
Transportation	3,645	11,874	4,842	6,611	8,229	1,197	1,769	5,263
Wholesale	26,623	85,684	35,363	48,287	59,061	8,740	12,924	37,397
Finance	4,072	19,003	5,409	7,385	14,931	1,337	1,976	11,618
Business	581	3,481	772	1,054	2,900	191	282	2,427
Personal	91,085	96,973	120,986	165,203	5,888	29,901	44,217	-68,230
Entertainment	933	2,065	1,239	1,692	1,132	306	453	373
Professional	38,413	98,271	51,023	69,670	59,858	12,610	18,647	28,601
Public administration	5,361	13,912	7,121	9,723	8,551	1,760	2,602	4,189
Not reported	4,707	19,384	6,252	8,537	14,677	1,545	2,285	10,847

Appendix Table 42 (continued)

Industry grouping	Relative changes				Per cent distribution		
	Total	Magnitude		Structure	1940	1960	Change
		Total ratio	Sex ratio		1940	1960	Change
(5)/(1).100	(6)/(1).100	(7)/(1).100	(5)/(1).100	(13)	(14)	(14)-(13)	
	(9)	(10)	(11)	(12)	(13)	(14)	(15)
Total	81.37	32.83	48.54	--	100.00	100.00	--
Agriculture	-12.08	32.83	48.54	-93.45	11.08	5.37	-57.71
Mining	253.49	32.83	48.54	172.12	.01	.03	.02
Construction	451.59	32.83	48.54	370.22	.16	.49	.33
Manufacturing	79.08	32.83	48.54	-2.29	32.23	31.83	-.40
Transportation	225.76	32.83	48.54	144.39	1.17	2.11	.94
Wholesale	221.84	32.83	48.54	140.47	8.58	15.22	6.64
Finance	366.67	32.83	48.54	285.30	1.31	3.38	2.07
Business	499.14	32.83	48.54	417.77	.19	.62	.43
Personal	6.46	32.83	48.54	-74.91	29.34	17.23	-12.11
Entertainment	121.33	32.83	48.54	39.96	.30	.37	.07
Professional	155.83	32.83	48.54	74.46	12.38	17.46	5.08
Public administration	159.50	32.83	48.54	78.13	1.73	2.47	.74
Not reported	311.81	32.83	48.54	230.44	1.52	3.44	1.92

