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9. ABSTRACT

A study of underemployment and development problems in 53 selected counties in Alabama, Arkansas, California, Kentucky, Missouri, North Carolina, New Mexico, Virginia, and West Virginia. Manpower utilization data for these areas were studied to determine (1) indications of need for development; (2) the potential for development; (3) indications of racial discrimination in the job markets; (4) manpower development policies and programs; and (5) the economic implications for potential employers in the rural areas studied. The most important implication of the data developed in this report is that these rural study areas need more and better employment opportunities. The quantity of labor available in these areas for new employment opportunities is significantly larger than labor force statistics indicate. These rural study areas are believed to offer rather good prospects for new enterprises, considering both their recent past performance and the characteristics and relative costs of manpower available to prospective employers. The technique advanced in this study could also serve as a useful research tool for helping plan and design programs to meet the elementary requirements of the lowest income groups in developing countries.

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Measurement of Manpower Utilization with Implications for Development

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FOREWORD

In a recent issue of the Survey of International Development (SID), the following comment is made concerning the problem facing planners and implementors of development programs. “. . . Unemployment, Underemployment, and marginality are a universal concern and affect at least one-third of humanity at the present time, the “strategy for the Second Development Decade needs to be complemented by a programme of action to guide international and national development efforts toward fulfilling the basic needs of all the people and particularly the elementary needs of the lowest income group.”

The Unemployment and Underemployment Institute was created to coordinate international economic development activities at Southern University under the 211 (d) grant, and to sharpen the strategy focus for unemployment and underemployment.

Following completion of the 1970 Census of Population, the Bureau of the Census undertook an employment survey for low income areas of 51 central cities of metropolitan areas, and seven (7) multi-county low income rural areas. The seven (7) rural areas are located in nine (9) states, since one of the areas—Appalachia—includes contiguous counties located in Kentucky, Virginia, and West Virginia. The other states in which rural areas are located are: Alabama, Arkansas, California, Missouri, New Mexico, and North Carolina. The New Mexico area included the Zuni Indian Reservation, and a separate enumeration was made for the reservation. As a result of this fact, eight (8) reports were issued for the seven (7) rural areas. The locations of the seven (7) low income areas are shown in figures 1 through 7.

The Census Employment Survey of low income areas makes available information on manpower characteristics and utilization which is found nowhere else. This information has, for the most part, not been analyzed.

This study was undertaken to analyze some of the data obtained for the low income rural areas. Additional data for these rural areas have been developed from other secondary sources. For comparative purposes, some manpower characteristics and utilization data for eight (8) of the fifty-one low-income sections of metropolitan areas are also analyzed in this report.

In 1972, the Agency for International Development (AID) approved a five year grant to Southern University to strengthen and increase its capacity in economic/agricultural economics to enhance Southern's capabilities to contribute to the resolution of problems of rural unemployment and underemployment in developing countries.

The general objectives of the Institute are (a) to develop and coordinate the activities of the University for greater participation in international economic development programs; (b) to make available the capacities and expertise thus developed to public and private agencies involved in international development programs; and (c) to conduct research, seminars, and workshops on domestic and international development problems including cooperatives, manpower utilization, small farmers, housing, populations, nutrition, leadership training, and community development.

In keeping with objective (a), the University supports several faculty members working towards advanced degrees in the area of economic development and related disciplines, supports undergraduate scholarships to foreign and U.S. nationals in the Department of Agricultural Economics and Economics, provides travel to professional seminars for faculty, foreign exposure to development experiences, and special training on techniques of program design and evaluation.

In keeping with objective (b), the Institute sponsors an International Development Seminar Series, Student-Faculty & Staff Research Paper Series, and hosts foreign individuals and groups interested in economic development programs at Southern University.

Results of research projects consistent with the objectives of this program are published under the Institute's Faculty-Staff Research Paper Series. Papers published under this series reflect the diversity of interests and specialties of the faculty and staff.

The above activities of the Institute demonstrate the capacities and expertise of Southern University developed through the 211(d) program. The Unemployment and Underemployment Institute at Southern University offers expert and technical assistance to private and public agencies involved in international economic development programs.

The references in this publication reveal some materials prepared by the Institute for the period 1972-77. We make this publication available with the hope that the contents will be helpful in your work and we appreciate your comments.

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The authors wish to thank everyone who contributed directly or indirectly to the Study: "Measurement of Manpower Utilization with Implications for Development." Special acknowledgments are due the United States Agency for International Development 211(d) Institutional Grant for research support for this Study. An expression of thanks is due Drs. Leroy Davis, Frederick Temple, Alfred Parks, Ernesto C. Lucas, and John Moland for their helpful suggestions and comments during the planning and completion of the manuscript.

Special thanks are extended to the Southern University Administration; President, Vice-President, Board of Supervisors, and Deans of the Colleges of Agriculture and Business for their insight into the significance of this Study. Thanks is due the secretarial staff, Business Office, Stenographic Office, and Comptroller's Office for the efficient manner in which they performed the number of tasks for the authors, including the clearing, duplication, and typing of the manuscript in record time.

A debt of gratitude is due the number of students in the Departments of Economics and Agricultural Economics who gave so freely of their time in the computation of the data. The authors express their appreciation to Mr. Anthony Lim, Ms. Delores Thomas, and Mrs. Patricia Handy who worked so cooperatively during each phase of the Study and who performed most of the final tabulation and typing.

Errors of fact and opinion that may exist in this manuscript are the sole responsibility of the authors and should not be attributed to the individuals or institutions mentioned above. Any part of this publication may be reproduced with the permission of the authors.

HIGHLIGHTS

The rural areas studied in this report are not a national sample, but it is believed that they represent among them, most of the important types of situations to be encountered in planning for rural development. The results that are developed are believed, therefore, to have applicability wider than the specific areas of study.

The areas studied are all found to need development efforts. The most pervasive need is new and improved employment opportunities. There are, however, also indications of need for other types of development policies, such as elimination of racial discrimination, improvement in the availability of health facilities, and the quality of educational services.

The study areas are found to have a basic potential for economic development as indicated by industrial composition of employment, rates of change over recent years in nonfarm employment, and in per capita incomes, the characteristics and present utilization of their manpower resources, and indications that the labor market in these rural areas function about as effectively as it does in large metropolitan areas.

Keywords: manpower utilization, unemployment, underemployment, subemployment, racial discrimination, hidden unemployment, rural development.

The techniques and analytic procedures demonstrated in this report can be used by agencies, firms, and individuals that are concerned with development in rural areas. They can be used to evaluate the need and potential of specified areas (domestic and International) for various types of developmental policies and programs, and to inform potential new or expanding firms of economically relevant manpower characteristics, and relative labor costs.

Analysis of change over time in area income measures relative to change nationally in the same measure is found to be an effective indicator of development progress, and to be superior to comparative analysis of absolute income changes. For the areas studied in this report, there is generally no indication that rates of growth in income per person are positively associated with the size of the largest cities in the counties.

Analysis of the rates of growth in per capita income relative to the national growth rate, and the interrelation between this measure and population change measures are found to place the facts of population loss or gain in better perspective as a development problem indicator. The data developed here shows that a far larger proportion of study counties that lost population during each of the past two decades experienced significantly

larger than national average increases in incomes per person over the period 1959 to 1970, than was the case for counties having population gains in each of the decades from 1950 to 1970.

Efficient performance by the labor market is a generally necessary condition for areas to improve relative earnings. A technique is developed in this report to compare the relative efficiency of labor markets in rural with those in large metropolitan areas. The results for our study areas and comparison cities indicate that for men, rural area labor markets perform as or more efficiently than those in cities. City labor markets appear to perform somewhat more effectively than the rural for women.

Serving as an indication of both need and potential for development policies to increase employment opportunities, the indices of subemployment, involuntary part-time work, and economic underutilization are taken into account, these rural areas have subemployment levels that are strikingly higher than the national average. The study area indices exceed the national by from about 50 to 400 percent.

Analyses developed in this study reveal that for many areas and groups, potential employers could pay wage rates exceeding those now prevailing, but less than rates prevailing nationally for persons of comparable earning capacities. An economic incentive in the form of lower relative labor costs, therefore, exists for the location of new enterprises in such areas. The location of new employment opportunities in these areas would, thus, be beneficial for both employer and employee.

For the three study areas having significantly large black populations, analysis was undertaken to determine whether racial discrimination in the job market is present. Comparative analysis for whites and blacks of industrial and occupational statuses of educational attainment and occupational indices, and of indices of weeks worked distributions, strongly suggest considerable job discrimination against blacks. Whether this finding is solely the result of long lasting past practices that no longer exist, cannot be determined from data developed in this study.

Chapter 1

INTRODUCTION

As recently as a decade ago, the major solution proposed by many for the manifold of rural areas, and indeed for the country as a whole, was sustained growth at an adequate level of the nation's Gross National Product (GNP). The experiences of more than a quarter century of national economic growth, with not much consideration for its spatial distribution, or with the incidence of its social and economic costs and benefits, have, it appears, developed an evolving consensus that national and rural development must encompass a concern for much more than just an adequately growing GNP. These concerns, additional to growth in the national product include:

- 1. Inducing placement of new employment opportunities in locations that will simultaneously provide jobs for underutilized manpower, and alleviate or at least prevent further exacerbation of environmental and congestion related problems of large metropolitan areas.*
- 2. Meshing with increased employment opportunities in desired locations, development of improved delivery systems for employment information and related services, health, education, and local governmental services; particularly for those largely rural areas bypassed during past rather exclusive concentration on aggregated national economic growth.*
- 3. Taking cognizance of the special problems of those, again largely rural areas that seem destined not to be recipients of new employment opportunities, but rather to continue declines of their economic bases.*

The present study of several low income rural areas for which special data were available was undertaken to shed some light on the development problems and prospects of rural areas in this broader context of development. The areas considered were selected for the different types of situations they represent and are not, of course, a national sample, and cannot be generalized to the country as a whole. It is believed, however, that, the 53 counties encompassing our study area include most of the gamut of situations that are encountered in seeking rural development in the Nation.

The Census of Population definition of rural (residence in open country or in places of less than 2,500) was not used in delineating these study areas. The 53 counties involved included two small Standard Metropolitan Statistical Areas (SMSAs) (Wilmington and Fayetteville, North Carolina. These two cities were not included in the survey; however, two small cities that are

parts of SMSAs were included. They are Phoenix City in Russell County, Alabama, which is part of the Columbus, Georgia SMSA, and West Memphis in Crittenden County, Arkansas, a part of the Memphis SMSA. Each of these cities had a population of around 25,000 in 1970. Two counties which by Census definitions had no urban population in 1970 but are parts of SMSAs are among the study counties. These are Brunswick, North Carolina (Wilmington SMSA) and Sandoval, New Mexico (Albuquerque SMSA).

Two counties (Merced, California and Onslow, North Carolina) are included which, while not metropolitan, did have urban populations of 50,000 or more in 1970. Santa Fe County, New Mexico, which is included in the survey, contains the small city of Santa Fe with a 1970 population of about 40,000.

The remaining 44 counties of the study areas have the following urbanity-rurality characteristics: Twelve contain cities with populations of between 10,000 and 24,000; 20 have urban places with populations between 2,500 and 9,999; and 12 have no town as large as 2,500.

Most of the counties included in the study (34 of them) are located within a 50 mile radius of the central city of an SMSA. The 19 remaining three counties more than 50 miles distant from an SMSA are Ashley and Chicot in Arkansas, and McKinley in New Mexico.

The 1970 total populations of these areas varies from a low of just under 90,000 for the eight Missouri counties to 725,000 for the 12 North Carolina counties. The five Alabama, two California, and four New Mexico counties have total populations of between 130,000 and 155,000, while the 14 Arkansas and eight Appalachian counties have, respectively, populations of 323,000 and 277,000.

The population of the United States increased approximately 13 percent from 1960 to 1970. Among these rural areas the New Mexico counties, with a population increase of 14.4 percent, were the only ones to exceed the national average. The North Carolina area with an increase of 13 percent virtually duplicated the national average. The Alabama (-5.5 percent), Appalachian (-16.9 percent), and Arkansas (-3.4 percent) areas experienced population losses during the decade, while the California and Missouri areas had gains of 10.0 and 4.8 percent, respectively.

The Alabama, Arkansas, and North Carolina areas have significantly large black populations, and for these areas most data and analyses that appear later deal separately with whites and blacks. For the New Mexico counties, separate statistics are generally available for white Spanish, and separate data are used for the Zuni Indians. For the other areas, separate racial data are generally not available.

In the United States today, 75 to 80 percent of income generated in the production of goods and services is attributable to the human agent. It is, therefore, of paramount importance to the attainment of virtually all social and private policy goals that manpower resources of our society be utilized efficiently.

The principal emphasis of this study, therefore, is an analysis of the nature and implications of manpower utilization as it relates to development policies and programs. Some attention is, however, directed to data on population and income change over the decade from 1960 to 1970, to indications of the quality of health and educational services, and to information concerning the incidence of low incomes among study area families. Information of these types can shed light, additional to that available from analysis of manpower utilization, upon development directions and strategies.

It is an acceptable fact that in most developing countries the data necessary to calculate economic manpower utilization are not readily available. However, the authors domestic and international economic development experiences lead us to the conclusion that the technique advanced in this report could serve as a useful research tool in helping plan and design programs to fulfill the needs of people and particularly the elementary requirements of the lowest income groups in developing countries.

Chapter 2

INCOME AND POPULATION CHANGES AND INCIDENCE OF LOW INCOMES

As a comment on the characteristics of personal well-being, and old aphorism avers that "Money isn't everything, but it's way ahead of whatever is in second place." It is certainly true that as an indicator of community, area, rural, or national well-being, "money isn't everything." It is equally true, however, that here too it is way ahead of any other indicator available to us. The reason is that income level is positively and often highly correlated with most other indicators that may be used.

In this chapter, per capita incomes for 1959 and 1969 are examined for the rural study area and their counties. Also analyzed are the relationships between per capita income levels and changes over time and population change and size of largest population center characteristics for the study areas and counties.

The basic information on per capita income is shown in Table 1. These areas were, of course, chosen for the Census Employment Survey as low income rural areas. The income figures for both 1959 and 1969 show that they indeed have low income. More analytically significant perhaps, than absolute levels of per capita income are the data concerning change in this measure for the decade from 1959 to 1969.

For the nation as a whole, per capita income increased by almost 70 percent from 1959 to 1969. A generally rather good indicator of successful economic development for low income areas of an affluent overall economy is the extent to which such areas improve over time their per capita income position relative to that of the country as a whole. In this respect, five of our seven areas had from 1959 to 1969 percentage increases in per capita income that were well above the 70 percent national increase. These five areas were the ones having the lowest incomes among the seven study areas in 1959. For four of these areas per capita incomes more than doubled during the decade. The fifth, Appalachia, experienced an increase of a bit more than 90 percent. The still relatively low per capita incomes obtaining for these five areas in 1969, emphasize the necessity for continuing improvement. The impressive gains during the decade do, however, indicate effective adjustments in resource utilization to changed and changing conditions of production and demand in the economy as a whole.

In 1959, the California and New Mexico areas had substantially higher per capita incomes than did the remaining five areas. In the ensuing decade,

Table 1
**Per capita income, for rural Census Employment Survey areas,
 1959 and 1969**

Rural census employment survey areas	Per capita income					
	1959		1969		1969 as percent of 1959	
	Dollars	Relative to U.S.	Dollars	Relative to U.S.	Percent	Relative to U.S.
Alabama	849	45.9	1,781	56.7	209.8	123.6
Appalachia	910	49.2	1,734	55.2	190.5	112.3
Arkansas	885	47.8	1,814	57.8	205.0	120.1
California	1,572	85.0	2,490	79.3	158.4	93.3
Missouri	1,002	54.2	2,030	64.7	202.6	119.4
New Mexico	1,287	69.6	2,069	65.9	160.8	94.8
North Carolina	994	53.7	2,115	67.4	212.8	125.4
United States	1,850	100.0	3,139	100.0	169.7	100.0

Source: Calculated From U. S. Census Of Population, 1960 and 1970.

however, incomes in those two areas gained at a slower rate than the national average. In 1969, the California area still had a higher income per person than any of the other study areas, and the New Mexico counties income was higher than all except North Carolina, and, of course, California.

Nevertheless, for relatively low income areas to increase per capita incomes over a 10 year period at less than the economy wide average is a sign of developmental retrogression rather than progress.

To this point the examination of change in incomes per person has been confined to study area averages. Such data could cover up divergent changes in individual counties. In general, however, this is not the case for the 53 counties comprising our rural study areas. The North Carolina and Alabama areas had the largest percentage increase in income per person that was at least 11 points above the national average.

There are 14 counties in the Arkansas area. Thirteen of these had percentage increases in income from 1959 to 1969 that ranged from 7 to 33 percent above the average for the United States. The fourteenth, Prairie County, experienced a percentage increase that was 99 percent of the average for the country.

The Appalachia and Missouri areas are the remaining ones which, overall, increased per capita incomes by larger percentages than the U. S. average. Each of these two areas contains eight counties. In Appalachia only

one county, McDowell, West Virginia, failed to increase income at the national average percentage. The other West Virginia county in this area, however, was able to generate a percentage increase only six-tenths of one point above the national average. The six remaining counties of the Appalachian area had percentage increases ranging from 7 to 21 percent above the increase for the nation.

The Missouri area more than doubled its per capita income from 1959 to 1969 and experienced a percentage increase 19 points greater than the U.S. average. Two of the eight counties included here, however, failed to match the national percentage growth. The two counties are Oregon and Reynolds. They had percentage changes that were respectively, 98 and 92 percent of the average for the country. The other six Missouri counties had percentage income increases ranging from 9 to 64 percent above the U. S. average increase for the decade.

As was the case with the areas having greater than national average increases in per capita income during the decade from 1959 to 1969, the individual counties in the California and New Mexico areas generally experienced percentage increases in income per person similar to the areas of which they are apart. Each California county had a percentage increase equal to about 93 percent of the national percentage. In the instance of the New Mexico area, three of four counties posted percentage gains that ranged from 81 to 98 percent of the national percentage. The fourth New Mexico county, Sandoval substantially more than doubled its very low 1959 income per person. It also was a very substantial population gained during the decade of the 1960's, but remained in 1970 a wholly rural county, that is, it had no town with a population as large as 2,500. The reasons for Sandoval's having an income change experience so dramatically different from the other three New Mexico counties are to be found in its developing economic relationship with the Albuquerque SMSA during the decade of the 1960's. Since 1970 the county has been officially added to the SMSA.

In summary, it appears that analysis of the per capita income change experience of individual counties suggest that most of them had the same type of experience as the areas with which they are grouped. Of the 47 counties in the five areas that had percentage gains greater than the national average 42 had larger percentage gains than the country as a whole. It is important, however, to remember that our income data suggest definite development problems for five of these counties—one in Arkansas, two in Missouri, and two in West Virginia.

Population loss is frequently taken as an indication of lack of development progress for counties and areas, and conversely, population gain is often thought to be an indication of development progress. In the preceding analysis of area and county change in income per person relative to such

change for the country as a whole, it was suggested that for relatively low income areas, percentage changes in per capita income significantly greater than the national average were indications of development progress, and that the opposite situation suggested retrogression.

To facilitate analysis of the interrelationships between changes over time in per capita income and population the study area counties have been grouped into four population change categories. They are: (1) counties losing population during each of the past two decades, (28 counties, 53 percent of the total fall in this group); (2) counties that lost population between 1960 and 1970 after gaining population during the 1950's (3 counties, 5.7 percent of the total are in this group); (3) counties that gained population in the 1960's after losing during the previous decade (10 counties, 18.9 percent of the total comprise this group); and (4) counties that gained population during each of the past two decades (12 counties fall in this group. They account for 22.6 percent of all study counties.) The data cross classifying numbers of counties for income and population change groups are given in Table 2.

Table 2
Counties Included in rural Census Employment Survey by
Per Capita Income, 1959 to 1969, and Population Change
Category, 1950 to 1970

Population change Category	Percentage change in Per Capita Income Groups, 1959-1969 (Number of Counties)				
	All change groups	More than double	Less than double but increased more than national ave	Equalled national average	Less than national average
Lost population in both decades	28	18	6	1	3
Lost in 1960s gained in 1950s	3	2	1	—	—
Gained in 1960s lost in 1950s	10	6	3	—	1
Gained in both decades	12	4	3	—	5
All population change groups	53	30	13	1	9

Sources: Income Change From Table 1. Population Change Categories Developed In Economic Development Division, Economic Research Service, USDA from Census of Population Data.

The population change category encompassing the largest number of our study counties is that group which lost population during each of the decades from 1950 to 1970. Eighteen, or 64 percent of these counties, more than doubled their incomes per person between 1959 to 1969, another six counties of this group increased per capita income by from 80 to 98 percent during this period. Since the income per person for the United States increased by 70 percent during the decade of the 1960's, it is evident that about 86 percent of study counties that were two decade losers of population, achieved percentage increases in per capita income between 1959 and 1969 that were substantially above the national average. Such an achievement is taken as an indication that development progress is occurring and that population loss for these counties was probably one of the adjustments that had to be made to achieve such progress.

The situation of the four remaining counties of this population change group as delineated by population and income change data appears to be grim. Not only have they lost population for two decades, and suffered the almost always painful adjustments that this fact entails, but starting from a low income position in 1959 they have during the decade of the 1960's seen their incomes per person become a smaller proportion of the national average than that with which they began. These counties are: Prairie in Arkansas, Oregon in Missouri, and McDowell and Mingo in West Virginia. In the instance of Mingo county the percentage change in per capita income was virtually the same as the national average; its relative position did not worsen, but it failed to improve.

Among our study counties a small group of only three lost population in the 1960's after gaining during the previous decade. The per capita income change experience of each of these counties would seem to suggest that the population loss was a needed adjustment. Two of the counties, Pender and Robeson, in North Carolina substantially more than doubled their incomes per person between 1959 and 1969. Their percentage change in per capita income exceeded the national average by 44 and 38 percent, respectively. The third county involved here is Russell in Alabama; per capita income in this county increased by 96 percent.

The per capita income change experience for the ten study counties that reversed a population loss trend and gained in the most recent decade after losing during the previous ten years was for the most part quite encouraging. The counties are located in Missouri (6), Arkansas (3), and North Carolina (1). Six of the 10 more than doubled their 1959 incomes per person and three achieved increases ranging from 81 to 93 percent—well above the 70 percent national increase. The remaining county, Reynolds of Missouri realized a 56 percent increase in per capita income—only 92 percent of the

average for the country. There is an indication here that population gain over a decade is not necessarily indicative of development progress.

A more impressive indication of this fact is afforded by the income change experiences of the final 12 study counties—those that gained population during each of the past two decades. Five of these counties, (42 percent) failed to match the national average of a 70 percent increase in per capita income. Of the remaining seven, four more than doubled incomes per person, and three attained increases ranging from 88 to 94 percent.

Since for low income areas percentage change over time in per capita income that exceed the national average are regarded as indications of progress in economic development, it is possible by examining the interrelationships between the relative rurality of our study counties and different categories of change in per capita income between 1959 and 1969 to shed some light on the development progress of counties grouped according to relative rurality. The basic information permitting this analysis is presented in Table 3.

Table 3
Counties included in rural Census Employment Survey by percentage change in per capita income groups and size of largest population center groups, 1959 to 1969.

Size of largest population center or relative urbanity group 1970	Percentage change in per capita income 1959 to 1969 (Number of counties)				
	All Change Group	More than Doubled	Less than 100 but exceeded national average	Equaled National average	Less than national average
Less than 2,500	12	7	2	0	3
2,500- 4,999	7	5	1	0	1
5,000- 9,999	13	10	24	1	0
10,000-24,999	12	5	4	0	3
25,000-49,999	1	0	0	0	1
Non-metropolitan					
50,000 or more urban	2	0	1	0	1
In standard metropolitan statistical area	6	3	3	0	0
All population group	53	30	13	1	9

Sources: Income change data from Table 1. Relative Urbanity Group Data Developed In Economic Development Division, Economic Research Service, USDA, From 1970 Census of Population data.

The most favorable indication of development progress that is afforded by these data are the number of counties that more than doubled per capita incomes during the decade. The fact will be observed that each of the three most relatively rural groups of counties are more than proportionally represented among counties that more than doubled incomes per person. These same counties are, however, also more than proportionally represented among the counties that had percentage increases in incomes per capita that were less than the national average. For low income counties this latter income change category is, of course, interpreted as an indication of development retrogression rather than progress. In general, it would appear that, within our sample of 55 counties, a county is about as likely to do either well or poorly with respect to percentage increase in per capita income in one relative rurality group as in another.

Families with Incomes Below the Low Income Level

An aspect of area income with some significance for development policies and programs is the incidence of families with incomes below a socially acceptable threshold. For our study areas data are available on the number of families by race and sex of head that had incomes in 1970 that were below the low income thresholds based upon definitions originated by the Social Security Administration in 1964 and subsequently modified by a Federal Interagency Committee.¹In the instance of this information on families with low incomes, data have been assembled from selected cities covered in the Census Employment Survey which permit comparisons of the incidence of low incomes, families in our rural study areas and in low income areas of selected cities. The cities chosen for comparison here and in other sections of this report are: Birmingham, Alabama; Charlotte, North Carolina; Cincinnati, Ohio; Memphis, Tennessee; New York, New York; Oakland, California; Phoenix, Arizona; and St. Louis, Missouri.

The data to be examined are presented in Tables 4 and 5. Since the data apply only to low income areas of cities, and since our rural study areas were selected as low income areas it is to be expected that percentages of families with low incomes would exceed national averages. The important comparisons available here are those between urban and rural and between the various rural study areas.

For all families of all races the rural study areas had percentages of families with incomes below the official low income thresholds that ranged

¹ A detailed explanation of the low income thresholds for families with different characteristics is available in Current Population Reports, Series P. 23, No. 28, U.S. Bureau of the Census.

from 13 to 159 percent greater than the United States average. The California area had the 13 percent greater incidence, and the Arkansas group of counties exceeded the national average by 159 percent. Arkansas was closely followed by the Missouri area with a percentage of families below low income thresholds that was 157 percent above that for the country as a whole. The incidence of low incomes for the Appalachian and Alabama areas were also well over double the national average. In the remaining three areas, New Mexico, North Carolina, and the Zuni Indian Reservation the national average was exceeded by 73, 76, and 87 percent, respectively.

Table 4
Number and percent of families with incomes below the low income level, for rural Census Employment Survey areas and the United States, by race, 1970

Rural census employment survey areas	Families with					
	Male heads		Female heads		All families	
	Number	Percent of total	Number	Percent of total	Number	Percent of total
Alabama						
All races	3,256	16.0	2,306	50.6	5,562	22.3
Relative to U.S.	—	225.4	—	115.7	—	223.0
White	868	6.9	269	21.7	1,137	8.2
Relative to U.S.	—	111.3	—	86.8	—	102.5
Black	2,388	30.8	2,037	61.3	4,425	39.9
Relative to U.S.	—	168.3	—	112.7	—	136.2
Appalachia						
All races	9,665	18.3	2,811	44.9	12,476	21.1
Relative to U.S.	—	257.7	—	138.2	—	211.0
Arkansas						
All races	10,855	20.0	5,327	63.4	16,182	25.9
Relative to U.S.	—	281.7	—	195.1	—	259.0
White	4,942	12.0	998	31.6	5,940	13.4
Relative to U.S.	—	193.5	—	126.4	—	167.5
Black	5,866	45.6	4,329	82.4	10,195	56.3
Relative to U.S.	—	249.2	—	151.5	—	192.2
California						
All races	2,050	8.2	1,160	34.6	3,210	11.3
Relative to U.S.	—	115.5	—	106.5	—	113.0
White	2,000	8.3	978	33.5	2,978	11.0
Relative to U.S.	—	133.9	—	134.0	—	137.5
Missouri						
All races	4,224	24.1	730	42.8	4,954	25.7
Relative to U.S.	—	339.4	—	131.7	—	257.0

Table 4—Continued

Rural census employment survey areas	Families with					
	Male heads		Female heads		All families	
	Number	Percent of total	Number	Percent of total	Number	Percent of total
New Mexico						
All races	2,271	14.2	775	47.6	3,046	17.3
Relative to U.S.	—	200.0	—	146.5	—	173.0
White Spanish	863	14.3	282	48.4	1,145	17.3
Relative to U.S.	—	1	—	1	—	1
North Carolina						
All races	11,784	13.5	6,602	38.6	18,386	17.6
Relative to U.S.	—	190.1	—	118.8	—	176.0
White	5,172	7.8	1,953	21.4	7,125	9.5
Relative to U.S.	—	125.8	—	85.6	—	118.8
Black	5,236	31.9	3,956	59.1	9,192	39.8
Relative to U.S.	—	174.3	—	108.6	—	135.8
Zuni Reservation						
All races	83	16.5	31	29.3	114	18.7
Relative to U.S.	—	232.4	—	90.2	—	187.0
United States						
All races ²	3,280	7.1	1,934	32.5	5,214	10.0
White ²	2,604	6.2	1,097	25.0	3,701	8.0
Black ²	625	18.3	820	54.4	1,445	29.3

Sources: Study areas, Census Employment Survey, PHC (3)-74 For The United States Census Population, 1970

¹ Data not available for U.S.

² Numbers in thousands.

For these eight study areas, two facts would seem to be significant: (1) families headed by males exceeded by far larger amounts, the national average percentages having low incomes than did families headed by females. The absolute percentage incidence is, of course, substantially higher for the United States and for all study areas for families with female than with male heads. (2) In the areas for which separate data on race are available, black families, compared to much higher national percentage base, exceeded the national percentage incidence of low incomes by far larger amounts than did whites.

These two facts would tentatively suggest that relative to the country as a whole incomes earned in our study areas are relatively lower for males than for females, and that in the Alabama, Arkansas and North Carolina areas the past influence of job and education related discrimination is re-

Table 5

Number and percent of families with incomes below the low income level for low income areas of selected cities, 1970

City, State, and item	Families with					
	Male heads		Female heads		All families	
	Number	Percent of total	Number	Percent of total	Number	Percent of total
Birmingham, Alabama						
All races	4,531	16.9	4,903	53.4	9,434	26.3
Relative to U.S.	—	238.0	—	164.3	—	263.0
White	1,077	10.8	717	35.6	1,794	16.3
Relative to U.S.	—	174.2	—	142.4	—	203.8
Black	3,454	20.7	4,186	58.4	7,640	32.0
Relative to U.S.	—	113.1	—	107.4	—	109.2
Phoenix, Arizona						
All races	3,791	14.0	3,354	46.9	7,145	20.8
Relative to U.S.	—	197.2	—	144.3	—	208.0
White Spanish	1,436	20.1	1,046	61.7	2,483	28.1
Relative to U.S.	—	?	—	?	—	?
Other White	1,617	10.2	1,129	34.6	2,746	14.4
Relative to U.S.	—	?	—	?	—	?
Total White	3,053	13.3	2,175	43.9	5,228	18.7
Relative to U.S.	—	214.5	—	175.6	—	233.8
Oakland, California						
All races	2,400	10.1	3,708	42.5	6,108	18.8
Relative to U.S.	—	142.2	—	130.8	—	188.0
White	730	9.2	482	28.5	1,212	12.6
Relative to U.S.	—	148.4	—	114.0	—	157.5
Black	1,546	11.1	3,121	46.3	4,667	22.6
Relative to U.S.	—	60.6	—	85.1	—	77.1
St. Louis, Missouri						
All races	8,645	18.1	10,795	52.9	19,440	28.6
Relative to U.S.	—	254.9	—	162.8	—	286.0
White	2,416	14.8	1,416	40.9	3,832	19.3
Relative to U.S.	—	238.7	—	163.6	—	241.2
Black	6,229	20.0	9,379	55.3	15,608	32.4
Relative to U.S.	—	109.3	—	101.6	—	110.6
New York, New York						
All races	50,700	13.0	78,100	39.5	128,800	21.9
Relative to U.S.	—	183.1	—	121.5	—	219.0
White Spanish	16,300	16.1	27,100	46.3	43,400	27.2
Relative to U.S.	—	?	—	?	—	?
Other White	11,900	11.4	5,800	28.0	17,700	14.1
Relative to U.S.	—	?	—	?	—	?
Total White	28,200	13.7	32,900	41.4	61,100	21.5

Table 5—Continued

City, State, and item	Families with					
	Male heads		Female heads		All families	
	Number	Percent of total	Number	Percent of total	Number	Percent of total ¹
Relative to U.S.	—	221.0	—	165.6	—	268.8
Black	19,500	12.1	40,900	37.3	60,400	22.3
Relative to U.S.	—	66.1	—	68.6	—	76.1
Charlotte, North Carolina						
All races	1,498	12.3	2,496	48.4	3,994	23.1
Relative to U.S.	—	173.2	—	148.9	—	231.0
White	242	7.8	219	24.1	461	11.5
Relative to U.S.	—	125.8	—	96.4	—	143.8
Black	1,256	13.9	2,277	53.8	3,533	26.7
Relative to U.S.	—	76.0	—	98.9	—	91.1
Cincinnati, Ohio						
All races	4,450	16.7	5,692	56.3	10,142	27.6
Relative to U.S.	—	235.2	—	173.2	—	276.0
White	2,156	19.0	1,284	50.2	3,440	24.8
Relative to U.S.	—	306.4	—	200.8	—	310.0
Black	2,267	14.9	4,408	58.4	6,675	29.3
Relative to U.S.	—	81.4	—	107.4	—	100.0
Memphis, Tennessee						
All races	7,813	20.5	9,085	58.8	16,898	31.5
Relative to U.S.	—	288.7	—	180.9	—	315.0
Black	6,882	22.1	8,372	60.2	15,254	33.9
Relative to U.S.	—	120.8	—	110.7	—	115.7
United States						
All races ²	3,280	7.1	1,934	32.5	5,214	10.0
White ²	2,604	6.2	1,097	25.0	3,701	8.0
Black ²	625	18.3	820	54.4	1,445	29.3

Sources: Study Areas, Census Employment Survey For The United States, Census Of Population, 1970

¹ Data not available for U.S.

² Numbers in thousands

flected in the very high percentages of black families having incomes below the low income threshold. Implicit in these implications are the suggestions that efforts to obtain new industries should consider those that can productively employ low income men and women and that affirmative efforts should be made to make entrance to all occupations available to all who are qualified without regard to race.

With respect to family incomes below a socially acceptable level, there are both similarities and striking differences between the rural study area and

the low income sections of the eight cities selected for comparison. Considering families of all races, the cities have even larger percentages of families with unacceptably low incomes than the high levels found in rural areas. The cities as did the rural areas, have, when compared to the national averages for their respective categories, higher incidences of poverty among families with male heads than those headed by females. In the instance of both groups the families with women heads had, of course, much higher absolute percentages with unacceptably low incomes than did families with male heads.

The principal differences between rural areas and cities that these data reveal is that compared to national average data for black families below the low income threshold, black families in the cities show substantially less incidence of poverty than their rural area counterparts.

Health and Educational Services

An important aspect of rural development is improving the quality of services and facilities available to rural people. A significant part of these is health and educational services. We have some data for our study areas that shed some light on what they have in these areas and how they compare to the country as a whole; Tables 6 and 7.

With respect to health services, the study areas will seem to have definite problems. The New Mexico area with 53 percent as many physicians per 10,000 population as the United States average leads all other areas in this respect. The other areas have percentages of the U. S. average ranging from 15 percent for Missouri to 46 percent for California. Generally, it will be seen that the availability of other health professionals and of hospital beds compares unfavorably with the average for the country as a whole.

There are no really satisfactory data for comparing the relative quality of elementary and secondary educational services for various areas. As a very rough approximation, we have developed information on per capita expenditures for 1962 and 1966 with comparisons to average levels for the state and the country as a whole.

It will be noted that the California area exceeds both state and national expenditure per capita levels, and the New Mexico area exceeds the national level, but falls a little short of the state expenditure. On the other hand, the Appalachia, Arkansas and Missouri areas spend more per capita on education than the state.

Table 6
Availability of selected professional health personnel and hospital beds for rural Census Employment Survey areas, and the United States, 1966 and 1970.

State	Physicians ¹		Dentists ²		Registered nurses ²		Pharmacists ²		Hospital beds ¹	
	Number	Per 10,000 population	Number	Per 10,000 population	Number	Per 10,000 population	Number	Per 10,000 population	Number	Per 1,000 population
Alabama	47	3.4	23	1.6	280	19.8	41	2.9	577	4.2
Relative to U.S.	—	24.6	—	29.6	—	63.2	—	48.3	—	102.4
Appalachia	168	5.5	55	1.8	255	8.3	56	1.8	991	3.3
Relative to U.S.	—	39.8	—	33.3	—	26.5	—	30.0	—	80.5
Arkansas	129	3.6	78	2.2	207	5.8	110	3.1	906	2.5
Relative to U.S.	—	26.1	—	40.7	—	18.5	—	51.7	—	61.0
California	98	6.3	55	3.7	317	21.3	45	3.0	539	3.5
Relative to U.S.	—	45.6	—	68.5	—	68.0	—	50.0	—	85.4
Missouri	18	2.0	24	2.7	48	5.4	27	3.0	67	0.8
Relative to U.S.	—	14.5	—	50.0	—	17.2	—	50.0	—	19.5
New Mexico	113	7.3	45	3.0	304	20.0	66	4.3	364	2.3
Relative to U.S.	—	52.3	—	55.6	—	63.9	—	71.7	—	56.1
North Carolina	343	4.5	136	1.9	1,369	19.2	190	10.9	1,965	2.6
Relative to U.S.	—	32.6	—	35.2	—	61.3	—	181.7	—	63.4
U.S.	281,702	13.8	106,680	5.4	613,188	31.3	117,495	6.0	842,986	4.1

Sources: Physicians and Hospital Beds From "Distribution Of Physicians In United States, 1970" American Medical Association, Chicago, 1971.
 Other Professions From "Health Manpower County And Metropolitan Data Book, HEW, 1971.

¹ December 1970

² December 1966

Table 7
Per capita expenditures for education in public elementary and secondary schools, for rural Census Employment Survey areas with comparisons to state and United States expenditures, 1962 and 1966.

Rural census employment survey areas	Dollars per capita		Relative to State		Relative to U.S.	
	1962	1966	1962 Percent	1966 Percent	1962 Percent	1966 Percent
Alabama	59.26	97.31	90.3	92.2	62.1	69.8
Appalachia	70.10	119.84	86.5	115.9	73.3	85.9
Arkansas	58.40	103.70	97.3	108.4	61.6	74.4
California	130.71	222.92	95.1	134.3	136.9	159.9
Missouri	76.58	134.01	109.9	106.6	80.2	96.1
New Mexico	116.97	174.83	91.7	97.3	122.5	125.4
North Carolina	74.15	110.47	106.3	97.9	77.7	79.2

Source: Census of Governments 1961 and 1966

Chapter 3

MANPOWER UTILIZATION

The previous chapter developed some data on per capita income levels and changes for the decade from 1959 to 1969, on the incidence of families with low income, and examined some of the interrelationships between per capita income change and population change, and per capita income change and the relative urbanity of our rural study areas. Information was also presented concerning the relative adequacy of health and educational services in the study areas.

In general these data indicate that most of the areas studied have made development progress during the decade of the 1960's, but the levels of income obtaining, and the incidence of low income families in 1969, and the indicators of health and educational services that were developed point to the need for continuing and accelerated development progress.

Since from three-fourths to four-fifths of income generated in this country in producing goods and services is attributable to manpower input, the balance of this chapter is devoted to developing and analyzing information on manpower utilization and to endeavoring to discern the implications of these data for development strategies, policies and programs.

We began this examination by considering briefly the general employment characteristics and trends for the study areas.

General Employment Characteristics and Trends²

In the United States 96 percent of employment was nonfarm. In 1970 this was up 94 percent from 1962. Of this nonfarm employment nine out of 10 were wage and salary workers. The remaining 10 percent were self-employed and nonpaid family workers (Table 8).

With the exception of the Appalachian and New Mexico areas, which have percentages of farm employment lower than the U. S. average of four percent farm employment accounts for substantially higher percentages of total employment in our rural study areas than in the country as a whole. In 1970 these percentages ranged from 34 in the California area to about 10 in the Alabama area. Employment on farms is, however, declining as a percentage of total employment in all study areas. Only for the California

² The data upon which this section is based was assembled from State Employment Security Agencies by Claude C. Haren of the Economic Research Service, USDA.

Table 8
Average annual employment by broad categories for rural Census Employment
Survey areas, with comparisons to the United States, 1962 and 1972.

Rural employment survey area	Total employed (Number)	Percent		Total nonfarm employed (Number)	Wage and salary workers (Percent)	Other nonfarm employed (Percent)
		Farm	Nonfarm			
Alabama						
1970	40,950	10.2	89.8	36,760	74.4	25.6
1962	34,380	19.0	81.0	27,830	66.0	34.0
Appalachia						
1970	68,502	2.4	97.6	66,846	89.3	10.7
1962	63,114	3.7	96.3	60,810	86.3	13.7
Arkansas						
1970	90,100	17.3	82.7	74,475	78.2	21.8
1962	79,150	28.5	71.5	56,600	72.8	27.2
California						
1970	48,840	34.2	65.8	32,120	84.7	15.3
1962	40,040	38.9	61.1	24,450	82.2	17.8
Missouri						
1970	29,140	18.6	81.4	23,730	78.8	21.2
1962	24,420	26.2	73.8	18,030	71.5	28.5
New Mexico						
1970	44,059	3.3	96.7	42,595	89.0	11.0
1962	23,687	5.4	94.6	33,758	85.9	14.1
North Carolina						
1970	239,690	15.0	85.0	203,620	84.6	15.4
1962	179,260	28.5	71.5	128,260	82.4	17.6
United States						
1970 ¹	81,756	3.9	96.1	78,558	89.8	10.2
1962 ¹	68,210	6.3	93.7	63,911	86.9	13.1

Source: Developed In Economic Development Division, Economic Research Source USDA From Date Of State Employment Security Agencies.

¹ Numbers in thousands.

area did the absolute number employed on farms increase between 1962 and 1970.

As is the case for the United States as a whole, nonfarm employment in all areas is comprised predominately of wage and salary workers, and in the case of all areas, the wage and salary workers increased as a percentage of all nonfarm employment between 1962 and 1970. Except for the Appalachian and New Mexico areas, however, wage and salary workers are a

smaller proportion of the total nonfarm work force than is the case for the country as a whole. The difference is accounted for by the still relatively large proportions of nonfarm employed in these areas who are either self-employed or are nonpaid family workers. For the study areas the proportions of nonfarm employed found among self-employed and nonpaid family workers range from 11 percent in Appalachia and New Mexico to almost 27 percent in Alabama. The fact will be noted, however, that for all areas these percentages decreased markedly between 1962 and 1970.

The comparatively high proportions of presently employed nonfarm workers found in categories other than wage and salary workers in these areas suggest that potential employers of wage and salary workers would find among this category a valuable and significantly large source of manpower.

Industrial Composition of Employment

The idea is frequently advanced that a major problem for low income areas is that they have poor industrial compositions, that is, a preponderance of relatively low wage paying industries. We have developed for our rural study areas and comparative cities distributions of wage and salary workers by major industries, and have calculated for males and females in each area an index of the economic quality of industrial composition. The results are shown in Tables 1 and 2 of the Appendix.

The indices were calculated by weighting the percent distributions of employment by the U. S. median earnings of the appropriate sex, and expressing the aggregate resulting as a percentage of an aggregate for the United States which was obtained by the same procedure.

The results show that for men in our rural areas the industrial composition of employment is as good or better than the national average in all areas except Arkansas and California. In each of these two areas the index is 87. The reason for the low index in these two areas is the relatively high proportion of employment in agriculture, forestry and fisheries. This industry has a quite low national median income.

In the instance of women, only two rural areas, Appalachia, and Missouri, have an index of 100 or more, although it will be noted that the New Mexico area, at 99.7 is virtually at the national norm. The indexes for the other four areas are not extremely low; they range from 93 to 97. In the Arkansas, California and North Carolina areas, the lower indexes appear to result mainly from relatively high proportions of employment in the agriculture, forestry and fisheries industry. In Alabama the cause may be the rather high employment in personal services.

For the low income areas of our eight comparative cities the industrial quality index for men is higher than the U. S. norm (100.0) in seven of the eight, and in the instance of Birmingham, Alabama with an index of 99.7 is practically at the U. S. average.

For women wage and salary workers in the cities the industrial composition is not so favorable. In only Cincinnati, New York City, and St. Louis is the index equal to or better than the national norm. In Phoenix, and Oakland the indexes, at 98, are not much below the norm. In none of the other three cities, however, does the index reach 90. The actual indexes are 75.5 for Birmingham, 85.1 for Charlotte and 86.6 for Memphis.

On the whole, the industrial quality indexes are a little better for men in the cities than in the rural areas while for women the reverse appears to be true. For women workers in most areas, and for men in a few it appears that development planning for expanded employment opportunities should endeavor to upgrade the present industrial mix.

Unemployment Characteristics

Unemployment is, of course, the most dramatic form of failure to utilize manpower resources. The belief is still wide-spread that unemployment is generally less severe in rural than in metropolitan areas. This belief is valid, however, only in situations where a preponderance of the work force are self-employed as either farmers or in other business and professions.

In our rural study areas unemployment of women wage and salary workers was higher than the 6.3 percent national average for the fall quarter of 1970 (the period of survey enumeration) in seven of the eight areas. The area of exception was the Zuni Reservation. In the instance of men workers four of our areas had unemployment rates higher than the 4.9 percent U. S. average, four had rates lower than this. The details for both men and women are shown in Appendix Table 3. The fact will be noted that the unemployment rate for blacks, both male and female, is shown to be about twice as high as that for whites in the three areas (Alabama, Arkansas, and North Carolina) for which such statistics are available. Black unemployment has, of course, traditionally been higher than that for whites in the country at large. For example, in the fourth quarter of 1970, the proximate time of the Census Employment Survey, national average unemployment for white males was 4.5 percent compared to 7.7 percent for blacks. In the instance of women the comparable figures are 5.8 for whites and 9.5 for blacks.

For comparative purposes unemployment data of the same type as that for our rural study areas are presented in Appendix Table 4. For the total of all men as well as women the unemployment rate was substantially above

the national average in each of these eight cities. It may also be noted that only in Charlotte, and Cincinnati was the unemployment rate for white males below the national average for all races. White women had rates below the national average only in Charlotte and St. Louis.

Unemployment is, therefore, seen to be substantial in both the rural study areas and in the low income enclaves of the cities selected for comparison. On balance, however, the cities appear to have more severe problems of unemployment as revealed by the data of these tables.

The relative severity of unemployment cannot, however, be judged very accurately by rates that weight equally all persons in the labor force. In order to shed some additional light on the relative severity of unemployment the data of Table 9 were developed. For this table the percent distributions of the age groups listed in Appendix Tables 3 and 4 were weighted by U. S. median incomes for all races for the appropriate age and sex group. The aggregate of this weighting process was then expressed as a percentage of the aggregate resulting from weighting the U. S. distribution by age groups for all races by the U.S. median income for all races of each age-sex group. The resultant index numbers have as a base, or 100.0, the aggregate resulting from this weighting of the percent distribution by age of national unemployment for all races by sex by the appropriate national median income for all races.

The results modify to an appreciable extent earlier indicators of the relatively greater severity of unemployment among blacks than whites. This indicates that relatively larger proportions of unemployed blacks than of whites are found in ages with relatively low incomes.

The fact will also be noted that the index of relative severity alters the picture of comparative unemployment between rural study areas. For example, the economic severity of unemployment among males in Missouri, New Mexico, and the Zuni Reservation is greater than in California, which has a substantially higher overall unemployment rate than either of these three areas. For women, also, the economic severity index drops the California area from highest according to the overall rate to third highest when considered from the standpoint of economic severity. Women of both the Missouri and Zuni areas experience more economically severe unemployment than those in the California area.

Hidden Unemployment

There has been considerable interest in the last few years in measuring the extent and assessing the significance of hidden unemployment. These are persons of labor force age who are not in the labor force because they think or know that no employment is available to them. The Census Employment Survey asked questions to determine the extent of this

Table 9
Index of the economic severity of unemployment, by sex and race for all rural areas and selected cities
included in the Census Employment Survey, 1970

Rural areas and cities	All races		White		Black		White Spanish		Other White	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
RURAL AREAS										
Alabama	75.6	88.9	98.0	100.8	64.2	83.4	—	—	—	—
Appalachia	80.1	89.0	—	—	—	—	—	—	—	—
Arkansas	90.6	95.8	102.8	102.5	82.9	90.0	—	—	—	—
California	103.2	97.2	103.1	98.1	—	—	—	—	—	—
Missouri	109.8	102.5	—	—	—	—	—	—	—	—
New Mexico	105.6	96.4	—	—	—	—	94.9	91.2	104.4	105.1
North Carolina	82.2	—	72.9	—	100.3	—	—	—	—	—
Zuni Reservation, New Mexico	107.4	126.0	97.5	94.0	105.7	—	—	—	—	—
CITIES										
Birmingham, Alabama	92.1	93.6	104.8	100.1	89.0	92.0	—	—	—	—
Phoenix, Arizona	110.9	95.3	—	—	—	—	96.1	90.2	117.8	99.1
Oakland, California	116.8	107.6	113.7	91.1	117.0	112.3	—	—	—	—
St. Louis, Missouri	104.1	92.6	111.7	91.5	102.1	92.8	—	—	—	—
New York City, New York	105.3	103.1	—	—	100.7	100.9	103.6	107.0	112.2	104.7
Charlotte, North Carolina	90.8	88.6	74.3	92.2	94.3	87.9	—	—	—	—
Cincinnati, Ohio	95.6	87.8	89.7	94.0	97.6	83.8	—	—	—	—
Memphis, Tennessee	84.0	91.8	—	—	82.7	92.5	—	—	—	—

U.S. percent distribution by age groups weighted by median earnings = 100.

Source: Developed from Census Employment Survey Data and Median Earnings Data From "Current Population Reports, Series. P. 60, No. 80, October, 1971

phenomenon. For this report we have taken the most conservative approach to “discouraged workers” or “hidden unemployment.” The only ones counted as discouraged workers are those who responded that they wanted a job now and that the reasons they were not looking was that they believed no work was available, or they had been unable to find any work.

The resultant percentages of the adjusted civilian labor force are presented in Tables 10 and 11. For most groups it will be seen that hidden

Table 10
Discouraged workers and wage and salary workers involuntarily working part-time, rural Census Employment Survey areas

Rural census employment survey area and race	Percent of adjusted civilian labor force ¹			
	Discouraged workers		Involuntarily working part-time	
	Male	Female	Male	Female
Alabama				
All races .....	.8	3.8	4.8	8.8
White .....	.7	1.6	3.3	6.1
Black .....	.8	5.9	6.8	11.3
Appalachia				
All races	2.2	13.0	3.6	4.3
Arkansas				
All races	0.4	5.5	3.4	6.7
White	0.1	2.4	1.6	3.8
Black	1.3	10.7	7.3	11.1
California				
All races	0.7	3.6	5.2	8.8
Missouri				
All races	0.7	7.7	5.0	9.9
New Mexico				
All races	2.6	8.3	3.3	5.8
North Carolina				
All races	0.5	3.1	6.1	7.2
White	0.3	2.0	4.0	5.1
Black	1.1	5.8	11.7	11.9
Zuni Reservation				
All races	2.3	1.3	1.8	.9

Source: Census Employment Survey Volumes, PHO(3)-74.

¹ Adjusted civilian labor force is conventionally defined labor force plus “Discouraged workers” not in labor force.

Table 11
Discouraged workers and wage and salary workers involuntarily working part-time, low income sections of specified cities included in Census Employment Survey, 1970

City and race	Percent of adjusted civilian labor force ¹			
	Discouraged workers		Involuntarily working part-time	
	Male	Female	Male	Female
Birmingham, Alabama				
All races	1.9	6.3	3.6	5.0
White	4.6	5.0	1.9	2.7
Black	2.2	6.8	4.4	6.0
Cincinnati, Ohio				
All races	2.2	7.0	3.4	3.2
White	1.5	5.0	3.2	2.8
Black	2.5	8.0	3.6	3.4
Charlotte, N.C.				
All races	1.1	5.7	3.3	4.7
White .....	.9	3.0	2.7	2.7
Black	1.2	6.3	3.5	5.2
Memphis, Tenn.				
All races	2.5	7.3	3.6	5.8
Black	2.8	8.2	3.9	6.4
New York, N.Y.				
All races	1.6	5.6	1.6	3.1
White Spanish	2.0	8.2	1.4	2.9
Other white	0.9	2.6	1.8	3.0
Black	1.8	5.8	1.8	3.2
Oakland, California				
All races	3.6	10.4	3.9	7.2
White	2.4	8.6	3.3	5.6
Black	4.5	11.1	4.5	7.7
Phoenix, Ariz.				
All races	1.3	5.6	5.2	5.8
White Spanish	1.0	8.2	5.5	8.1
Other white	1.1	3.6	4.8	4.4
St. Louis, Missouri				
All races	2.2	5.5	4.3	4.5
White	1.4	5.7	6.4	3.2
Black	2.5	5.4	3.3	4.8

Source: Census Employment Survey Volumes, PHO (3)-74

¹ The adjusted civilian labor force is the regularly defined labor force plus the number of discouraged workers.

unemployment, while not extremely high, is a significant fraction of conventionally defined unemployment. The concept is additive with unemployment percentages when each is expressed as a percent of the adjusted civilian labor force (which is the regularly defined civilian labor force plus those counted as discouraged workers).

Hidden unemployment is in almost all instances shown to be much more severe among women than men. In part this probably stems from the always large number of respondents among women who are wives of family heads. Such persons may genuinely want employment, but when job finding is quite difficult they find it more economically feasible to drop out of the labor force than would an unrelated individual or a family head.

The rates of hidden unemployment, for the rural study areas and the low income section, of our comparison cities will be seen not to differ dramatically. That the rates are much the same in major cities as in rural areas suggests that the labor market in the cities may not be functioning markedly better than in rural areas—an assumption frequently made in endeavoring to explain rural-urban income differentials.

In an effort to shed a bit more light on some characteristics of “discouraged workers”, the data of Table 12 were developed. It will be seen that especially among men the “discouraged workers” are heavily concentrated among the most youthful and the least educated. It is also noteworthy that relatively few family heads are among these persons, either men or women.

Among “discouraged women workers” there is much less concentration at the lowest educational levels and much larger percentages are found among the most productive age groups. In most instances two-thirds or more of these women are wives of family heads.

Involuntary Part-Time Workers

Another aspect of manpower utilization that is significant for development planning is the percent of persons in the labor force who are involuntarily working only part-time. Information of this type is also available in Tables 10 and 11.

In our rural study areas the percentages involuntarily working part-time generally approach or exceed the unemployment rate for both black men and women. For white men the involuntary part-time rate exceeds or approaches the unemployment rate in the Alabama, Missouri and North Carolina areas. In the Alabama, California, and Missouri areas white women working involuntarily at part-time jobs are approximately the same or larger in number as those who are unemployed.

Table 12

Percent distribution by specified characteristics of persons who want work now, but are not in labor force because they think no work is available, low-income rural census of employment areas, 1970

Age, family status educational attainment	Alabama				Appalachia		Arkansas			
	Male		Female		Male	Female	Male		Female	
	%Black	%White	%Black	%White	%All races	%All races	%Black	%White	%Black	%White
Age total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
16-21 in school	55.0	47.8	7.2	—	10.4	1.0	40.7	—	7.2	3.2
16-21 not in school	18.0	8.0	20.5	21.8	33.3	18.9	33.1	50.0	14.5	13.4
22-34	18.0	—	27.3	21.8	14.8	29.5	17.1	—	15.3	14.0
35-44	—	—	9.5	40.0	10.6	22.7	—	—	20.0	22.0
45-54	—	9.7	17.7	10.9	17.8	20.8	—	—	18.5	23.7
55-64	9.0	34.5	17.8	5.5	13.1	7.1	9.1	50.0	24.5	23.6
Family status ¹										
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Family head	—	47.5	8.2	12.2	27.2	6.4	30.8	50.0	16.9	25.3
Wife of head	—	—	61.9	63.3	—	75.8	—	—	62.1	67.8
Other family members unrelated individuals	100.0	15.2	24.9	24.5	66.0	15.7	69.2	50.0	15.7	6.9
unrelated individuals	—	37.3	5.0	—	6.8	2.1	—	—	5.3	—
Educational attainment ¹										
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than 8 years	25.0	69.5	26.7	18.4	36.8	28.2	43.0	50.0	46.9	21.1
8 years	—	15.2	15.2	18.4	29.3	16.6	28.8	—	17.3	14.2
9-11 years	25.0	—	37.0	25.8	11.6	31.8	28.2	—	29.2	28.5
12 years	25.0	15.3	12.9	25.2	15.4	20.2	—	—	3.8	36.1
13 years or more	25.0	—	8.2	12.2	6.9	3.2	—	50.0	2.8	—

Source: Developed from 1970 Census Employment Survey volumes, PHC(3)-74.

¹ Persons 16 to 64 years of age and not in school.

The data for our comparison cities indicate that involuntary part-time schedules are a significant problem in these low income areas of cities. In general the involuntary part-time rates for men in the cities are as high or higher than in rural areas. For metropolitan women the rates are generally only slightly less than in our rural areas. Involuntary part-time schedules are, therefore, a significant problem.

Economic Indices of Factors Influencing Earning Capacities of Wage and Salary Workers

There is probably a virtual consensus of judgement, at least among economists, that in an enterprise economy at any given time there will be area and regional differentials in income stemming from variations in the quantity and quality of economic resources available. It does not always seem to be recognized, however, that earnings, the preponderant source of income in the United States, can logically be expected to vary among population groups in response to differentials in the quality of the earning capacity of manpower resources which comprise the various populations.

In an effort to quantify the probable effects upon earnings capacity of specific manpower attributes, and use characteristics for our rural study populations the data presented in Tables 13 and 14 have been developed. This is an endeavor to estimate in quantitative terms the influence upon the

Table 13
Economic indexes of selected factors influencing earning capacities of wage and salary workers in rural Census Employment Survey areas, 1970¹

Rural census employment survey areas, sex and race	Economic index of:			
	Educational attainment	Occupational structure	Age structure	Work experience
Alabama				
Males				
White	97.4	108.9	98.3	108.6
Black	74.7	79.3	88.0	96.7
Females				
White	102.1	111.8	99.6	119.5
Black	85.0	69.2	95.9	104.7
Appalachia				
Males				
All races	84.4	98.1	95.9	103.0
Females				
All races	102.8	100.3	94.3	102.0

Table 13—Continued

Rural census employ- ment survey areas, sex and race	Economic index of:			
	Educational attainment	Occupational structure	Age structure	Work experience
Arkansas				
Males				
White	95.7	98.0	97.3	106.8
Black	69.0	63.6	88.9	82.7
Females				
White	102.2	106.4	97.5	111.1
Black	75.5	52.8	96.9	80.2
California				
Males				
All races	97.9	87.4	93.0	96.8
White	98.1	88.2	93.2	98.1
Females				
All races	105.6	94.0	92.8	84.9
White	105.6	94.9	93.0	84.8
Missouri				
Males				
All races	90.9	97.9	99.3	100.0
Females				
All races	99.3	98.2	97.6	105.7
New Mexico				
Males				
All races	100.2	102.3	96.2	104.5
White Spanish	94.5	95.5	94.1	105.1
Females				
All races	109.2	104.8	92.2	100.2
White Spanish	100.7	92.9	89.4	99.0
North Carolina				
Male				
White	96.5	105.8	96.1	108.1
Black	79.2	72.9	86.0	91.7
Females				
White	106.7	106.7	94.9	109.7
Black	89.8	69.6	93.1	86.1
Zuni Reservation				
Males				
All races	93.3	107.9	91.4	98.8
Females				
All races	86.4	110.5	89.5	105.9

¹ U.S. index for male wage and salary workers of all races—100 for males.
U.S. index for female wage and salary workers of all races—100 for females.

Table 14
**Economic indexes of factors influencing the earning capacity of wage
and salary workers, in low income areas of specified cities, 1970¹**

City, sex, race	Economic index of:			
	Educational attainment	Occupational structure	Age structure	Work experience
Birmingham, Alabama				
Males				
White	95.2	103.3	95.3	113.3
Black	85.0	83.8	91.0	107.1
Females				
White	72.5	102.0	93.5	123.0
Black	91.6	71.5	97.8	111.2
Phoenix, Arizona				
Males				
White Spanish	78.0	83.7	87.5	107.5
Other White	97.2	101.1	94.1	106.0
Females				
White Spanish	76.1	71.1	84.6	87.5
Other White	99.8	103.1	92.3	112.8
Oakland, California				
Males				
White	101.8	96.8	96.0	99.3
Black	94.8	85.0	94.7	99.0
Females				
White	101.5	105.5	92.4	115.8
Black	97.2	86.4	97.0	105.8
St. Louis, Missouri				
Males				
White	83.3	95.1	98.9	107.5
Black	87.5	85.7	96.4	106.2
Females				
White	82.4	108.3	93.3	125.8
Black	88.9	84.5	96.2	119.1
New York City, New York				
Males				
White Spanish	76.4	90.0	96.9	112.1
Other White	101.4	104.4	102.9	113.6
Black	92.0	92.0	109.1	115.1
Females				
White Spanish	70.2	102.3	93.1	124.5
Other White	96.5	116.5	98.2	131.3
Black	89.1	94.7	99.9	135.8

Table 14—Continued

City, race, sex, race	Economic index of:			
	Educational attainment	Occupational structure	Age structure	Work experience
Charlotte, North Carolina				
Males				
White	89.1	102.1	99.5	111.2
Black	86.0	72.1	93.2	111.6
Females				
White	94.4	111.8	100.1	132.7
Black	89.6	75.5	83.3	118.8
Cincinnati, Ohio				
Males				
White	92.3	101.6	96.2	109.7
Black	89.5	84.1	97.8	110.3
Females				
White	86.8	102.4	90.5	120.3
Black	89.0	78.4	97.0	123.1
Memphis, Tennessee				
Males				
All races	85.9	88.1	94.1	108.6
Black	82.6	84.8	94.0	109.0
Females				
All races	90.0	81.7	96.6	120.0
Black	86.3	74.5	98.1	117.7

¹ U.S. index for male wage and salary workers of all races—100 for males.

U.S. index of female wage and salary workers of all races—100 for females.

earning capacity of wage and salary workers in our study populations of their distributions with respect to levels of educational attainment, occupational structure, age structure, and number of weeks worked during the year.

Each number in these Tables represents the estimated percentage of the national median earnings of all wage and salary workers of the same sex which would be warranted as median earnings for the particular population if they were remunerated the same as persons having the identical distribution characteristics with respect to the specified attribute, e.g., educational attainment is remunerated in the economy as a whole. For example, the number 97.4 in Table 13 opposite the line white males in the Alabama area, and in the column headed educational attainment means that it is estimated that the educational attainment distribution of these men would warrant their having median earnings of 97.4 percent of the national median earnings of all male wage and salary workers. The procedure for developing these indices of factors affecting earning capacities is as follows:

1. A national percentage distribution is developed for wage and salary workers of each sex for each attribute, e.g., occupational structure.
2. The percent distribution for any attribute is then weighted by multiplying each percentage of the distribution. For example, in an occupational distribution the percentage representing "professional, technical and kindred workers" would be multiplied by the national median earnings of the appropriate sex, in this occupation.
3. The results of weighting each percentage in each national distribution are then summed for each attribute distribution. This number for each distribution becomes the national norm or 100.0.
4. Percentage distributions for each attribute are developed for each sex-race group in each study area, and these percent distributions are weighted by the same national median earnings figures discussed under (2), above, and the results of the weightings are summed for the percent distributions of each attribute for each sex race group.
5. The numbers resulting are divided by the national number (3), above, for the relevant attribute. The percentages thus obtained are the economic indices displayed in Tables 13 and 14.

The indices themselves show some significant patterns. One that may be noted at this point is the almost uniformly rather low indexes for educational attainment and occupational structure for both black males and females in the three rural study areas which separate data are available for blacks.

To really analyze the effect of these various index levels for different attributes we need a method of combining them to give an overall picture. This task is undertaken in the following chapter where the indices of Tables 13 and 14 are used to develop measures of the economic utilization of wage and salary workers in our rural study areas and comparison cities.

Chapter 4

RELATIVE ECONOMIC UTILIZATION OF EMPLOYED WAGE AND SALARY WORKERS

In many areas of a diverse, complex economy, such as that of the United States, underutilization of employed manpower may be as or more important as an economic and social indicator as unemployment, hidden unemployment or involuntary part-time schedules for workers.

The indices presented in Tables 13 and 14, and discussed in the preceding Chapter provide a foundation for developing a quantitative measure of economic underutilization of manpower. These indices can be used, along with a modicum of other data, to develop for each population group in each study area an estimate of the median earnings that would represent for each particular group median earnings for manpower resources that are equivalent to those of each study population.

There are at least four alternative techniques that can be used to obtain estimates of these "warranted median earnings." The least complex, and perhaps the least satisfactory, would be to take a simple average (mean) of the four earning capacity influencing indices. The resultant average, used as a percentage, would be multiplied by the national median earnings for the appropriate sex to obtain a "warranted median" would then be expressed as a percentage of the actual median earnings of the relevant group. The resultant percentage would represent an index of economic utilization for the particular group. Use of this procedure would tend to give maximum estimates of the extent of economic underutilization.

A second method would use the same procedure as outlined above except that instead of obtaining the arithmetic mean of the four indices the geometric mean would be developed. Using this procedure would result in lowering somewhat the estimates of "warranted median earnings," and therefore in moderately lowering estimates of the extent of economic underutilization.

A third alternative would be to use regression analysis techniques. In this instance the "warranted median earnings" would be set as the dependent variable and the indices influencing earning capacity as independent variables used to estimate "warranted earnings." This method would probably result in estimates of underutilization somewhere between those of the first two techniques. The method would have the advantage of providing statistical estimates of the relative importance of the four indices in producing the estimate of warranted median earnings.

The fourth method, and the one used in this analysis, obtains the product of the four indices ($1 \times 2 \times 3 \times 4$). As would be the case with the first two methods, this product of earning capacity influencing indices, for any population group, is multiplied by the national median earnings for the relevant sex to obtain an estimate of "warranted median earnings." The warranted median earnings is then divided by the actual median earnings for the group to obtain an index of economic utilization.

This latter technique was chosen because it is believed that its use results in the most conservative (the lowest) estimates of the extent of economic underutilization for most population groups found among wage and salary workers in low income areas such as those with which this study is concerned. This can be quickly indicated by considering a hypothetical population group with economic indices affecting earning capacity of .90 each for educational attainment, occupational structure, age structure, and work experience (weeks worked distribution). The product of these four indices would be .656, the arithmetic mean method would, of course, result in this instance in an overall index of earning capacity of .900.

By the same token the product of indices method will result in relatively high estimates of the extent of underutilization for population groups having values of over 100 for all or most individual earning capacity influencing indices.

In addition to the indices influencing earning capacity three other bits of information are introduced in Table 15, which displays our estimates of economic utilization for the population groups of the rural study areas. These are the national median earnings of male and female wage and salary workers of all races, the estimated purchasing power of income, and the actual median earnings of men and women wage and salary workers for each study area population group. In Table 16 the individual indices affecting earning capacity is designated as "adjustment factors" and their product as, simply, "product of factors." This product of factors is, of course, in more analytically functional terminology an overall index of earning capacity for each population group. National median earnings for the appropriate sex is multiplied by this index to obtain the "warranted median earnings" estimate which is so crucial to an estimate of economic underutilization.

Since we derive our warranted median earnings by taking a designated percentage of national median earnings, and since to obtain the index of economic utilization, we divide warranted by actual median earnings, it is desirable that actual median earnings be adjusted to reflect differences between the purchasing power of income in the study areas and in the nation as a whole.

The purchasing power of income index which is given in Table 15 is the closest approximation available to us for achieving this end. These indices

Table 15
Estimated economic utilization of all male and female wage and salary workers with work experience for rural
Census Employment Survey areas, by race, 1970

Item	Alabama				Appalachia		Arkansas			
	Males		Females		Males	Females	Males		Females	
	White	Black	White	Black	All races		White	Black	White	Black
Median earnings U.S. (All races)	\$ 7,152	7,152	2,730	2,730	7,152	2,730	7,152	7,152	2,730	2,730
Actual median earnings	\$ 5,789	3,151	3,172	1,505	5,978	1,969	5,406	2,357	2,756	815
Purchasing power of income factor (U.S. Urban = 100)	88	88	88	88	88	88	88	88	88	88
Real median earnings (= actual median ÷ purchasing power of income)	\$ 6,578	3,580	3,604	1,710	6,793	2,237	6,443	2,678	3,131	926
Number in group	\$12,772	10,771	9,803	10,229	51,827	24,589	36,963	17,540	27,800	15,568
Adjustment factors										
Occupation	108.9	79.3	111.8	69.2	98.1	100.3	98.0	63.6	106.4	52.8
Age	98.3	88.0	99.6	95.9	95.9	94.3	97.3	88.9	97.5	96.9
Education	97.4	74.7	102.1	85.0	84.4	102.8	95.7	69.0	102.2	75.5
Work experience	108.6	96.7	119.5	104.7	103.0	102.0	106.8	82.7	111.1	80.2
Product of factors	113.2	50.4	135.9	59.1	81.8	99.2	97.5	32.3	117.8	31.0
Warranted median earnings (= U.S. median X product of adjustment factors)	\$ 8,096	3,605	3,710	1,613	5,850	2,708	6,973	2,310	3,216	846
Index of economic utilization (= real median earnings ÷ warranted)	81.3	99.3	97.1	106.0	116.1	82.6	88.1	115.9	97.4	109.5
Percent economic underutilization	18.7	0.7	2.9	—	—	17.4	11.9	—	2.6	—
Man equivalent years of economically unutilized labor	2,388	75	284	—	—	4,278	4,399	—	723	—

Table 15—Continued

Item	California				Missouri		Zuni Reservation	
	Males		Females		Males	Females	Males	Females
	All races	White	All races	White	All races	All races	All races	
Median earnings U.S. (All Races)	\$ 7,152	7,152	2,730	2,730	7,152	2,730	7,152	2,730
Actual median earnings	\$ 5,884	6,017	1,805	1,813	4,415	2,280	3,972	2,935
Purchasing power of income factor (U.S. Urban = 100)	100	100	100	100	94	94	93	93
Real median earnings (= actual median ÷ purchasing power of income)	\$ 5,884	6,017	1,805	1,813	4,696	2,425	4,270	3,155
Number in group	26,656	25,395	20,854	19,570	13,590	11,122	547	455
Adjustment factors								
Occupation	87.4	88.2	94.0	94.9	97.9	98.2	107.9	110.5
Age	93.0	93.2	92.8	93.0	99.3	97.6	91.4	89.5
Education	97.9	98.1	105.6	105.6	90.9	99.3	93.3	86.4
Work experience	96.8	98.1	84.9	84.8	100.0	105.7	98.8	105.9
Product of factors	77.0	79.1	78.2	79.0	88.4	100.6	90.9	90.5
Warranted median earnings (= U.S. median X product of adjustment factors)	\$ 5,507	5,657	2,135	2,157	6,322	2,746	6,501	2,471
Index of economic utilization (= Real median earnings ÷ warranted)	106.8	106.4	84.5	84.1	74.3	88.3	65.7	127.7
Percent economic underutilization	—	—	15.5	15.9	25.7	11.7	34.3	—
Man equivalent years of economically unutilized labor	—	—	3,232	3,112	3,493	1,301	188	—

Item	North Carolina				New Mexico			
	Males		Females		Males		Females	
	White	Black	White	Black	All races	White Spanish	All races	White Spanish
Median earnings U.S. (All Races)	\$ 7,152	7,152	2,730	2,730	7,152	7,152	2,730	2,730
Actual median earnings	\$ 5,818	3,227	2,907	1,356	6,057	5,225	2,130	1,825
Purchasing power of income factor	88	88	88	88	93	93	93	93
Real median earnings (= actual median ÷ purchasing power of income)	\$ 6,611	3,667	3,303	1,540	6,512	5,618	2,290	1,962
Number in group	64,313	22,515	60,612	24,605	16,937	6,727	10,558	3,487
Adjustment factors								
Occupation	105.8	72.9	106.7	69.6	102.3	95.5	104.8	92.9
Age	96.1	86.0	94.9	93.1	96.2	94.1	92.2	89.4
Education	96.5	79.2	106.7	89.8	100.2	94.5	109.2	100.7
Work experience	108.1	91.7	109.7	86.1	104.5	105.1	100.2	99.0
Product of factors	106.1	45.5	118.5	50.1	103.0	89.3	105.7	82.8
Warranted median earnings (= U.S. median X product of adjustment factors)	\$ 7,588	3,254	3,235	1,368	7,367	6,387	2,886	2,260
Index of economic utilization (= real median earnings ÷ warranted)	87.1	112.7	102.1	112.6	88.4	88.0	79.3	86.8
Percent economic underutilization	12.9	—	—	—	11.6	12.0	20.7	13.2
Man equivalent years of economically unutilized labor	8,296	—	—	—	1,965	807	2,186	460

have as 100.0 the U. S. average urban cost of a "lower budget" for a family of four as reported by the Bureau of Labor Statistics, (BLS) of the United States Department of Labor, for the spring of 1970.³ These estimates are developed by BLS for specified metropolitan areas, and for four regions of the country for nonmetropolitan urban areas, which is defined as places of 2,500 to 50,000 population. For the most part we have used for our rural study areas the BLS index for nonmetropolitan areas for the appropriate region. In the instance of the Missouri and New Mexico areas, and the Zuni Reservation the broad regional indices for the North Central and West, respectively, were adjudged to be too high for these study groups. The numbers appearing in Table 15 have, therefore, been adjusted downward by three percent for Missouri, and seven percent for New Mexico and the Zuni Reservation.

As is indicated in the stub of Table 15, actual median earnings are divided by the index of the purchasing power of income to provide estimated real actual median earnings. The effect is to cause real actual medians to be higher than actual reported medians for all except the California area. The western region nonmetropolitan areas index, which is used for California, was 100 so actual and "real actual" are the same for this area.

For males in these rural areas "real actual median earnings" were lower than the national median earnings of \$7,152 for all groups. In the instance of black males they were from about \$3,500 to \$4,500 less than the national. In eight of the thirteen male population groups in Table 15 "warranted medians" were higher than "real actual medians" thus indicating some degree of economic underutilization.

The estimated extent of economic underutilization will be seen to range from highs of 34 percent for the Zuni Reservation and 26 percent for Missouri area males to a low of a nominal .7 percent for black males in the Alabama area. White males in Alabama, Arkansas, and North Carolina are shown to have underutilization rates of 19, 12, and 13, respectively. In the New Mexico area males of all races and white Spanish males each had rates of underutilization of about 12 percent.

There are five male population groups for which "real actual medians" exceeded the medians representing earnings equivalent to those obtaining in the country as a whole for persons of equivalent earning capacities ("warranted medians"), and for which, therefore, no underutilization is estimated. These groups are males of all races in Appalachia, white and all races in California, and black males in Arkansas, and North Carolina. It will be recalled that for no population group of males did "real median earnings" exceed the national median of \$7,152. For population groups in three areas, however, "warranted medians" were higher than the national. These are

³ Spring 1970 Cost Estimates for Urban Family Budgets, USDL-11-606, December, 1970.

white males in Alabama, and North Carolina, and males of all races in New Mexico. The obverse of this statistic, of course, is that the national median exceeds that "warranted" for ten of 13 male study population groups.

While no group of men in our rural study areas had "real" actual median earnings that exceeded national median earnings, for males, four of the 13 women population groups are shown to have "real" median earnings greater than the national median of \$2,730. The four are white women in Alabama, Arkansas, and North Carolina, and women of the Zuni Reservation. The women in these four populations had "real" median earnings ranging from a little over \$3,100 to \$3,600. The women of three other population groups (all races in Appalachia, Missouri and New Mexico) had "real" medians between \$2,200 and \$2,500. Five of the remaining six population groups had medians between \$1,500 and \$2,000. The final population group, black women in Arkansas, had "real" median earnings of only \$926.

With respect to "warranted" medians, eight of the 13 women population groups had earning characteristics that resulted in "warranted" median earnings larger than "real" actual medians. Thus, some degree of economic underutilization is estimated to exist for women in these eight population groups.

The estimated underutilization for white women in Alabama, and Arkansas is a quite moderate three percent. Women of all races and white women in California are each estimated to have about 16 percent rates of economic underutilization, while women in the Missouri area are underutilized at a rate of about 12 percent. The highest degree of underutilization found for women in our rural study areas is the 21 percent rate for women of all races in the New Mexico area. White Spanish women in New Mexico were underutilized by about 13 percent. The final area experiencing underutilization of women wage and salary workers is Appalachia. These women had, at 17 percent, the second most severe degree of economic underutilization.

There are five female population groups for which we estimate no economic underutilization, that is, these women are economically utilized as well or better than their counterparts in the economy as a whole who have comparable earning capacities. These groups are: black women in Alabama, Arkansas, and North Carolina; white women in North Carolina; and women of the Zuni Reservation.

City Comparison

Estimates of economic underutilization were developed for the low income enclaves of eight of the surveys of such enclaves for 51 cities included in the Census Survey of Employment. The data comparable to that for rural areas is presented in Table 16.

Table 16
Estimated economic utilization of all male and female wage and salary workers with work experience by race, 1970

Item	Birmingham, Alabama				Charlotte, North Carolina			
	Males		Females		Males		Females	
	White	Black	White	Black	White	Black	White	Black
Median earnings U.S. (All races)	\$ 7,152	7,152	2,730	2,730	7,152	7,125	2,730	2,730
Actual median earnings	\$ 6,494	4,724	3,308	1,788	5,942	4,869	4,001	2,431
Purchasing power of income factor (U. S. Urban = 100)	92	92	92	92	95	95	95	95
Real median earnings (= actual median ÷ purchasing power of income)	\$ 7,058	5,134	3,595	1,943	6,254	5,125	4,211	2,558
Number in group	9,642	18,760	7,357	17,786	3,413	11,343	3,028	12,078
Adjustment factors								
Occupation	103.3	83.8	102.0	71.5	102.1	72.1	111.8	75.5
Age	95.3	91.0	93.5	97.8	99.5	93.2	100.1	83.3
Education	95.2	85.0	72.5	91.6	89.1	86.0	94.4	89.6
Work experience	113.3	107.1	123.0	111.2	111.2	111.6	132.7	118.8
Product of factors	106.2	69.4	85.0	71.2	100.7	64.5	140.2	66.9
Warranted median earnings (= U.S. median X product of adjustment factor)	\$ 7,595	4,963	2,320	1,944	7,202	4,613	3,827	1,826
Index of economic utilization (= real median earnings ÷ warranted)	92.9	103.4	155.0	99.9	86.8	111.1	110.0	140.1
Percent economic underutilization	7.1	—	—	0.1	13.2	—	—	—
Man equivalent years of economically utilized labor	685	—	—	178	451	—	—	—

Item	Phoenix, Arizona				Oakland, California			
	Males		Females		Males		Females	
	White Spanish	Other White	White Spanish	Other White	Black	White	Black	White
Median earnings U.S. (All Races)	\$7,152	7,152	2,730	2,730	7,152	7,152	2,730	2,730
Actual median earnings	\$5,651	6,614	1,951	3,049	6,610	6,412	3,176	3,420
Purchasing power of income factor	100	100	100	100	110	110	110	110
Real median earnings (= actual median ÷ purchasing power of income)	\$5,651	6,614	1,951	3,049	6,009	5,829	2,887	3,109
Number in group	7,411	14,436	5,285	12,135	15,935	9,391	13,971	5,944
Adjustment factors								
Occupation	83.7	101.1	71.1	103.1	85.0	96.8	86.4	105.5
Age	87.5	94.1	84.6	92.3	94.7	96.0	97.0	92.4
Education	78.0	97.2	76.1	99.8	94.8	101.8	97.2	101.5
Work experience	107.5	106.0	87.5	112.8	99.0	105.8	99.3	115.8
Product of factors	61.4	98.0	40.1	107.1	75.5	100.1	80.9	114.6
Warranted median earnings (= U.S. median X product of adjustment factors)	\$4,391	7,009	1,095	2,924	5,400	7,159	2,209	3,129
Index of economic utilization (= real median earnings ÷ warranted	128.7	94.4	178.2	104.3	111.3	81.4	130.7	99.4
Percent economic underutilization	—	5.6	—	—	—	18.6	—	0.6
Man equivalent years of economically unutilized labor	—	808	—	—	—	1,747	—	357

Table 16—Continued

Item	New York City			New York City			Cincinnati, Ohio			
	Males			Females			Males			
	Black	White Spanish	Other White	Black	White Spanish	Other White	White	Black	White	Black
Median earnings U.S. (All races)	\$ 7,152	7,152	7,152	2,730	2,730	2,730	7,152	7,152	2,730	2,730
Actual median earnings	\$ 6,070	5,156	7,046	4,452	3,538	4,724	5,912	5,693	3,381	2,921
Purchasing power of income factors	103	103	103	103	103	103	95	95	95	95
Real median earnings (= actual median ÷ purchasing power of income)	\$ 5,893	5,006	6,841	4,322	3,435	4,586	6,223	5,992	3,558	3,074
Number in group	191,500	113,100	112,300	158,600	57,800	65,300	12,138	16,484	9,384	16,697
Adjustment factors										
Occupation	92.0	90.0	104.4	94.7	102.3	116.5	101.6	84.1	102.4	78.4
Age	109.1	96.9	102.9	99.9	93.1	98.2	96.2	97.8	90.5	97.0
Education	92.0	76.4	101.1	89.1	70.2	96.5	92.3	89.5	86.8	89.0
Work experience	115.1	112.1	113.6	135.8	124.5	131.3	109.7	110.3	120.3	123.1
Product of factors	106.3	74.7	123.4	114.5	83.2	145.0	99.0	81.2	96.8	83.3
Warranted median earnings (= U.S. median X product adjustment factors)	\$ 7,603	5,343	8,826	3,126	2,271	3,959	7,080	5,807	2,643	2,274
Index of economic utilization (= real median earnings ÷ warranted)	77.5	93.7	77.5	138.2	151.2	115.8	87.9	103.2	134.6	135.2
Percent economic underutilization	22.5	6.3	22.5	—	—	—	12.1	—	—	—
Man equivalent years of economically unutilized labor	43,088	7,125	25,268	—	—	—	1,469	—	—	—

Item	St. Louis, Missouri				Memphis, Tennessee			
	Males		Females		Males		Females	
	White	Black	White	Black	All races	Black	All races	Black
Median earnings U.S. (All Races)	\$ 7,152	7,152	2,730	2,730	7,152	7,152	2,730	2,730
Actual median earnings	\$ 6,062	5,276	3,646	2,800	4,769	4,611	2,398	2,247
Purchasing power of income factor	100	100	100	100	92	92	92	92
(U.S. Urban = 100)								
Real median earnings (= actual median ÷ purchasing power of income)	\$ 6,062	5,276	3,646	2,800	5,183	5,011	2,606	2,442
Number in group	16,695	36,340	11,870	35,538	41,377	35,055	39,784	33,051
Adjustment factors								
Occupation	95.1	85.7	108.3	84.5	88.1	84.8	81.7	74.5
Age	98.9	96.4	93.3	96.2	94.1	94.0	96.6	98.1
Education	83.3	87.5	82.4	88.9	85.9	82.6	90.0	86.3
Work experience	107.5	106.2	125.8	119.1	108.6	109.0	120.0	117.7
Product of factors	84.2	76.8	104.7	86.1	77.3	71.8	85.2	74.2
Warranted median earnings (= U.S. median X product of adjustment factors)	\$ 6,022	5,493	2,858	2,351	5,528	5,135	2,326	2,026
Index of economic utilization (= real median earnings ÷ warranted)	100.7	96.0	127.6	119.1	93.8	97.6	112.0	120.5
Percent economic underutilization	—	4.0	—	—	6.2	2.4	—	—
Man equivalent years of economically unutilized labor	—	1,454	—	—	2,565	841	—	—

The purchasing power of income index was derived from the same source as indicated for rural areas. In the instance of our eight cities BLS indices were directly available for Cincinnati, New York City, Oakland and St. Louis. Indices for the other four cities were estimated. In making the estimates consideration was given to index levels available for any nearby cities, and to the general relationship between metropolitan and nonmetropolitan urban indexes for the region in which the city is located.

For males it appears that the overall extent of economic underutilization in the low income sections of cities is roughly comparable to that prevailing for men in rural areas. For example, 11 of the 17 separately identified city male population groups are found to have some degree of economic underutilization. In the instance of rural men eight of 13 population groups had some underutilization. Thus, about 65 percent of city and 62 percent of rural male population groups have real median earnings lower than those prevailing in the economy as a whole for persons having comparable earning capacities.

The extent of economic underutilization among city males is, overall, somewhat less severe than that for rural males. Some city groups, however, exhibit high rates. For example, New York City black males, and white males other than Spanish each have economic underutilization rates of 22.5 percent, and white males in Oakland experienced underutilization of almost 19 percent.

The underutilization picture for city female population groups is altogether different from that for city males, rural males, and rural females. For all practical purposes our data indicate that there is no economic underutilization for any of the 17 city female population groups of our eight comparison cities. The lowest indexes of economic utilization found among these 17 women population groups are 99.4 for white women in Oakland, and 99.9 for black women in Birmingham.

Subemployment Index

We have now examined four different measures or indicators of manpower utilization in our low income rural study areas. The four are unemployment, involuntary part-time schedules, hidden unemployment or discouraged workers, and economic underutilization. Each is an important facet of the overall picture, but only a facet. There is needed a measurement which can combine all four into a general social indicator of manpower utilization. The construction of such a measure is attempted in presenting the data of Table 17. The new resulting number is called a "subemployment index." The numbers underlying each of the four individual measures previously presented are expressed as a percentage of the adjusted civilian labor

Table 17
Subemployment index with component parts for low-income rural areas included in Census Employment Survey, with comparisons to United States, 1970

Area and race	% Male					% Female				
	Unem- ployment	Invol- untary parttime	Discour- aged workers	Economic underuti- lization	Subem- ployment index	Unem- ployment	Invol- untary parttime	Discour- aged workers	Economic underuti- lization	Subem- ployment index
Alabama:										
All races	3.4	4.8	0.8	NA	NA	7.1	8.8	3.8	NA	NA
White	2.1	3.3	0.7	15.2	21.3	5.1	6.1	1.6	2.8	15.6
Black	5.1	6.8	0.8	0.7	13.4	8.9	11.3	5.9	0.0	17.2
Appalachia:										
All races	5.8	3.6	2.2	0.0	11.6	8.4	4.3	13.0	15.5	41.2
Arkansas:										
All races	4.1	3.4	0.4	N	NA	7.7	6.7	5.5	NA	NA
White	2.3	1.6	0.1	8.9	12.9	4.6	3.8	2.4	2.5	14.3
Black	8.0	7.3	1.3	0.0	16.6	10.6	11.1	10.7	0.0	31.8
California:										
All races	9.3	5.2	0.7	0.0	15.2	9.1	8.8	3.6	17.0	38.5
Missouri:										
All races	5.7	5.0	0.7	17.4	28.8	7.5	9.9	7.7	10.3	35.4
New Mexico:										
All races	7.7	3.3	2.6	10.1	23.7	6.4	5.8	8.3	19.7	40.2
North Carolina:										
All races	3.8	6.1	0.5	NA	NA	8.7	7.2	3.1	NA	NA
White	2.8	4.0	0.3	7.5	14.6	7.1	5.1	2.0	0.0	14.2
Black	6.0	11.7	1.1	0.0	18.8	11.1	11.9	5.8	0.0	28.8
Zuni Reservation:										
All races	2.8	1.8	1.3	21.2	27.1	2.0	0.9	1.3	0.0	4.2
United States:										
All races	4.9	2.2	0.3	0.0	7.4	6.2	3.1	0.9	0.0	10.3
White	4.5	NA	0.3	NA	NA	5.6	NA	0.8	NA	NA
Black	7.7	NA	0.7	NA	NA	9.5	NA	1.5	NA	NA

Sources: For Study areas, Census Employment Survey, Vol. PHC(3)-74. For the U.S. Handbook of Labor Statistics, USDL Bulletin 1705, and "Monthly Labor Review," March, 1973.

force (regular civilian labor force plus the number of discouraged workers). The percentages for the four measures are then summed to give a sub-employment index. The number used to obtain the percent for economic underutilization is found on the final line of Table 15, where it is called "man equivalent years of economically unutilized labor." This number is expressed as a percentage of the adjusted civilian labor force.

In order to provide a base for judging the significance of the sub-employment indices that are developed, a comparable index for males and females of all races has been constructed for the United States. Data are not available that permits development of a national subemployment index for racial groups.

The fact will be observed that economic underutilization is not shown for the U. S. index. This, of course, is because all races for the U. S. is the norm used for calculating the index of economic utilization for area sex groups. The U. S. index of economic utilization is, therefore, by definition, equal to 100.0 and there can be no national underutilization.

For males the national subemployment index is 7.4 the lowest index among our study areas males is 11.6 for Appalachia. This is more than 50 percent higher than the national. The Missouri area males with 28.8 has the highest index of subemployment.

The fact should be noted that not only is the subemployment index for each male group in our study areas much higher than the national norm, but also that each component of the index for each area male group is much larger than its national counterpart.

The picture revealed for women is essentially the same as that just sketched for men. For all but two area groups the subemployment index for women is substantially higher than for men. The two exceptions are white women in North Carolina and women of the Zuni Reservation. The Zuni women with a subemployment index of 4.2, less than half the national norm, are the only group of either sex to have an index smaller than the national norm, which in the instance of women is 10.3. In Appalachia and New Mexico the subemployment index for women is shown to be more than 40 percent, and in California and Missouri it exceeds 35.

Chapter 5

CONCLUSIONS AND IMPLICATIONS FOR DEVELOPMENT

Conclusions

The preceding chapters of this report have developed various measures indicative of: (1) development need; and (2) the nature of manpower utilization in our study areas with some comparisons to data for low income sections of selected large cities. In this chapter we examine the conclusions and their implications for development of rural areas that arise from the information that has been developed. These conclusions and implications are organized into five parts: (1) indications of need for development in the rural study areas; (2) the potential for development in the study areas and in rural areas (3) indications of racial discrimination in the job market; (4) manpower development policies and programs; and (5) the economic implications for potential employers in the rural study areas.

The information we have developed portrays a group of rural areas having per capita incomes in 1969 that range from 45 to about 21 percent below the national per capita income of \$3,139. Only California of the seven study areas, (the Zuni Reservation is included with the New Mexico counties in per capita income calculations), had a per capita income as high as 79 percent of the national. Among the other six areas three had incomes per person between 50 and 60 percent of the national; the other three had per capita incomes dispersed rather closely around 65 percent of the U. S. income per person.

The data for the incidence of families with incomes below socially acceptable thresholds also indicate a group of areas with rather severe income problems. All areas have substantially larger percentages of low income families than the average for the country. These two income indicators suggest that the study areas are badly in need of economic development which will permit increased earnings.

The previous analysis of per capita income changes from 1959 to 1969 as related to population changes from 1950 to 1970, uncovered four individual counties that had lost population for the last two decades, and had seen their per capita incomes decline as percentages of the national during the decade from 1959 to 1969. These counties are located in the Appalachia, Arkansas, and Missouri study areas. Each of these areas, as a whole, experienced increases in per capita incomes from 1959 to 1969 that were substantially above the national average.

This situation points to the possibility for these four counties of a different type of development problem. Their situation may be that more and better paying jobs are not in prospect, and that innovative social action is indicated to at least cushion the continuing erosion of assets of the people in these counties.

A further indication of needed development policies not directly related to industrialization is afforded by the data which were developed concerning the availability of health facilities and personnel and expenditures per capita for public elementary and secondary education.

Only the New Mexico area has half as many physicians per 10,000 people as the U. S. average. The others range from 35 to 45 percent of the national average. The same general picture prevails with respect to the availability of dentists, nurses and pharmacists. Except for the Appalachian area, (which has about the same national average) hospital beds per 1,000 people are substantially below the national average in the rural study areas.

Per capita expenditures for elementary and secondary education are well below the national average in most areas. In the California and New Mexico areas expenditures exceed the national norm and in Missouri they are 96 percent.

All of the study areas are thus indicated to be in need of development activities to substantially improve the availability of professional health personnel and all but one needs development of improved hospital facilities. To the extent that expenditures per capita can be used as a guide to the relative quality of educational services, it appears that four of seven areas need development activity aimed at upgrading the quality of their elementary and secondary educational services.

A final indication of need for development is provided by the subemployment indices developed for the study areas. These indices, which include unemployment, hidden unemployment, involuntary part-time workers, and economic underutilization, are taken as indications of need for development policies and programs designed to provide increased and better paying employment opportunities.

Only one population group among the 26 for which subemployment rates were developed had a rate smaller than the United States average. This group is the women of the Zuni Reservation. The other groups, both men and women, exhibit rates of subemployment that are from 50 percent to 400 percent higher than the U. S. average. Subemployment is generally much more severe for women than for men. The rates for men, however, range from a low of 11.6 to 29 percent. The national average for men is 7.4 percent.

Some analysts have looked at rural-urban income differentials and

changes over time, and population change data, and reached the gloomy conclusion that in general, rural areas have little prospect of effective development in either the narrower sense of industrialization, or in the broader concept of increasing employment while improving the quality of services and facilities.

The data developed in this study do not support such conclusions. One of the principal reasons such conclusions are sometimes reached is that income differentials and changes over time are analyzed mainly in absolute terms rather than in terms of proportional change.

In a large, complex and diverse overall economy such as the United States, it is highly improbable that all areas and regions and economic activity sectors will ever have precisely equal incomes even after logical adjustments for the quality of income earning resources, and the relative purchasing power of income are made. If, therefore, relatively low income areas, activity sectors or population groups of the economy experience overtime, increases in income that are significantly larger, in percentage terms, than those obtaining for the economy as a whole, progress is being made. It is suggested that only in Keynesian sense of "long-run" ("when we shall all be dead") is it practicable to expect low income areas to completely overtake the higher areas.

To worry, therefore, because absolute income increases overtime are larger in high income area or sectors than those for low income areas, and to calculate the extent to which absolute differentials have increased overtime, despite larger proportional increases for low income areas or sectors, is, from the standpoint of evaluating developmental progress or potential, functionally irrelevant.

Changes in per capita income for our rural study areas between 1959 and 1969 reveal that five of the seven areas increased incomes substantially more than the 70 percent national increase. The two remaining areas, California and New Mexico, attained increases in per capita income that were seven and five percent, respectively, less than the national rate of increase. The estimated purchasing power of income factor (the relative cost of living) for the New Mexico area is .93. If the 94.8 percent of the U.S. change in per capita income is divided by .93, the result is an estimate that in "real" terms per capita income for the New Mexico area increased during the decade by 102 percent of the national increase.

This same adjustment would also increase the percentage margin over the U. S. for all other areas except California. The California area is estimated to have a relative cost of living factor of 100.0, equal to the U. S. average. Adjustment to "real" terms would not, therefore, for this area influence estimates of change overtime for per capita income relative to national change.

The data on relative change in per capita income suggests, therefore, that in five of our rural study areas that approximately doubled their incomes per person during the period 1959 to 1969, (compared to a 70 percent national increase) effective development progress was occurring.

The two (2) California counties definitely lost ground during the decade. Some question is raised with respect to its development potential using only historical income change data. The four counties comprising the New Mexico area did not lose ground per capita income-wise when expressed in "real" terms. Their gain was, however, quite nominal—not an encouraging performance for an area starting the decade at 30 percent below the national income per person level.

The information developed on changes in broad employment categories between 1962 and 1970 offers encouraging evidence for the development potential of our rural study areas. The most relevant data concerns the percentage increases in nonfarm employment that were attained by these rural areas during the period 1962–70.

For this period the U. S. increase was 22 percent. Only the Appalachian area which experienced an increase of nine percent failed to materially exceed the U. S. percentage gain in nonfarm employment. The significance of the relatively low percent increases in Appalachia is moderated considerably by the fact that the area had a population loss of 17 percent between 1960 and 1970.

In the California and New Mexico areas where per capita income change experience was not encouraging, increases in nonfarm employment were 31 and 26 percent respectively—well above the national average in each instance.

The Alabama, Arkansas, and Missouri areas each realized gains of almost one-third in nonfarm employment.

The North Carolina area, with an increase of 58 percent, substantially more than doubled the national average. These data suggest that our study areas have been making progress in obtaining new employment opportunities at better than national average rates. They certainly indicate that these areas have an encouraging potential for continuing development of new employment opportunities.

The industrial composition of employment in our rural study areas is believed to be generally supportive of potential for increasing employment opportunities and earnings.

In five of the seven areas the industrial mix for males results in an estimated index of industrial quality that is equal to or greater than the United States average. The Arkansas and California areas, with heavy con-

centrations of males employed in agriculture, forestry and fisheries, have indices of industrial quality of 87. Other data shows, however, that between 1962 and 1970 farm employment as a percent of total employment declined by 40 percent in the Arkansas area. The comparable decline was 13 percent for California. These latter data suggest that the industrial quality mix for Arkansas and California area males has been improving in the recent past.

In the instance of women, the industrial quality composition also suggest a good potential for increased employment and earnings opportunities. The indexes for all the study areas are at or near the national average.

There is a considerable body of literature comparing and endeavoring to explain rural-urban income differentials which is relevant to this examination of the development potential of our study areas and of rural areas generally. Much of it stems from an insightful article by T. W. Schultz entitled "Reflections on Poverty Within Agriculture" published in *The Journal of Political Economy* in February 1950. The two most comprehensive efforts at empirical verification of the general theme sketched by Schultz are probably W. Keith Bryant's unpublished Ph.D. thesis (Michigan State University, 1963), which is entitled, "An Analysis of Intercommunity Income Differentials in Agriculture," and the 1960 Census Monogram, "People of Rural America" by Dale E. Hathaway, J. Allan Beegle and W. Keith Bryant.

The overall hypothesis, which these analysts have generally accepted, despite sometimes mixed empirically derived indications, is that the labor market performs significantly more efficiently at or near the center of large urban industrial complexes. If this is a fact there is less than bright potential for improving relative earnings in most rural areas.

The data on relative economic utilization of manpower for rural areas and cities which was developed in this study can be used to examine the validity of this hypothesis for these areas. It is suggested a reasonable test of labor market efficiency is the extent to which, in a given market, various population groups are economically utilized in such manner that the real median earnings they attain are equivalent to or better than the median earnings obtainable for persons in the economy as a whole who have comparable income earning capacities.

When this test is applied for males in our eight rural study areas and the eight comparison large cities, it is found that in the cities 11 population groups experienced economic underutilization. This is 64 percent of the 17 male population groups analyzed for these eight cities. In the instance of the rural areas, 13 male population groups are identified. Eight or 61 percent of these were found to have economic underutilization.

These facts are interpreted to mean that the labor market is working at

least as efficiently for males in the rural areas studied here as it is in the central cities of the eight large cities used for comparison. It is also suggested that this relative efficiency of labor market performance argues well for the potential of these rural areas to improve relative earnings overtime.

When the same test of labor market efficiency is applied to women wage and salary workers in the rural areas and the cities, the results indicate that for women the labor market is performing more efficiently in the cities than in rural areas. Sixty-one percent of (8 of 13) rural women population groups experienced economic underutilization, while only four (24 percent) of 17 city women population groups failed to have real median earnings as large or larger than those obtaining in the county as a whole for persons of comparable earning capacity. These facts probably indicate that cities tend to generate a greater employment demand for jobs usually employing women than do rural areas. As women, overtime, obtain access to wider varieties of occupations and industries, the relative efficiency of the labor market for women in rural areas should improve.

Since all the rural areas except California have purchasing power of income that is greater than the U. S. average the increases in educational expenditures vis a vis the national average would be yet greater in "real" terms. The purchasing power of income in the California area is the same as the national average.

Over the past several years most available statistics indicate that progress has been made in ameliorating racial discrimination in the job market. The past effects of policies that confined some groups to the bottom rungs of some occupational ladders, and excluded them entirely from other occupations will, however, be seen in statistics for a long time. Some of the information developed in this study suggests the continuing effects of past job discrimination and social neglect in the education of blacks in southern areas.

Separate data were developed for blacks in the Alabama, Arkansas and North Carolina areas. These data show that both black men and women have substantially lower median earnings than their white counterparts. Black medians are for the most part only about 50 to 60 percent as large as those for whites. Our analysis does not, however, anticipate equal earnings medians for all population groups. It rather has endeavored to determine whether each group was attaining real median earnings equivalent to those obtaining for persons of comparable earning capacity in the economy as a whole. To do this "warranted" median earnings were calculated. These warranted medians were obtained by multiplying national median earnings of each sex by our estimated index of overall earning capacity. This index of overall earning capacity, it will be recalled, is the product of indices for educational attainment, occupational structure, age structure,

and work experience (weeks worked distributions). The "warranted" medians that evolved for blacks were, except for Alabama males, lower than the very low actual medians. In the instance of black men in Alabama the "warranted" and "real" actual medians were virtually the same.

On the basis of these facts a superficial conclusion would be that no job market discrimination exists, because our data indicate they are utilized as effectively as are persons of comparable earning capacity in the nation at large. Such a conclusion would be based on an implicit assumption that access to occupations and to full-time work experience was available to blacks without discrimination.

Some of our data appears to bring the validity of such an assumption sharply into question. Let us first consider the relationships between the index of industrial quality (which is for all races) and indices of occupational quality for blacks and whites. There is, of course, no reason to expect perfect correlation, but the results for blacks and whites in our three are interesting. For white males in Alabama, Arkansas and North Carolina, occupational indices are sharply higher than the area indices for industrial quality. For black males in the same three areas, occupational indices are even more sharply lower than the relevant industrial quality index. Precisely the same situation prevails for white and black women in the three areas.

As a comparison we can look at the relationship between industrial quality and occupation indices for all races in the Appalachia, California and Missouri areas. The population of each of these areas is preponderantly white. For males in Appalachia the industry index is substantially higher than that for occupations; in the Missouri area the industry index is moderately higher and for California males the indices are practically the same. In the instance of women the two indices are virtually identical for Appalachia and California and the occupational index is moderately lower in the Missouri area.

These facts are believed to suggest that both black men and women in the Alabama, Arkansas and North Carolina areas have in the past been restricted to lower rungs of those occupations to which they were admitted.

A further indication of possible job discrimination against blacks may be found by analyzing the relationships between educational and occupational indices for whites and blacks, because it seems reasonable to assume that there should be some consistent relationship between these two individual indexes.

For white males in Alabama and North Carolina the educational index is 97.4 and 95.6, respectively, while the occupational indices are considerably higher at 108.9 and 105.6. The two indexes are more nearly equal in

Arkansas, but the occupational measure at 98.0 still exceeds the educational index which is 95.7.

The educational indexes are relatively low for black men. They are 74.7, 69.0 and 79.2 for Alabama, Arkansas and North Carolina, respectively, while the occupational indices are considerably higher at 108.9 and 105.6. The two indexes are more nearly equal in Arkansas, but the occupational measure at 98.0 still exceeds the educational index which is 95.7.

The situation among white women in the three areas is not greatly different from that for white men. The women have higher educational indexes and generally somewhat higher indices for occupational structure.

Black women exhibit more striking differences between educational and occupational indexes than do the men, but there are the same type of differences—the educational consistently and markedly higher than the occupational index.

The consistent pattern of blacks having occupational indices lower than their educational, while for whites the reverse is true, does not *prove* that this results from job discrimination, but it raises a serious question about its existence. Taken alone, the low levels of educational attainment of blacks compared to whites highlights past social neglect of this minority group.

An indication that job discrimination is not confined to rural areas, or to the South can be found by considering, briefly, the relationships between educational and occupational indices for our comparison cities.

In Cincinnati and Charlotte the educational quality index for black males is only slightly below that of white males, but for Charlotte, the occupational index of black males is 30 points below that for whites, and in Cincinnati it is seven points lower for Negroes. For Oakland there is a seven point spread in favor of white males in educational attainment, but a 12 point differential in the same direction for the occupational index.

The same sort of situation is found in St. Louis. Here black males have a slightly higher educational attainment index, but have a nine point lower occupational index than do whites.

In New York City and Phoenix, Arizona, on the other hand, there will seem to be a rough equivalency among male racial groups in the point divergences between the educational and occupational indexes.

The same situation exists for black women as that just discussed for black men with respect to extreme divergences between the occupational and educational indexes as between whites and blacks in cities.

In Cincinnati black women have a higher educational index than whites, but they have a 24 point lower occupational index. In Oakland, black women

have an occupational index 19 points lower than whites, but show an educational index of four points higher. In St. Louis the situation is similar. Blacks have a six point higher educational index and a 24 point lower occupational index. In Charlotte the situation is also distributing. Here black women have a five point lower educational index and a 36 point lower occupational index than do whites. These facts do not, of course, prove job discrimination in these labor markets. They do raise questions worth investigating.

The work experience index is one that can also be affected by job discrimination against blacks, for if blacks are discriminated against with respect to occupations, they would likely be much more than proportionally represented in the more casual types of jobs and those that are the first to be dispensed with if there is a cutback in production or business activity.

A comparison of white and black work experience indices for the rural study areas reveals that whites uniformly have higher work experience indices than do blacks. In Alabama the work experience for white men is 14 points above that for blacks, while in Arkansas there is a 24 point spread in favor of white males. Black men in North Carolina have a work experience index 16 points below that of whites.

Both white and black women in Alabama have work experience indices above 100.0, but the white index is 15 points higher than that for black women. In the Arkansas area white women have a work experience index of 111 while that for blacks, at 80, is 31 points lower. The situation in North Carolina is only moderately less extreme. The index for white women is about 110 while that for blacks is 86. It thus appears that there is a substantial probability that both black men and women are discriminated against in ways which lead to relatively low work experience indices.

These data, taken in conjunction with information indicating discrimination leading to unjustifiably low occupation indices, suggest that the overall indices of earning capacity for blacks in the study area are substantially lower than would be the case in the absence of job discrimination. Higher indices of overall earning capacity would probably give a truer indication of the overall quality of the black labor forces. It might also result in estimates of economic underutilization for some or all black population groups.

Implications:

By far the most important implication of the manpower utilization data developed in this report is that these rural study areas need more and better employment opportunities. The nature of this manpower utilization information that should encourage employers to locate employment opportunities in these and similar rural areas is discussed in the following pages.

There is to be found in our data, however, implications of need for manpower development programs and policies. Such programs and policies are, of course, meaningful only within a context that includes employment opportunities for the upgraded skills that are developed.

The educational, occupational and work experience status of blacks in the Alabama, Arkansas and North Carolina areas suggest need for job oriented training for better employment opportunities. With respect to blacks, continued and stepped up programs to eliminate discrimination in the job market are probably the most urgently needed manpower development policy.

Male wage and salary workers in the California area appear to be another specific population group that would benefit from job oriented training programs to upgrade their skills.

The relatively large percentages of total nonfarm employment found among the self-employed and nonpaid family workers for each of the study areas, probably indicates a need for skill development training in all the areas included in this study.

Potential employers are concerned, minimally, with the quantity, quality and relative cost of labor for their enterprises. The data developed in this report are believed to contain some important implications concerning these aspects of available manpower that should encourage employers to locate economic activities in these and similar areas of the country.

The quantity of labor that would be available in each of these areas for new employment opportunities is significantly larger than labor force statistics will indicate, because there exists in each of them a considerable number of discouraged workers who have withdrawn from the labor force. The percentages of discouraged workers in these areas are from about double to more than 10 times the percentage for the country as a whole.

Two other indications that labor for potential employers would be relatively plentiful in these areas are to be found in: (1) the much higher than national average percentages of wage and salary workers in the study areas who are involuntarily working part-time; and (2) the higher than national average percentages of all nonfarm employed persons who are unpaid family workers or who are self-employed. Substantial numbers of persons in this latter category are usually readily drawn to wage and salary opportunities.

The indications of labor quality that have been developed suggest that white males in the Alabama, Arkansas and North Carolina areas, and males of all races in the New Mexico area have earning capacities either about equal or superior to the average for the nation. The Appalachian, Missouri, and Zuni Reservation males have overall indices of earning capacity ranging from 82 to 91 percent of the national average. The index for California males is 77 percent of the national.

In the instance of women wage and salary workers, overall earning capacity indices indicate that white women in Alabama, Arkansas and North Carolina and women of all races in the Appalachia and Missouri areas have earning capacity indexes virtually equivalent to the national average. The women of the Zuni Reservation have an earning capacity index of about 91. While as was the case with males, the California women of all races had the lowest indicated earning capacity of any group thus far considered, their index of earning capacity is 78.

The relative quality of labor in the black population groups has not been discussed to this point, because, as indicated in the discussion of racial discrimination, it is believed that our indices of overall earning capacity for blacks tends to understate the quality of these labor forces. Even if it were possible to correct for the influence of discrimination on the individual occupation and work experience index components of the overall indices of earning capacity for black men and women, the overall indices would still be relatively low. Since, however, real median earnings of these black groups are also quite low, these people may still be economically attractive to potential employers.

For an employer not requiring for some operations a high level of formal education, and who can and will eschew racial discrimination, the employment of black men and women in the Alabama, Arkansas and North Carolina areas may represent a real bargain. The real median earnings of these groups are generally 40 to 50 percent below the national medians for men and women.

It is reasonable to suppose that an employer could offer wages significantly above those now prevailing for these people, which would represent an important improvement in their income positions, and still have wage costs well below the average of those prevailing in the country as a whole.

In the instance of white males in the Alabama, Arkansas and North Carolina areas and of men of all races in the New Mexico areas, employers would find labor quality on the whole well above the national average. The actual median earnings for these groups is from \$1,100 to \$1,700 less than the national median for males. In these situations it would appear that potential employers could obtain high quality workers at less than national average wage costs.

For men in the Missouri and Zuni Reservation areas actual median earnings are, respectively, 61 and 55 percent of the national median for men. These men are, however, indicated to have overall indices of earning capacity that are about 90 percent of the U. S. average. This sort of spread should allow both workers and employers to achieve significant economic benefits from the creation of new employment opportunities.

Men in the Appalachia and California areas have actual median earnings that are about \$1,100 and \$1,200, respectively, lower than the median for all men in the country. Their indicated index of earning capacity results in estimated "warranted medians" that are slightly less than their actuals.

In the instance of the men of these areas it does not appear that potential employers would have an economic bonus to split with workers. Such employers could, however, find a fairly high quality labor force at wage rates about equal to the national average for persons of comparable capacity.

There appears to exist in the cases of women wage and salary workers in the Appalachia, Missouri and New Mexico areas situations where workers and potential employers could share a bonus from the creation of new employment opportunities. The quality of the female labor force in all these areas is about equal to or a little better than the U. S. average, but actual median earnings are substantially below the national median for women. New employers can obtain a superior quality of workers for less than national average wage costs by offering increases over the average rates now in existence.

The basic economic incentive for potential employers is present also with respect to women in the California areas. These women do not have as high an earning capacity index as those of the areas discussed above. Their index is, however, estimated to be 85 percent of the national average. The actual median earnings of these women, though, is only 66 percent of the median for all women in the country. Offering employment opportunities which would produce median earnings somewhere between these two percentages of the national median would be economically beneficial to both workers and employers.

For white women in the Alabama, Arkansas and North Carolina areas, and for women of the Zuni Reservation actual median earnings exceed the national median for women. There is not, for these areas, a relative labor cost incentive for potential employers of women. If, however, location with respect to markets or production related resources point to these areas, an employer could expect to find high quality women workers at about the national average wage cost for persons of comparable earning capacity.

In summary, these rural study areas, all of which badly need increased employment opportunities, are believed to have rather good prospects to attract new enterprises, considering both their recent past performance and the characteristics and relative costs of manpower available to prospective employers. It is an acceptable fact that in most developing countries the data necessary to calculate economic manpower utilization are not readily available. However, the author's domestic and international economic development experiences lead us to the conclusion that the technique advanced in this report and summarized below could serve as a useful research tool in

helping plan and design programs to fulfill the logical needs of people and particularly the elementary requirements of the lowest income groups in developing countries.

APPENDICIES

I. Procedure for Calculating Relative Economic Utilization

The basic concept underlying development of an index of economic utilization for wage and salary workers is to provide a quantitative measure of the extent to which wage and salary workers of a study population are utilized in a manner resulting in their attaining median earnings equivalent to those obtaining for persons having comparable earning capacities in some larger population which is taken as a norm. In this study, all men and women wage and salary workers in the nation are the larger populations taken as norms.

The basic computational task is to develop an estimate of the median earnings which would prevail for a study population if they received the same remuneration as persons of the same sex and equivalent earning capacities received in the nation as a whole. We refer to this estimated median as the "warranted" median earnings.

This "warranted" median earnings is then expressed as a percentage of the "real" actual median earnings of the study population group. This percentage becomes our index of economic utilization.

Since actual median earnings are available for each study population group from the Census Employment Survey and national median earnings are available from Current Population Survey data of the Census Bureau, the crux of the computational process is development of "warranted" medians.

This process starts with choosing factors that can logically be thought to influence the earning capacities of wage and salary workers and for which necessary data are available. For this study four such factors were chosen: (1) level of educational attainment; (2) age structure; (3) occupational structure; and (4) work experience (number of weeks worked).

For each of these factors three bits of basic data are necessary (1) numerical or percent distributions for each study population; (2) such distributions for wage and salary workers of each sex at the national level; and (3) national median earnings for each sex for each component of each distribution.

For example, in the instance of the educational attainment factor we have numerical and national median earnings data for persons who have completed: less than eight years of school; eight years; nine to eleven years; twelve years; and thirteen years or more.

For each study population the percent of persons having each of these levels of educational attainment is multiplied by the national median earnings, for the relevant sex of persons having the same educational level. The resulting five products are added.

At the national level for each sex exactly the same procedure is employed to obtain a sum of the products of percents with each level of education multiplied by national earnings for the appropriate educational level.

The sum for each study population is then divided by the national sum for the relevant sex. The resulting percentage is taken as an indication of the percentage of national median earnings that are “warranted” for the study population considering the level of educational attainment alone. It may be referred to as an economic index of educational attainment.

Precisely the same computational procedure is used to develop economic indexes for each of the other three earning capacity influencing factors—age structure, occupational structure, and work experience (weeks worked distribution).

When the four indexes are developed a product is obtained ($1 \times 2 \times 3 \times 4$). This product of indices is an overall index of the relative earning capacity of a specific study population. It indicates the percentage of the national median earnings for the relevant sex that is estimated as “warranted” considering the combined influence on earning capacity of all four factors.

This product of factors, or overall index of earning capacity is multiplied by the national median earnings figure for the relevant sex to produce our estimate of “warranted median earnings” for each study population group.

As stated above, “warranted median earnings” is then divided by “real” actual median earnings to obtain an index of economic utilization. An index of less than 100 indicates economic underutilization, the degree of underutilization is indicated by the extent to which the index of economic utilization is less than 100. An index of economic utilization of 100 or more indicates that the particular study population is utilized as or more effectively than persons of comparable earning capacity in the nation as a whole.

II. Maps of Selected States and Counties

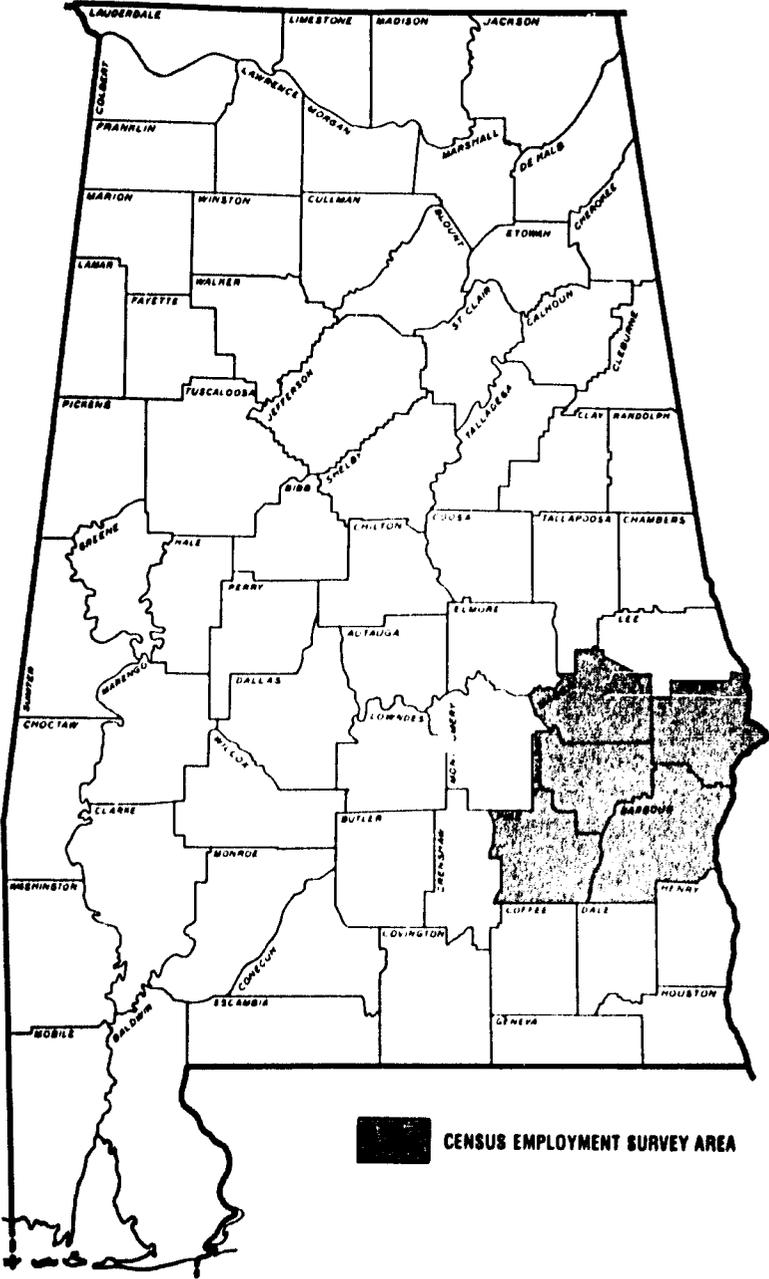


Figure 1—ALABAMA

Figure 3—ARKANSAS

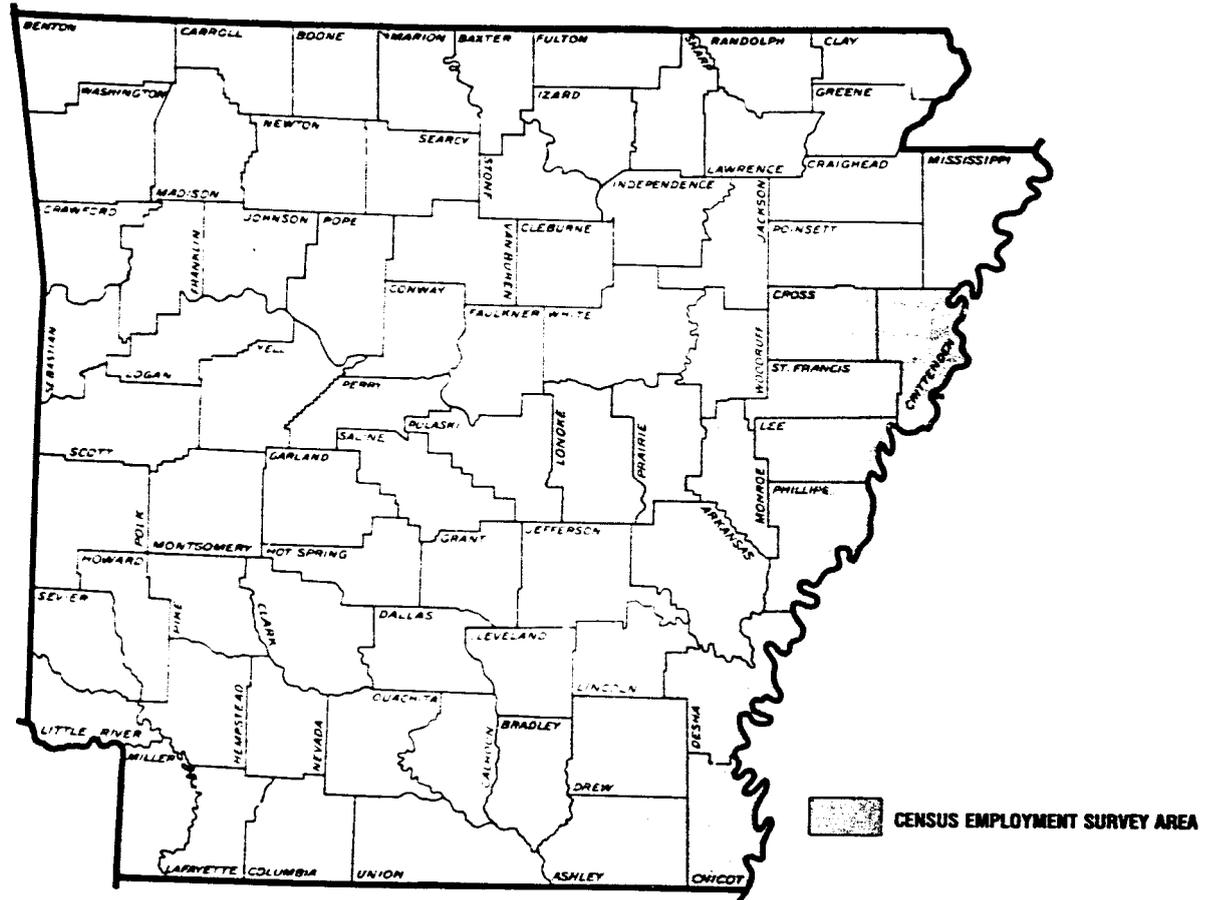
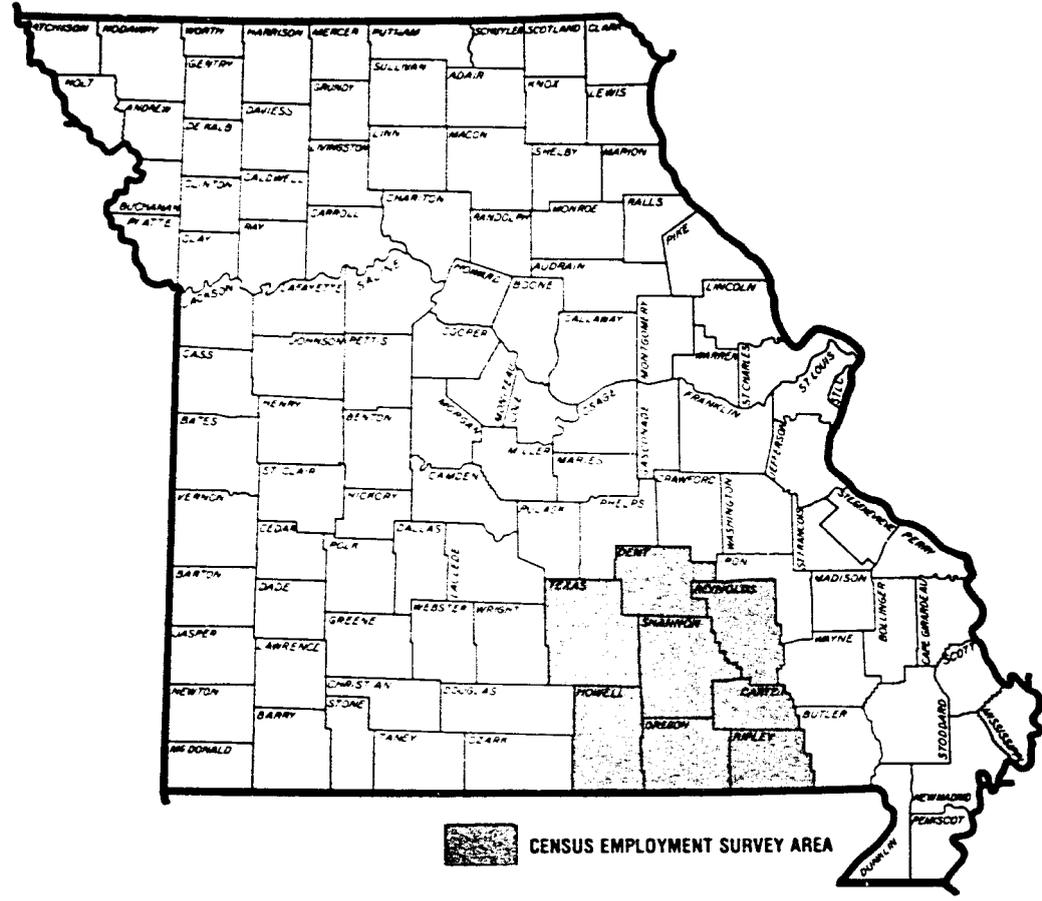




Figure 4—CALIFORNIA

66
Figure 5—MISSOURI



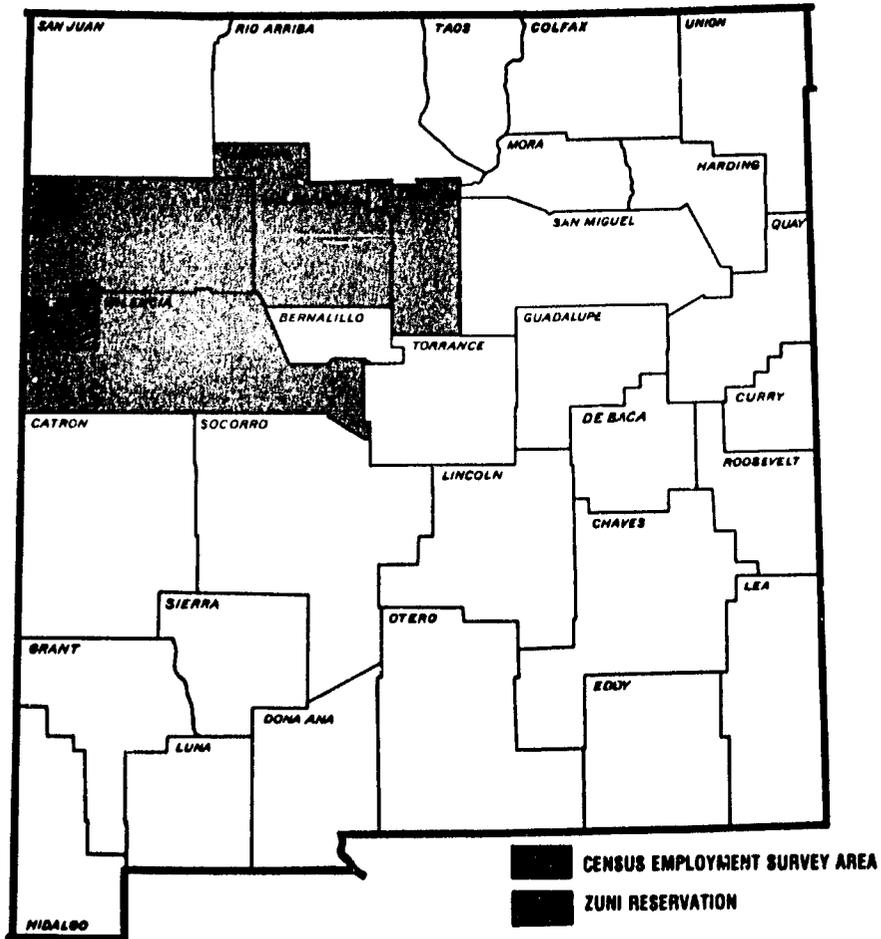
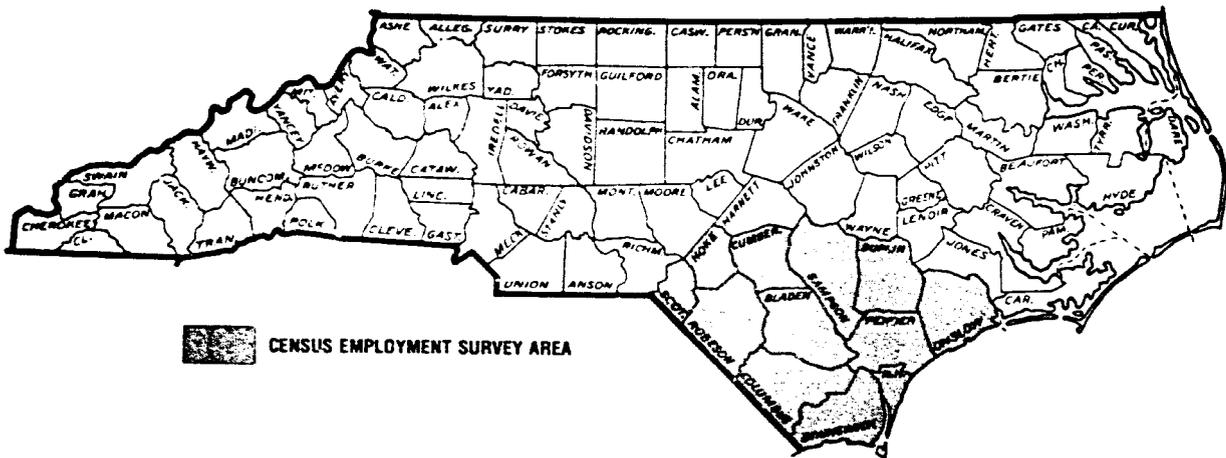


Figure 6—NEW MEXICO

Figure 7—NORTH CAROLINA



III. Tables

Table 1
Percentage distribution of wage and salary workers by major industry group, by sex all races rural Census
Employment Survey areas and the United States, 1970

Industry	U.S.	Alabama		Appalachia		Arkansas	
	Pct.	Pct. dis- tribution	Relative to U.S.	Pct. dis- tribution	Relative to U.S.	Pct. dis- tribution	Relative to U.S.
MALES	100.0	100.0		100.0		99.9	
Agriculture, forestry, and fisheries	6.7	6.3	94.0	0.5	7.5	22.3	332.8
Mining	1.0	0.7	70.0	44.9	4490.0	0.1	10.0
Construction	9.7	10.4	107.2	6.3	64.9	7.8	80.4
Durable goods manufacturing	18.5	11.4	61.6	6.4	34.6	16.6	89.7
Nondurable goods manufacturing	10.0	16.4	164.0	2.0	20.0	10.8	108.0
Transportation, communication, and other public utilities	8.2	6.0	73.2	8.1	98.8	6.4	78.0
Wholesale and retail trade	18.7	15.7	84.0	12.1	64.7	16.4	87.7
Finance, insurance and real estate	4.0	2.0	50.0	1.2	30.0	1.7	42.5
Business and repair services	3.4	1.8	52.9	1.8	52.9	1.7	50.0
Personal services	2.8	2.0	71.4	1.3	46.4	1.4	50.0
Professional, public administra- tion, and entertainment	17.0	27.3	160.6	15.4	90.6	14.7	86.5
Index of industrial quality ¹		101.5	101.5	112.1	112.1	87.1	87.1

¹ U.S. percent distribution weighted by median earnings for industries = 100.0.

Table 1—Continued

Industry	California		Missouri		New Mexico		North Carolina	
	Pct. distribution	Relative to U.S.	Pct. distribution	Relative to U.S.	Pct. distribution	Relative to U.S.	Pct. distribution	Relative to U.S.
FEMALES	100.0	100.0			99.9		99.9	
Agriculture, forestry, and fisheries	2.3	2.0	87.0		—	—	6.6	287.0
Mining	0.1	—	—		1.2	1200.0	—	—
Construction	0.8	0.5	62.5		0.3	37.5	0.3	37.5
Durable goods manufacturing	7.7	2.0	26.0		3.7	48.0	9.1	118.2
Nondurable goods manufacturing	10.5	23.4	222.9		8.2	78.1	15.3	145.7
Transportation, communication, and other public utilities	3.4	1.7	50.0		2.1	61.8	1.8	52.9
Wholesale and retail trade	22.2	13.3	59.9		23.7	106.8	18.4	82.9
Finance, insurance and real estate	5.9	2.7	45.8		2.4	40.7	3.0	50.8
Business and repair services	2.2	0.8	36.4		0.5	22.7	0.6	27.3
Personal services	12.5	21.8	174.4		11.9	94.4	15.7	125.6
Professional, public administration, and entertainment	32.4	31.9	98.5		46.0	142.0	29.1	89.8
Index of industrial quality ¹		93.4	93.4		100.8	100.8	93.7	93.7
MALES	99.9		100.0		100.0		99.9	
Agriculture, forestry, and fisheries	23.0	343.3	3.9	58.2	3.3	49.2	7.6	113.4
Mining	0.5	50.0	5.6	560.0	14.4	1440.0	*	—
Construction	7.2	74.2	8.8	90.7	9.0	92.8	11.8	121.6
Durable goods manufacturing	7.3	39.5	19.0	102.7	4.7	25.4	9.3	50.3
Nondurable goods manufacturing	9.6	96.0	11.8	118.0	3.0	30.0	19.2	192.0
Transportation, communication, and other public utilities	6.1	74.4	6.7	81.7	11.8	143.9	6.0	73.2

Wholesale and retail trade	18.0	96.3	17.6	94.1	15.5	82.9	19.4	103.7
Finance, insurance and real estate	2.2	55.0	2.2	55.0	1.5	37.5	2.4	60.0
Business and repair services	2.2	64.7	1.3	38.2	2.7	79.4	2.4	70.6
Personal services	1.2	42.9	1.1	39.3	1.8	64.3	1.8	64.3
Professional, public administration, and entertainment	22.6	132.9	22.0	129.4	32.3	190.0	20.0	117.6
Index of industrial quality ¹	87.1	87.1	104.8	129.4	105.8	105.8	100.0	100.0
FEMALES	100.1		100.1		100.1		100.0	
Agriculture, forestry, and fisheries	8.6	373.9	0.6	26.1	0.7	30.4	7.6	330.4
Mining	—	—	0.2	200.0	0.2	200.0	—	—
Construction	0.6	75.0	0.3	37.5	0.3	37.5	0.4	50.0
Durable goods manufacturing	1.2	15.6	4.8	62.3	1.8	23.4	4.5	58.4
Nondurable goods manufacturing	12.7	121.0	34.6	329.5	2.1	20.0	26.0	247.6
Transportation, communication, and other public utilities	1.6	47.0	1.6	47.0	3.4	100.0	2.1	61.8
Wholesale and retail trade	23.6	106.3	19.4	87.4	25.5	114.9	18.6	83.8
Finance, insurance and real estate	5.4	91.5	3.0	50.8	4.0	67.8	3.4	57.6
Business and repair services	0.8	36.4	0.4	18.2	1.2	54.5	0.8	36.4
Personal services	8.3	66.4	7.8	62.4	11.5	92.0	9.8	78.4
Professional, public administration, and entertainment	37.3	115.1	27.4	84.6	49.4	152.5	26.8	82.7
Index of industrial quality ¹	94.7	94.7	105.8	105.8	99.7	99.7	97.1	97.1

¹ U.S. percent distribution weighted by median earnings for industries = 100.0.

Table 2
Percentage distribution of wage and salary workers by major industry group, by sex for low income areas of selected cities included in Census Employment Survey, 1970

Industry	U.S.	Birmingham, Ala.		Phoenix, Ariz.		Oakland, Ca.		St. Louis, Mo.	
		Pct. distribution	Rel. to U.S.	Pct. distribution	Rel. to U.S.	Pct. distribution	Rel. to U.S.	Pct. distribution	Rel. to U.S.
MALES									
Agriculture, forestry, and fisheries	6.7	0.6	9.0	3.3	49.2	1.0	14.9	0.4	6.0
Mining	1.0	1.0	100.0	0.4	40.0	—	—	0.1	10.0
Construction	9.7	7.1	73.2	11.9	122.7	7.2	74.2	4.6	47.4
Durable goods manufacturing	18.5	33.6	181.6	18.3	98.9	16.8	90.8	27.3	147.6
Nondurable goods manufacturing	10.0	6.4	64.0	5.0	50.0	8.4	84.0	14.0	140.0
Transportation, communications, and other public utilities	8.2	8.7	106.1	5.9	72.0	13.4	163.4	9.3	113.4
Wholesale and retail trade	18.7	18.5	98.9	18.9	101.1	16.7	89.3	13.8	73.8
Finance, insurance and real estate	4.0	2.4	60.0	1.8	45.0	1.6	40.0	2.2	55.0
Business and repair service	3.4	2.5	73.5	4.4	129.4	4.7	138.2	3.3	97.0
Personal services	2.8	3.1	110.7	5.2	185.7	2.6	92.8	2.5	89.3
Other professional, entertainment and public administration	17.0	15.9	93.5	24.5	144.1	26.5	155.9	22.5	132.4
Index of industrial quality ²	100.0	106.0	106.0	99.8	99.8	105.8	105.8	107.9	107.9
FEMALES									
Agriculture, forestry and fisheries	2.3	0.2	8.7	0.9	39.1	0.5	21.7	0.2	8.7
Mining	0.1	0.1	100.0	—	—	—	—	0.1	100.0
Construction	0.8	0.2	25.0	0.6	75.0	0.3	37.5	0.2	25.0
Durable goods manufacturing	7.7	3.3	42.8	13.1	170.1	3.3	42.8	5.7	74.0
Non-durable goods manufacturing	10.5	5.5	52.4	8.2	78.1	8.3	79.0	14.6	139.0

Transportation, communications, and									
other public utilities	3.4	2.4	70.6	2.7	79.4	5.2	152.9	2.5	73.5
Wholesale and retail trade	22.2	22.8	102.7	22.5	101.4	14.9	67.1	13.8	62.2
Finance and real estate	5.9	4.7	79.7	4.4	74.6	6.0	101.7	2.9	49.2
Business and repair service	2.2	1.2	54.5	3.8	172.7	2.1	95.4	2.1	95.4
Personal service	12.5	27.4	219.2	15.6	124.8	20.7	165.6	17.2	137.6
Other professional entertainment									
and public administration	32.4	32.2	99.4	28.0	86.4	38.7	119.4	40.5	125.0
Index of industrial quality ²	100.0	75.5	75.5	98.1	98.1	97.8	97.8	100.8	100.8
MALES									
Agriculture, forestry, and fisheries	0.2	3.0	0.8	11.9	0.3	4.5	0.6	9.0	
Mining	'	—	0.3	30.0	—	—	0.1	10.0	
Construction	4.5	46.4	10.7	110.3	8.7	89.7	8.6	88.6	
Durable goods manufacturing	10.7	57.8	12.5	67.6	22.9	123.8	17.5	94.6	
Nondurable goods manufacturing	14.7	147.0	14.3	143.0	12.0	120.0	17.2	172.0	
Transportation, communications, and									
other public utilities	10.0	122.0	12.8	156.1	7.5	91.5	9.1	111.0	
Wholesale and retail trade	18.6	99.5	21.4	114.4	14.8	79.1	17.0	90.9	
Finance, insurance and real estate	6.9	172.5	2.5	62.5	2.0	50.0	2.0	50.0	
Business and repair service	5.8	170.6	4.0	117.6	4.1	120.6	3.2	94.1	
Personal services	4.7	167.8	3.3	117.8	3.1	110.7	2.8	100.0	
Other professional entertainment									
and public administration	23.8	140.0	17.5	102.9	24.5	144.1	21.9	128.8	
Index of industrial quality ²	104.2	104.2	103.6	103.6	106.2	106.2	105.7	105.7	
FEMALES									
Agriculture, forestry, and fisheries	—	—	0.2	8.7	0.1	4.3	0.7	30.4	
Mining	'	—	—	60.0	—	—	—	—	
Construction	0.2	25.0	0.6	300.0	0.6	75.0	0.3	37.5	
Durable goods manufacturing	6.3	81.8	2.4	31.2	6.6	85.7	7.4	96.1	
Nondurable goods manufacturing	22.2	211.4	16.3	155.2	10.8	102.8	6.8	64.8	

¹ Less than .05.

² U.S. percent distribution weighted by median earnings = 100.

Table 2—Continued

Industry	New York City, N.Y.		Charlotte, N.C.		Cincinnati, Ohio		Memphis, Tennessee	
	Pct. distribution	Rel. to U.S.	Pct. distribution	Rel. to U.S.	Pct. distribution	Rel. to U.S.	Pct. distribution	Rel. to U.S.
Transportation, communications, and other public utilities	4.9	144.1	2.7	79.4	2.9	85.3	2.7	79.4
Wholesale and retail trade	12.0	54.0	17.3	77.9	15.3	68.9	19.4	87.4
Finance and real estate	9.1	154.2	3.5	59.3	3.6	61.0	2.6	42.4
Business and repair service	3.8	172.7	1.8	81.8	2.7	122.7	2.2	100.0
Personal service	11.1	88.8	29.6	236.8	17.5	140.0	27.7	221.6
Other professional entertainment and public administration	30.2	93.2	25.5	78.7	39.9	173.1	30.2	93.2
Index of industrial quality ²	110.2	110.2	85.1	85.1	100.6	100.6	86.6	86.8

¹ Less than .05.

² U.S. percent distribution weighted by median earnings = 100.

Table 3
Unemployment rates by age, sex and race for rural Census Employment Survey areas, with comparisons to the United States, 1970

Sex and age groups	Alabama						Appalachia	
	All Races		White		Black		All Races	
	Unemployment rate	Relative to U.S.	Unemployment rate	Relative to U.S.	Unemployment rate	Relative to U.S.	Unemployment rate	Relative to U.S.
MALES								
Total 16 years and over	3.6	73.5	2.1	42.8	5.5	112.2	6.1	124.5
16-21 years	13.2	78.6	7.2	42.8	17.5	104.2	19.7	117.3
22-34 years	3.0	53.6	1.5	26.8	5.0	89.3	6.1	108.9
35-44 years .....	.5	18.5	.8	29.6	0	—	2.3	85.2
45-54 years	1.4	56.0	1.2	48.0	1.7	68.0	2.7	108.0
55-64 years	3.9	130.0	4.0	133.3	3.9	130.0	3.8	126.7
65 years and over .....	.7	16.7	0	—	1.6	38.1	2.3	54.8
FEMALES								
Total 16 years and over	8.2	130.2	5.6	88.9	10.8	171.4	11.9	188.9
16-21 years	25.0	147.1	14.2	83.5	32.2	189.4	25.6	150.6
22-34 years	8.5	123.2	6.3	91.3	11.0	159.4	15.0	217.4
35-44 years	5.1	96.2	5.2	98.1	5.1	96.2	6.5	122.6
45-54 years	4.7	127.0	2.8	75.7	7.0	189.2	7.1	191.9
55-64 years	3.1	114.8	2.9	107.4	3.3	122.2	4.3	159.2
65 years and over	1.7	48.6	2.9	82.8	0	—	0	—

Table 3—Continued

Sex and age groups	Arkansas						California			
	All Races		White		Black		All Races		White	
	Unemployment rate	Relative to U.S.	Unemployment rate	Relative to U.S.	Unemployment rate	Relative to U.S.	Unemployment rate	Relative to U.S.	Unemployment rate	Relative to U.S.
MALES										
Total 16 years and over	4.2	85.7	2.4	49.0	8.8	179.6	9.6	195.9	9.2	187.3
16-21 years	14.2	84.5	7.2	42.8	25.4	151.2	22.4	133.3	21.5	128.0
22-34 years	3.4	60.7	2.5	44.6	6.6	117.8	7.6	135.7	7.4	132.1
35-44 years	2.5	92.6	1.6	59.2	4.9	181.5	7.4	274.1	7.1	263.0
45-54 years	2.9	116.0	1.3	52.0	6.7	268.0	8.0	320.0	8.1	324.0
55-64 years	3.1	103.3	2.4	80.0	4.6	153.3	9.7	323.3	8.2	273.3
65 years and over	3.5	83.3	0	—	8.2	195.2	2.9	69.0	3.0	71.4
FEMALES										
Total 16 years and over	9.4	149.2	6.3	100.0	15.0	238.1	10.7	169.8	10.4	165.1
16-21 years	23.6	138.8	13.8	81.2	38.3	225.3	19.2	112.9	18.0	105.9
22-34 years	12.12	176.8	9.1	131.9	19.8	287.0	13.1	189.8	12.3	178.3
35-44 years	11.5	217.0	3.6	67.9	9.3	175.5	5.7	107.5	6.1	115.1
45-54 years	5.7	154.0	4.6	124.3	7.6	205.4	7.6	205.4	7.4	200.0
55-64 years	3.7	137.0	1.2	44.4	7.6	281.5	7.6	281.5	8.1	300.0
65 years and over	2.6	74.3	2.4	68.6	2.8	80.0	3.1	88.6	3.3	94.3

Sex and age groups	Missouri		New Mexico		New Mexico		New Mexico	
	All races		All races		White Spanish		Other White	
	Unemploy- ment rate	Relative to U.S.	Unemploy- ment rate	Relative to U.S.	Unemploy- ment rate	Relative to U.S.	Unemploy- ment rate	Relative to U.S.
MALES								
Total 16 years and over	5.9	120.4	8.4	171.4	8.3	169.4	4.0	81.6
16-21 years	14.8	88.1	20.3	120.8	22.4	133.3	11.8	70.2
22-34 years	8.0	142.8	10.1	180.4	7.6	135.7	4.7	83.9
35-44 years	4.7	174.1	6.2	229.6	6.4	237.0	2.6	84.0
45-54 years	5.2	208.0	3.8	152.0	1.8	72.0	2.1	106.7
55-64 years	2.2	73.3	5.1	170.0	6.4	213.3	3.2	107.1
65 years and over	0	—	7.6	181.0	18.6	442.8	4.5	
FEMALES								
Total 16 years and over	9.2	146.0	8.4	133.3	9.3	147.6	7.6	120.6
16-21 years	19.8	116.5	16.2	95.3	16.2	95.3	13.4	78.8
22-34 years	10.4	150.7	9.8	142.0	11.2	211.3	8.7	126.1
35-44 years	8.5	160.4	5.2	98.1	4.8	90.6	6.6	124.5
45-54 years	6.5	175.7	5.6	151.4	6.7	181.1	4.9	132.4
55-64 years	4.6	170.4	4.4	163.0	0	—	6.4	237.0
65 years and over	2.2	62.8	2.0	57.1	0	—	3.0	85.7

Table 3—Continued

Sex and age groups	North Carolina				Zuni Reservation New Mexico			
	All Races		White		Black		All Races	
	Unemploy- ment rate	Relative to U.S.	Unemploy- ment rate	Relative to U.S.	Unemploy- ment rate	Relative to U.S.	Unemploy- ment rate	Relative To U.S.
MALES								
Total 16 years and over	3.9	79.6	2.8	57.1	6.4	130.6	3.1	63.
16-21 years	12.8	76.2	11.7	69.6	11.0	65.5	6.9	41.
22-34 years	3.5	62.5	3.0	53.6	6.0	107.1	3.7	66.
35-44 years	2.0	74.1	1.0	37.0	3.9	144.4	3.1	114.
45-54 years	1.7	68.0	.5	20.0	6.1	244.0	1.5	60.
55-64 years	3.0	100.0	1.8	60.0	5.4	180.0	1.0	33.
65 years and over	1.7	40.5	0	—	6.9	164.3	0	—
FEMALES								
Total 16 years and over	10.2	161.9	8.0	127.0	14.2	255.4	2.3	36.
16-21 years	21.1	124.1	18.91	111.2	23.1	135.9	4.3	25.
22-34 years	13.0	188.4	9.9	143.5	19.1	276.8	1.4	20.
35-44 years	6.2	117.0	4.8	90.6	10.7	201.9	0	—
45-54 years	5.6	151.4	3.5	94.6	10.6	286.5	9.8	264.
55-64 years	4.5	166.7	2.8	103.7	7.3	270.4	0	—
65 years and over	2.2	62.8	3.3	94.3	—	—	0	—

Table 4
Unemployment rates, by age, sex, and race for low income areas of selected cities included in the Census Employment Survey, with comparisons to the United States, 1970

Birmingham, Alabama						
Sex and age groups	All races		White		Black	
	Unemployment rate	Relative to U.S.	Unemployment rate	Relative to U.S.	Unemployment rate	Relative to U.S.
MALES						
Total 16 years and over	7.8	159.2	4.1	83.7	9.8	200.0
16-21 years	23.7	141.1	10.0	59.5	28.8	171.4
22-34 years	8.0	142.8	3.3	58.9	11.1	198.2
35-44 years	2.7	100.0	1.2	44.4	3.6	133.3
45-54 years	3.3	132.0	3.1	124.0	3.4	136.0
55-64 years	3.6	120.0	4.5	150.0	3.0	100.0
65 and over	7.3	173.8	6.3	150.0	8.1	192.8
FEMALES						
Total 16 years and over	13.0	206.3	7.3	115.9	15.3	242.8
16-21 years	39.1	230.0	15.9	93.5	50.1	294.7
22-34 years	12.1	175.4	6.1	88.4	14.3	207.2
35-44 years	8.9	167.9	10.2	192.4	8.5	160.4
45-54 years	6.3	170.3	2.9	78.4	7.8	210.8
55-64 years	4.3	159.2	3.2	118.5	4.9	181.5
65 and over	2.0	57.1	5.6	160.0	0	—
Phoenix, Arizona						
Sex and age groups	All races		White Spanish		Other White	
	Unemployment rate	Relative to U.S.	Unemployment rate	Relative to U.S.	Unemployment rate	Relative to U.S.
MALES						
Total 16 years and over	8.8	179.6	7.8	159.2	6.9	140.8
16-21 years	18.3	108.9	15.1	89.9	13.7	81.5
22-34 years	7.9	141.1	6.1	108.9	7.1	126.8
35-44 years	6.2	229.6	5.1	188.9	4.8	177.8
45-54 years	6.6	264.0	1.6	64.0	5.8	232.0
55-64 years	5.9	196.7	12.1	403.3	4.7	156.7
65 and over	4.8	114.3	15.3	364.3	4.5	127.1
FEMALES						
Total 16 years and over	10.9	173.0	16.8	266.7	7.1	112.7
16-21 years	20.9	122.9	29.5	173.5	11.7	65.7
22-34 years	12.9	167.0	15.0	217.4	10.0	144.9
35-44 years	3.4	64.2	9.0	169.8	1.2	22.6
45-54 years	8.5	229.7	18.6	502.7	6.3	170.3
55-64 years	5.4	200.0	0	—	4.1	151.8
65 and over	4.3	122.8	0	—	5.2	148.6

Table 4—Continued

Oakland, California						
Sex and age groups	All races		White		Black	
	Unemploy- ment rate	Relative to U.S.	Unemploy- ment rate	Relative to U.S.	Unemploy- ment rate	Relative to U.S.
MALES						
Total 16 years and over	17.3	353.1	12.6	257.1	21.5	438.8
16-21 years	40.5	241.1	30.0	178.6	48.9	291.1
22-34 years	17.1	305.4	12.3	219.6	21.3	380.4
35-44 years	12.9	477.8	5.4	200.0	17.5	648.1
45-54 years	10.5	420.0	15.2	608.0	9.0	360.0
55-64 years	10.6	353.3	6.2	206.7	14.8	493.3
65 and over	14.6	347.6	15.2	361.9	17.7	421.4
FEMALES						
Total 16 years and over	18.0	285.7	11.9	188.9	20.8	330.2
16-21 years	41.9	246.5	26.6	156.5	48.6	285.9
22-34 years	20.4	295.6	11.4	165.2	24.4	353.6
35-44 years	10.9	205.7	11.9	224.5	10.0	188.7
45-54 years	12.1	327.0	4.1	110.8	15.4	416.2
55-64 years	5.3	196.3	8.8	325.9	3.9	144.4
65 and over	10.6	302.8	0	—	13.5	385.7
St. Louis, Missouri						
Sex and age groups	All races		White		Black	
	Unemploy- ment rate	Relative to U.S.	Unemploy- ment rate	Relative to U.S.	Unemploy- ment rate	Relative to U.S.
MALES						
Total 16 years and over	9.4	191.8	5.9	120.4	11.0	224.5
16-21 years	27.4	163.1	16.5	98.2	30.9	183.9
22-34 years	10.2	182.1	6.4	114.3	12.0	214.3
35-44 years	6.7	248.1	5.6	207.4	7.2	266.7
45-54 years	4.6	184.0	2.3	92.0	5.6	244.0
55-64 years	3.6	120.0	4.6	153.3	3.0	100.0
65 and over	4.1	97.6	0	—	5.8	138.1
FEMALES						
Total 16 years and over	11.7	185.7	5.9	93.6	13.6	215.9
16-21 years	28.9	170.0	12.8	75.3	34.3	202.4
22-34 years	14.0	202.9	6.0	87.0	16.2	234.8
35-44 years	6.5	122.6	7.1	134.0	6.5	122.6
45-54 years	5.8	156.8	3.0	81.1	7.0	189.2
55-64 years	4.6	170.4	4.2	155.6	4.8	177.8
65 and over	4.0	114.3	0	—	6.6	188.6

Table 4—Continued

Sex and age groups	Charlotte, North Carolina					
	All Races		White		Black	
	Unemployment rate	Relative to U.S.	Unemployment rate	Relative to U.S.	Unemployment rate	Relative to U.S.
MALES						
Total 16 years and over	6.5	132.6	3.9	79.6	7.3	149.0
16-21 years	23.1	137.5	15.1	89.9	24.9	148.2
22-34 years	4.4	78.6	2.7	48.2	4.8	85.7
35-44 years	2.3	85.2	0	—	3.0	111.1
45-54 years	3.5	140.0	2.7	108.0	3.8	152.0
55-64 years	2.0	66.7	0	—	2.8	93.3
65 and over	8.5	202.4	11.3	269.0	6.5	154.8
FEMALES						
Total 16 years and over	10.1	160.3	3.6	57.1	11.6	184.1
16-21 years	30.8	181.2	15.4	90.6	33.0	194.1
22-34 years	9.0	142.0	0	—	11.6	165.1
35-44 years	5.4	101.9	5.2	98.1	5.5	103.8
45-54 years	3.7	100.0	3.5	94.6	3.7	100.0
55-64 years	1.0	37.0	0	—	1.4	51.8
65 and over	4.2	120.0	4.4	125.7	4.1	117.1
Sex and age groups	Cincinnati, Ohio					
	All Races		White		Black	
	Unemployment rate	Relative to U.S.	Unemployment rate	Relative to U.S.	Unemployment rate	Relative to U.S.
MALES						
Total 16 years and over	7.3	149.0	3.9	79.6	10.0	204.1
16-21 years	24.2	144.0	11.1	66.1	32.6	194.0
22-34 years	7.3	130.4	5.2	92.8	9.2	164.3
35-44 years	2.9	107.4	.9	33.3	4.1	151.8
45-54 years	4.5	180.0	2.4	96.0	6.0	240.0
55-64 years	3.9	130.0	1.0	33.3	6.4	213.3
65 and over	3.2	76.2	3.0	71.4	3.6	85.7
FEMALES						
Total 16 years and over	9.7	154.0	8.6	136.5	10.2	161.9
16-21 years	26.5	155.9	17.9	105.3	32.4	190.6
22-34 years	10.4	150.7	8.3	120.3	11.3	163.8
35-44 years	6.3	118.9	6.8	128.3	6.1	115.1
45-54 years	3.9	105.4	8.3	224.3	1.2	32.4
55-64 years	2.1	77.8	2.6	96.3	1.7	63.0
65 and over	1.9	54.3	0	—	3.3	94.3

Table 4—Continued

Race, sex and age group	Memphis, Tennessee			
	All Races		Black	
	Unemployment	Relative to U.S.	Unemployment	Relative to U.S.
MALES				
Total 16 years and over	9.3	189.8	10.1	206.1
16-21 years	35.5	211.3	37.7	224.4
22-34 years	7.9	141.1	8.0	142.8
35-44 years	4.3	159.2	3.9	144.4
45-54 years	2.0	80.0	2.4	96.0
55-64 years	2.6	86.7	3.3	110.0
65 years and over	5.1	121.4	6.9	164.3
FEMALES				
Total 16 years and over	13.4	212.7	15.1	239.7
16-21 years	38.2	224.7	45.6	268.2
22-34 years	14.2	205.8	15.9	230.4
35-44 years	8.3	156.5	8.5	160.4
45-54 years	6.2	167.6	7.5	202.7
55-64 years	3.4	126.9	3.0	111.1
65 and over	1.5	4.28	2.2	62.8

IV. Bibliography

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