

# Type of Place

## GENERAL

This report presents supplementary consolidations and classifications of the demographic, social, and economic characteristics of the populations of the States by urban-rural and by metropolitan-nonmetropolitan residence in 1960. Data concerning age, marital status, households, families, fertility, and labor force status are presented for the total population, for persons in urbanized areas by whether living in central city or urban fringe, and for persons in standard metropolitan statistical areas (SMSA's) by whether in central city, other urban, rural-nonfarm, or rural-farm areas. Data concerning nativity and color, education, occupation, and income are presented for the total population classified by urban-rural and by metropolitan-nonmetropolitan residence. The urban-rural classification includes the following categories: Central city of urbanized area, fringe of urbanized area, other urban, rural-nonfarm, and rural farm. In the metropolitan-nonmetropolitan classification, central cities of SMSA's are shown as a separate class, and the outlying parts of SMSA's and all area outside SMSA's are each classified as urban, rural nonfarm, or rural farm.

The data are presented for the United States, regions, and geographic divisions, for each of the ten largest States, for other geographic combinations of States, and for groupings of States made on the basis of similarity in certain selected characteristics. These last groupings are in terms of such characteristics as population density, growth rate, dominance of the metropolitan population, industrialization, and selected social or economic characteristics of the population. In this report, the choice of groupings for each table depends upon the focus of interest in the formation, growth, characteristics, and differentiations of the population.

All the data are based on the detailed statistics published in the 1960 State reports, Volume I, Characteristics of the Population. Depending on the original publication source, the 1960 statistics are based on the complete count or the 25-percent sample of the population enumerated in the Eighteenth Decennial Census, taken as of April 1, 1960. The statistics shown for the total population and for urbanized areas in tables 1, 2, and 3 represent a combination of complete-count and sample data. The data for SMSA's in these tables and all the data in tables 4, 5, and 6 are from the 25-percent sample.

The tables of the present report are selected from special tabulations made for a forthcoming monograph on the population of the United States in the twentieth century, by Irene B. Taeuber, Senior Research Demographer, Office of Population Research, Princeton University, and Conrad Taeuber, Assistant Director for Demo-

graphic Fields, Bureau of the Census. This monograph is one in the series sponsored by the Social Science Research Council and the U.S. Bureau of the Census.

## RELATED REPORTS

An earlier report, PC(3)-1D, Standard Metropolitan Statistical Areas, presented data for persons in SMSA's by residence in and outside central cities. The groupings of areas and summary measures used with these data were designed to show the growth and distribution of the metropolitan population from 1900 to 1960 and the demographic, social, and economic characteristics of this population in 1960. Statistics were shown for individual SMSA's (total, central city, outside central city) and for various groupings of SMSA's. In most instances, the statistics were shown separately for the white and Negro or the white and nonwhite population.

Additional statistics for the United States and the individual States by urban-rural residence and metropolitan-nonmetropolitan status may be found in a number of other 1960 Census reports. In Volume I, Characteristics of the Population, Parts 1 to 57, data on the number of inhabitants are presented in chapter A, general characteristics of the population in chapter B, and social and economic characteristics in chapters C and D. Area classifications similar to those presented in this report may be found in several tables of chapters A and B, in tables 70 and 71 of chapter C for States, and in tables 100 and 101 of chapter C for the United States. Many of the subject reports in Series PC(2) include statistics by size of place or metropolitan-nonmetropolitan residence. In report PC(3)-1B, Size of Place, statistics are shown for the population in urbanized areas by size of area, but figures are given only for the United States and regions.

## AVAILABILITY OF UNPUBLISHED DATA

Statistics shown in tables 1 to 6 for the ten largest States are available also for the other 40 States and the District of Columbia. National, regional, and divisional consolidations are available for the conterminous as well as the total area of the United States, the West, and the Pacific Division. Statistics for groupings of States by residential or social and economic criteria are presented here only selectively for the various tables. All groupings that are shown for any table are available for every table. Requests for unpublished data, giving specific description of the figures desired, may be made by writing to the Chief, Population Division, Bureau of the Census, Washington, D.C. 20233.

## DEFINITIONS AND EXPLANATIONS

Some of the definitions used in 1960 differ from those used in 1950. These changes were made after consultation with users of census data in order to improve the statistics, even though it was recognized that comparability would be affected. The definitions and explanations should be interpreted in the context of the 1960 Censuses, in which data were collected by a combination of self-enumeration, direct interview, and observation by the enumerator.

The definitions below are consistent with the instructions given to the enumerator. As in all surveys, there were some failures to execute the instructions exactly. Through the forms distributed to households, the respondents were given explanations of some of the questions more uniformly than would have been given in direct interviews. Nevertheless, it was not feasible to give the full instructions to the respondents, and some erroneous replies have undoubtedly gone undetected.

More complete discussions of the definitions of population items are given in 1960 Census of Population, Volume I, Characteristics of the Population, Part 1, United States Summary, and in each of the State parts.

## COMBINATIONS OF STATES

United States, regions, and divisions.--The Census of 1960 was the first to include Alaska and Hawaii as States. Summary tabulations for the United States, the West, and the Pacific Division as presented here include Alaska and Hawaii. The allocation of States to regions and divisions is shown in the map on page VI.

Other geographic combinations of States.--The historic changes and the present complexities in geographic localization require more subregions than the nine geographic divisions into which the regions are usually divided. The New England, Middle Atlantic, East North Central, and West North Central Divisions are retained. Florida and California are considered as separate subregions. Alaska and Hawaii are not presented separately, though tabulations are available. Seven combinations of States are added: Delaware, Maryland, and D.C.; North Carolina and Virginia; Appalachian States; Deep South; Oklahoma and Texas; Northern Mountain States; and Oregon and Washington. These combinations of States are shown in List 1, page XIX.

Groupings of States based on characteristics of the population.--The 50 States and the District of Columbia were combined in the following nine groupings:

1. Density in 1960 as measured by population per square mile.
2. Percent of change in population, 1940 to 1960.
3. Percent of the total population in standard metropolitan statistical areas in 1960.
4. Percent of the population urban, 1900.
5. Percent of the gainfully occupied in primary industry, 1930.

6. Nativity and industrial status, 1930, as measured by the percent native of native parentage, subclassified by whether or not 25 percent or more of the gainfully occupied males reported agricultural occupations.

7. Percent of the labor force in professional, technical, and kindred occupations, 1960.

8. Percent of families with heads completing four or more years of college, 1960.

9. Percent of families with incomes in 1959 of \$10,000 or more.

The States in the various groupings within each classification are shown in Lists 3 to 11, pages XIX to XXII.

## URBAN-RURAL RESIDENCE

According to the definition adopted for use in the 1960 Census, the urban population comprises all persons living in (a) places of 2,500 inhabitants or more incorporated as cities, boroughs, villages, and towns (except towns in New England, New York, and Wisconsin); (b) the densely settled urban fringe, whether incorporated or unincorporated, of urbanized areas (see section below); (c) towns in New England and townships in New Jersey and Pennsylvania which contain no incorporated municipalities as subdivisions and have either 25,000 inhabitants or more or a population of 2,500 to 25,000 and a density of 1,500 persons or more per square mile; (d) counties in States other than the New England States, New Jersey, and Pennsylvania that have no incorporated municipalities within their boundaries and have a density of 1,500 persons per square mile; and (e) unincorporated places of 2,500 inhabitants or more. In other words, the urban population comprises all persons living in urbanized areas and in places of 2,500 inhabitants or more outside urbanized areas. The population not classified as urban constitutes the rural population.

## FARM-NONFARM RESIDENCE

The rural population is subdivided into the rural-farm population, which comprises all rural residents living on farms, and the rural-nonfarm population, which comprises the remaining rural population. In the 1960 Census, the farm population includes persons living in rural territory on places of 10 or more acres from which sales of farm products amounted to \$50 or more in 1959 or on places of less than 10 acres from which sales of farm products amounted to \$250 or more in 1959. Through an error in computer programming, the small number (29,873 for the United States) of farm residents in workers' camps (including quarters for migratory agricultural workers) were erroneously classified as nonfarm in the tabulations for Series PC(1)-C, which was the source of data on farm residence for the present report. Persons in all other types of group quarters were properly classified as nonfarm.

If the reported value of sales was at least the amount specified for that size of place, the household

was classified as living on a farm. Other persons in rural territory, including those living on "city lots," were classified as nonfarm residents. Persons were also classified as nonfarm if their household paid rent for the house but their rent did not include any land used for farming.

Sales of farm products refer to the gross receipts from the sale of field crops, vegetables, fruits, nuts, livestock and livestock products (milk, wool, etc.), poultry and poultry products, and nursery and forest products produced on the place and sold at any time during 1959.

#### URBANIZED AREAS

Definition.--The major objective of the Bureau of the Census in delineating urbanized areas was to provide a better separation of urban and rural population in the vicinity of the larger cities. In addition to serving this purpose, individual urbanized areas have proved to be useful statistical areas as well. They correspond to what are called "conurbations" in some other countries. An urbanized area contains at least one city of 50,000 inhabitants or more in 1960,<sup>1</sup> as well as the surrounding closely settled incorporated places and unincorporated areas that meet the criteria listed below. An urbanized area may be thought of as divided into the central city, or cities, and the remainder of the area, or the urban fringe. All persons residing in an urbanized area are included in the urban population.

It appeared desirable to delineate the urbanized areas in terms of the 1960 Census results rather than on the basis of information available prior to the census as was done in 1950. For this purpose, a peripheral zone was recognized around each 1950 urbanized area and around cities that were presumably approaching a population of 50,000 in 1960. Within the unincorporated parts of this zone small enumeration districts (ED's) were established, usually including no more than one square mile of land area and no more than 75 housing units.<sup>2</sup>

Arrangements were made to include within the urbanized area those enumeration districts meeting specified criteria of population density as well as adjacent incorporated places. Since the urbanized area outside incorporated places was defined in terms of ED's, the boundaries of the urbanized area for the most part follow such features as roads, streets, railroads, streams, and other clearly defined lines which may be easily identified by census enumerators in the field and often do not conform to the boundaries of political units.

In addition to its central city or cities, an urbanized area contains the following types of contiguous areas, which together constitute its urban fringe:

1. Incorporated places with 2,500 inhabitants or more.

<sup>1</sup> A few urbanized areas contain no single city with a population of 50,000 but have "twin" central cities with a combined population of at least 50,000

<sup>2</sup> An enumeration district (ED) is a small area assigned to one enumerator to be canvassed and reported separately. The average ED contains approximately 200 housing units.

2. Incorporated places with less than 2,500 inhabitants, provided each has a closely settled area of 100 housing units or more.

3. Towns in the New England States, townships in New Jersey and Pennsylvania, and counties elsewhere which are classified as urban.

4. Enumeration districts in unincorporated territory with a population density of 1,000 inhabitants or more per square mile. (The areas of large nonresidential tracts devoted to such urban land uses as railroad yards, factories, and cemeteries were excluded in computing the population density of an ED.)

5. Other ED's provided that they served one of the following purposes:

a. To eliminate enclaves.

b. To close indentations in the urbanized areas of one mile or less across the open end.

c. To link outlying ED's of qualifying density that were no more than  $1\frac{1}{2}$  miles from the main body of the urbanized area.

A single urbanized area was established for cities in the standard metropolitan statistical area (SMSA) if their fringes adjoin. Urbanized areas with central cities in different SMSA's are not combined, except that a single urbanized area was established in the New York-Northeastern New Jersey Standard Consolidated Area and in the Chicago-Northwestern Indiana Standard Consolidated Area.

#### STANDARD METROPOLITAN STATISTICAL AREAS

Definition.--It has long been recognized that for many types of analysis it is necessary to consider as a unit the entire population in and around a city the activities of which form an integrated economic and social system. Prior to the 1950 Census, areas of this type had been defined in somewhat different ways for different purposes and by various agencies. Leading examples were the metropolitan districts of the Census of Population, the industrial areas of the Census of Manufactures, and the labor market areas of the Bureau of Employment Security. To permit all Federal statistical agencies to utilize the same areas for the publication of general-purpose statistics, the Bureau of the Budget has established "standard metropolitan statistical areas" (SMSA's). Every city of 50,000 inhabitants or more according to the 1960 Census is included in an SMSA.

The definitions and titles of SMSA's are established by the Bureau of the Budget with the advice of the Federal Committee on Standard Metropolitan Statistical Areas. This Committee is composed of representatives of the major statistical agencies of the Federal Government. The criteria used by the Bureau of the Budget in establishing the SMSA's are presented below. (See the Bureau of the Budget publication Standard Metropolitan Statistical Areas, U.S. Government Printing Office, Washington, D.C., 1961.)

The definition of an individual SMSA involves two considerations: First, a city or cities of specified population to constitute the central city and to identify the county in which it is located as the central county; and, second, economic and social relationships with contiguous counties which are metropolitan in

character, so that the periphery of the specific metropolitan area may be determined.<sup>3</sup> SMSA's may cross State lines.

Population criteria.--The criteria for population relate to a city or cities of specified size according to the 1960 Census.

1. Each standard metropolitan statistical area must include at least:

- a. One city with 50,000 inhabitants or more, or
- b. Two cities having contiguous boundaries and constituting, for general economic and social purposes, a single community with a combined population of at least 50,000, the smaller of which must have a population of at least 15,000.

2. If each of two or more adjacent counties has a city of 50,000 inhabitants or more (or twin cities under 1b) and the cities are within 20 miles of each other (city limits to city limits), they will be included in the same area unless there is definite evidence that the two cities are not economically and socially integrated.

Criteria of metropolitan character.--The criteria of metropolitan character relate primarily to the attributes of the contiguous county as a place of work or as a home for a concentration of nonagricultural workers.

3. At least 75 percent of the labor force of the county must be in the nonagricultural labor force.<sup>4</sup>

4. In addition to criterion 3, the county must meet at least one of the following conditions:

a. It must have 50 percent or more of its population living in contiguous minor civil divisions<sup>5</sup> with a density of at least 150 persons per square mile, in an unbroken chain of minor civil divisions with such density radiating from a central city in the area.

b. The number of nonagricultural workers employed in the county must equal at least 10 percent of the number of nonagricultural workers employed in the county containing the largest city in the area, or the county must be the place of employment of 10,000 nonagricultural workers.

c. The nonagricultural labor force living in the county must equal at least 10 percent of the number in the nonagricultural labor force living in the county containing the largest city in the area, or the county must be the place of residence of a nonagricultural labor force of 10,000.

5. In New England, the city and town are administratively more important than the county, and data are

<sup>3</sup> Central cities are those appearing in the SMSA title. A "contiguous" county either adjoins the county or counties containing the largest city in the area, or adjoins an intermediate county integrated with the central county. There is no limit to the number of tiers of outlying metropolitan counties so long as all other criteria are met.

<sup>4</sup> Nonagricultural labor force is defined as those employed in nonagricultural occupations, those experienced unemployed whose last occupation was a nonagricultural occupation, members of the Armed Forces, and new workers.

<sup>5</sup> A contiguous minor civil division either adjoins a central city in an SMSA or adjoins an intermediate minor civil division of qualifying population density. There is no limit to the number of tiers of contiguous minor civil divisions so long as the minimum density requirement is met in each tier.

compiled locally for such minor civil divisions. Here, towns and cities are the units used in defining SMSA's. In New England, because smaller units are used and more restricted areas result, a population density criterion of at least 100 persons per square mile is used as the measure of metropolitan character.

Criteria of integration.--The criteria of integration relate primarily to the extent of economic and social communication between the outlying counties and central county.

6. A county is regarded as integrated with the county or counties containing the central cities of the area if either of the following criteria is met:

- a. 15 percent of the workers living in the county work in the county or counties containing central cities of the area, or
- b. 25 percent of those working in the county live in the county or counties containing central cities of the area.

Only where data for criteria 6a and 6b are not conclusive are other related types of information used as necessary. This information includes such items as average number of telephone calls per subscriber per month from the county to the county containing central cities of the area; percent of the population in the county located in the central city telephone exchange area; newspaper circulation reports prepared by the Audit Bureau of Circulation; analysis of charge accounts in retail stores of central cities to determine the extent of their use by residents of the contiguous county; delivery service practices of retail stores in central cities; official traffic counts; the extent of public transportation facilities in operation between central cities and communities in the contiguous county; and the extent to which local planning groups and other civic organizations operate jointly.

Criteria for titles.--The criteria for titles relate primarily to the size and number of central cities.

7. The complete title of an SMSA identifies the central city or cities and the State or States in which the SMSA is located:

a. The name of the SMSA includes that of the largest city.

b. The addition of up to two city names may be made in the area title, on the basis and in the order of the following criteria:

(1) The additional city has at least 250,000 inhabitants.

(2) The additional city has a population of one-third or more of that of the largest city and a minimum population of 25,000, except that both city names are used in those instances where cities qualify under criterion 1b. (A city which qualified as a secondary central city in 1950 but which does not qualify in 1960 has been temporarily retained as a central city.)

c. In addition to city names, the area titles contain the name of the State or States in which the area is located.

In the first reports of the 25-percent sample data for 1960, Aurora and Joliet, Illinois, and Pomona, California, were inadvertently included as central

cities of SMSA's. Since the data in the present report were drawn from these earliest publications, they also contain the error. Thus, the population in central cities of SMSA's is overstated by 198,000 and the population outside central cities is understated by the same amount.

Relation between population in standard metropolitan statistical areas and urbanized areas.--The urbanized area can be characterized as the physical city as distinguished from both the legal city and the metropolitan community. In most cases urbanized areas are smaller than SMSA's and are contained in SMSA's. However, in a few instances, the fact that the boundaries of SMSA's are determined by county lines (in New England, by city and town lines), and those of urbanized areas by the pattern of urban growth, means that there are small segments of urbanized areas which lie outside SMSA's. In general then, urbanized areas represent the thickly settled portions of the SMSA's. Because of discontinuities in land settlement, there are also some cases in which a single SMSA contains several urbanized areas. As the foregoing discussion suggests, the population in urbanized areas, but outside SMSA's, is relatively small as compared with the population in SMSA's outside urbanized areas. Thus, slightly less than 1 percent of the population of urbanized areas was in areas outside SMSA's.

#### AGE

The age classification is based on the age of the person in completed years as of April 1, 1960, as determined from the reply to a question on month and year of birth.

#### FERTILITY RATIO

The "fertility ratio," as the term is used in this report, is the number of children under 5 years old per 1,000 women 15 to 44 years old. (The base includes single women as well as women who have married.) It is a rough index of the natural growth of various population groups. The ratio provides the longest series of fertility measures available for the United States.

#### COLOR

The term "color" refers to the division of population into two groups, white and nonwhite. The color group designated as "nonwhite" includes Negroes, American Indians, Japanese, Chinese, Filipinos, Koreans, Hawaiians, Asian Indians, Malaysians, Eskimos, Aleuts, etc. Persons of Mexican birth or ancestry who are not definitely of Indian or other nonwhite race are classified as white.

#### NATIVITY AND PARENTAGE

Native.--This category comprises persons born in the United States, the Commonwealth of Puerto Rico, or a possession of the United States; persons born in a foreign country or at sea who have at least one native American parent; and persons whose place of birth was

not reported and whose census report contained no contradictory information, such as an entry of a language spoken prior to coming to the United States.

Foreign born.--This category includes all persons not classified as native.

Native of native parentage.--This category consists of native persons both of whose parents are also natives of the United States.

Native of foreign or mixed parentage.--This category includes native persons one or both of whose parents are foreign born.

#### YEARS OF SCHOOL COMPLETED

The data on years of school completed were derived from the answers to the two questions: (a) "What is the highest grade (or year) of regular school he has ever attended?" and (b) "Did he finish this grade (or year)?" Enumerators were instructed to obtain the approximate equivalent grade in the American school system for persons whose highest grade of attendance was in a foreign school system, whose highest level of attendance was in an ungraded school, whose highest level of schooling was measured by "readers," or whose training by a tutor was regarded as qualifying under the "regular" school definition. Persons were to answer "No" to the second question if they were attending school, had completed only part of a grade before they dropped out, or failed to pass the last grade attended.

The number in each category of highest grade of school completed represents the combination of (a) persons who reported that they had attended the indicated grade and finished it, and (b) those who had attended the next higher grade but had not finished it.

The questions on educational attainment applied only to progress in "regular" schools. Regular schooling is that which may advance a person toward an elementary school certificate or high school diploma, or a college, university, or professional degree. Schooling that was not obtained in a regular school and schooling from a tutor or through correspondence courses were counted only if the credits obtained were regarded as transferable to a school in the regular school system. Schooling which is generally regarded as not regular includes that which is given in nursery schools, in specialized vocational, trade, or business schools; in on-the-job training; and through correspondence courses.

Elementary school, as defined here, includes grades 1 to 8, and high school includes grades 9 to 12. College includes junior or community colleges, regular 4-year colleges, and graduate or professional schools.

#### MARITAL STATUS

This classification refers to the marital status of the person at the time of enumeration. Persons classified as "married" comprise, therefore, both those who have been married only once and those who remarried after having been widowed or divorced.

Persons reported as separated (either legally separated or otherwise absent from the spouse because of marital discord) are classified as a subcategory of married persons. The enumerators were instructed to report persons in common-law marriages as married and persons whose only marriage had been annulled as single. Persons "ever married" are those in the categories married (including separated), widowed, and divorced.

#### HOUSEHOLD, GROUP QUARTERS, AND RELATIONSHIP TO HEAD OF HOUSEHOLD

A household consists of all the persons who occupy a housing unit. A house, an apartment or other group of rooms, or a single room, is regarded as a housing unit when it is occupied or intended for occupancy as separate living quarters; that is, when the occupants do not live and eat with any other persons in the structure and there is either (1) direct access from the outside or through a common hall or (2) a kitchen or cooking equipment for the exclusive use of the occupants. A "husband-wife" household is one in which the head and his wife are enumerated as members of the same household. The number of husband-wife households, therefore, is equal to the number of persons reported as wife of head. The population per household is obtained by dividing the population in households by the number of households.

All persons who are not members of households are regarded as living in group quarters. Group quarters are living arrangements for institutional inmates or for other groups containing five or more persons unrelated to the person in charge. Most of the persons in group quarters live in rooming houses, college dormitories, military barracks, or institutions. Inmates of institutions are persons for whom care or custody is provided in such places as homes for delinquent or dependent children; homes and schools for the mentally or physically handicapped; places providing specialized medical care for persons with mental disorders, tuberculosis, or other chronic disease; nursing and domiciliary homes for the aged and dependent; prisons; and jails.

For persons in households, several categories of relationship to head of household are recognized in this report:

1. The head of the household is the member reported as the head by the household respondent. However, if a married woman living with her husband is reported as the head, her husband is classified as the head for the purpose of census tabulations.
2. The wife of a head of a household is a woman married to and living with a household head. This category includes women in common-law marriages as well as women in formal marriages.
3. An other relative of the head is a person related to the head of the household by blood, marriage, or adoption, but not included specifically in another category.
4. A nonrelative of the head is any member of the household who is not related to the household head. This category includes lodgers (roomers and partners, relatives of such persons, and foster children) and resident employees (maids, hired farm hands, etc.).

#### MARRIED COUPLE AND FAMILY

A married couple is defined as a husband and his wife enumerated as members of the same household. A married couple with own household is one in which the husband is a household head. Conceptually, the number of married couples with own household should be equal to the number of wives of household heads and the number of husband-wife households, but the figures may not be exactly the same in this report, because of the methods used to inflate the sample.

A family consists of two or more persons in the same household who are related to each other by blood, marriage, or adoption; all persons living in one household who are related to each other are regarded as one family.

#### CHILDREN EVER BORN

The number of children ever born includes children born to the woman before her present marriage, children no longer living, and children away from home, as well as children borne by the woman who were still living in the home. Although the question on children ever born was asked only of women reported as having been married, the data are not limited to legitimate births.

#### EMPLOYMENT STATUS

The data on employment status relate to the calendar week prior to the date on which the respondents filled their Household Questionnaires or were interviewed by enumerators. This week is not the same for all respondents because not all persons were enumerated during the same week.

Employed persons comprise all civilians 14 years old and over who were either (a) "at work"--those who did any work for pay or profit, or worked without pay for 15 hours or more on a family farm or in a family business; or (b) were "with a job but not at work"--those who did not work and were not looking for work but had a job or business from which they were temporarily absent because of bad weather, industrial dispute, vacation, illness, or other personal reasons.

Persons are classified as unemployed if they were 14 years old and over and not "at work" but looking for work. A person is considered as looking for work not only if he actually tried to find work but also if he had made such efforts recently (i.e., within the past 60 days) and was awaiting the results of these efforts. Persons waiting to be called back to a job from which they had been laid off or furloughed are also counted as unemployed.

The "civilian labor force" includes all persons classified as employed or unemployed, as described above. The "labor force" also includes members of the Armed Forces (persons on active duty with the United States Army, Air Force, Navy, Marine Corps, or Coast Guard).

Persons "not in the labor force" comprise all those 14 years old and over who are not classified as members of the labor force, including persons doing only incidental unpaid family work (less than 15 hours during the week).



## GAINFUL WORKERS

Statistics on industrial classification of the population in 1930 relate to gainful workers. "Gainful workers" were persons reported as having a gainful occupation in which they earned money or a money equivalent, or in which they assisted in the production of marketable goods, regardless of whether they were working or seeking work at the time of the census. A person was not considered to have had a gainful occupation if his activity was of limited extent.

## OCCUPATION

The data on occupation in this report are for employed persons and refer to the job held during the week for which employment status was reported. For persons employed at two or more jobs, the data refer to the job at which the person worked the greatest number of hours. The occupation and industry statistics presented here are based on the detailed systems developed for the 1960 Census; see 1960 Census of Population, Classified Index of Occupations and Industries, U.S. Government Printing Office, Washington, D.C., 1960.

## INDUSTRIAL STATUS, 1930

In List 8, States are classified as agrarian in 1930 if 25 percent or more of the gainfully occupied males were reported in agricultural occupations. Those States with less than 25 percent in agriculture in 1930 are designated as industrial.

## PRIMARY INDUSTRY, 1930

In List 7, States are grouped according to the percent of gainful workers who were classified as "in primary industry" in 1930. This category includes agriculture, forestry, and fisheries, as those industries were defined in the 1930 Census.

## INCOME IN 1959

Information on income for the calendar year 1959 was requested from all persons 14 years old and over in the sample. "Total income" is the sum of amounts reported separately for wage or salary income, self-employment income, and other income. Wage or salary income is defined as the total money earnings received for work performed as an employee. It represents the amount received before deductions for personal income taxes, Social Security, bond purchases, union dues, etc. Self-employment income is defined as net money income (gross receipts minus operating expenses) from a business, farm, or professional enterprise in which the person was engaged on his own account. Other income includes money income received from such sources as net rents, interest, dividends, Social Security benefits, pensions, veterans' payments, unemployment insurance, and public assistance or other governmental payments, and periodic receipts from insurance policies or annuities. Not included as income are money received from the sale of property (unless the recipient was engaged in the business of selling such property), the value of income "in kind," withdrawals of bank deposits, money borrowed, tax refunds, and gifts and lump-sum inheritances or insurance payments.

## COLLECTION AND PROCESSING OF DATA

## COLLECTION OF DATA

Several enumeration forms were used to collect the information for the 1960 Census of Population. A few days before the census date, the Post Office Department delivered an Advance Census Report (ACR) to households on postal delivery routes. This form contained questions which were to be answered for every person and every housing unit. Household members were requested to fill the ACR and have it ready for the enumerator. The census enumerator recorded this information on a form specially designed for electronic data processing by FOSDIC (Film Optical Sensing Device for Input to Computer). The information was either transcribed from the ACR to the complete-count FOSDIC schedule or entered on this schedule during direct interview.

In the densely populated areas, the enumerator left a Household Questionnaire to be completed by each household (or person) in the sample and mailed to the local census office. The population and housing information was transcribed from the Household Questionnaire to a sample FOSDIC schedule. When the Household Questionnaire was not returned or was returned without having been completed, the enumerator collected the missing information by personal visit or by tele-

phone and entered it directly on the sample FOSDIC schedule. In the remaining areas, when the enumerator picked up the ACR, he obtained all the information by direct interview and recorded it directly on the sample FOSDIC schedule.

Soon after the enumerator started work, his schedules were examined in a formal field review. This operation was designed to assure at an early stage of the work that the enumerator was performing his duties properly and had corrected any errors he had made.

More detailed descriptions of the 1960 Census procedures in the collection and processing of the data are given in reports entitled United States Censuses of Population and Housing, 1960: Principal Data Collection Forms and Procedures, 1961; and Processing the Data, 1962, U.S. Government Printing Office, Washington, D.C., 204-02.

## MANUAL EDITING AND CODING

After the FOSDIC forms had been checked for completeness in the field, they were sent to a central processing office for manual editing and coding and for microfilming. Except where some special problems arose, there was no manual coding of the FOSDIC forms for complete-count data. On the sample forms, the

manual operation was limited to those items where coding required the reading of written entries and therefore could not be done effectively by machine. The coding clerks converted the written entries to codes by marking the appropriate circles on the FOSDIC schedules and at the same time were able to correct obviously wrong entries and sometimes supply missing information.

#### ELECTRONIC PROCESSING

After the enumerators and coders recorded the information by marking the appropriate circles, the schedules were microfilmed. The information on the microfilm was then read by FOSDIC, which converted the markings to signals on magnetic tape. The tape, in turn, was processed in an electronic computer, which was used extensively to edit and tabulate the data and to produce the publication tables.

#### EDITING

For a majority of items, nonresponses and inconsistencies were eliminated by using the computer to assign entries and correct inconsistencies. In general, few assignments or corrections were required, although the amount varied by subject and by enumerator.

The assignment of an acceptable entry by machine was based on related information reported for the person or on information reported for a similar person in the immediate neighborhood. For example, in the assignment of age in the complete-count tabulations, the computer stored reported ages of persons by sex, color or race, household relationship, and marital status; each stored age was retained in the computer only until a succeeding person having the same characteristics and having age reported was processed through the computer; this stored age was assigned to the next person whose age was unknown and who otherwise had the same characteristics. This procedure insured that the distribution of ages assigned by the computer for persons of a given set of characteristics would correspond closely to the reported age distribution of such persons as obtained in the current census.

The extent of the allocations for nonresponse or for inconsistency is shown for the United States and for States, places of 10,000 inhabitants or more, and other areas in appendix tables in chapters B, C, and D of 1960 Census of Population, Volume I, Characteristics of the Population.

## SAMPLE DESIGN AND SAMPLING VARIABILITY

#### SAMPLE DESIGN

For persons in housing units at the time of the 1960 Census, the sampling unit was the housing unit and all its occupants; for persons in group quarters, it was the person. On the first visit to an address, the enumerator assigned a sample key letter (A, B, C, or D) to each housing unit sequentially in the order in which he first visited the units, whether or not he completed an interview. Each enumerator was given a random key letter to start his assignment, and the

Specific tolerances were established for the number of computer allocations acceptable for a given area. If the number was beyond tolerance, the data were rejected and the original schedules were re-examined to determine the source of the error. Correction and re-processing were undertaken as necessary and feasible.

#### ACCURACY OF THE DATA

Human and mechanical errors occur in any mass statistical operation such as a decennial census. Such errors include failure to obtain required information from respondents, obtaining inconsistent information, recording information in the wrong place or incorrectly, or otherwise producing inconsistencies between entries on interrelated items on the field documents. Sampling biases occur because some of the enumerators fail to follow the sampling instructions. Clerical coding and editing errors occur, as well as errors in the electronic processing operation.

Careful efforts are made in every census to keep the errors in each step at an acceptably low level. Review of the enumerator's work, verification of manual coding and editing, checking of tabulated figures, and ratio estimation of sample data to control totals from the complete count reduce the effects of the errors in the census data.

Some of the statistics shown in this report differ slightly from corresponding figures appearing in earlier publications because of special procedures used to consolidate the data.

Some innovations in the 1960 Censuses reduced errors in processing and others produced a more consistent quality of editing. The elimination of the card-punching operation removed one important source of error. The extensive use of electronic equipment insured a more uniform and more flexible edit than could have been accomplished manually or by less intricate mechanical equipment. It is believed that the use of electronic equipment in the 1960 Censuses has improved the quality of the editing compared with that of earlier censuses but, at the same time, it has introduced an element of difference in the statistics.

A group of reports designated Evaluation and Research Program Series will deal with the methods, results and interpretation of a group of evaluation and research studies of the 1960 Censuses of Population and Housing. A report entitled The Post-Enumeration Survey: 1950, Technical Paper No. 4, presents evaluative material on the 1950 Census.

order of canvassing was indicated in advance, although these instructions allowed some latitude in the order of visiting addresses. Each housing unit which was assigned the key letter "A" was designated as a sample unit and all persons enumerated in the unit were included in the sample. In every group quarters, the sample consisted of every fourth person in the order listed.

Although the sampling procedure did not automatically insure an exact 25-percent sample of persons or housing units in each locality, the sample design was



unbiased if carried through according to instructions; and, generally, for large areas the deviation from 25 percent was found to be quite small. Biases may have arisen, however, when the enumerator failed to follow his listing and sampling instructions exactly.

#### RATIO ESTIMATION

The statistics based on the sample of the 1960 Census returns are estimates that have been developed through the use of a ratio estimation procedure. This procedure was carried out for each of 44 groups of persons in each of the smallest areas for which sample data are published.<sup>6</sup> (For a more complete discussion of the ratio estimation procedure, see 1960 Census of Population, Volume I, Characteristics of the Population, Part 1, United States Summary.)

These ratio estimates reduce the component of sampling error arising from the variation in the size of household and achieve some of the gains of stratification in the selection of the sample, with the strata being the groups for which separate ratio estimates are computed. The net effect is a reduction in the sampling error and bias of most statistics below what would be obtained by weighting the results of the 25-percent sample by a uniform factor of four. The reduction in sampling error is trivial for some items and substantial for others. A by-product of this estimation procedure, in general, is that estimates for this sample are consistent with the complete count with respect to the total population and for the subdivisions used as groups in the estimation procedure.

#### SAMPLING VARIABILITY

The figures from the 25-percent sample tabulations are subject to sampling variability. The standard error is a measure of sampling variability. The chances are about 2 out of 3 that the difference due to sampling variability between an estimate and the figure that would have been obtained from a complete count of the population is less than the standard error. The chances are about 19 out of 20 that the difference is less than twice the standard error and about 99 out of 100 that it is less than 2½ times the standard error. The amount by which the estimated standard error must be multiplied to obtain other odds deemed more appropriate can be found in most statistical text books.

Standard errors of estimated totals are not included in this report because sampling variability has

<sup>6</sup> Estimates of characteristics from the sample for a given area are produced using the formula:

$$x' = \sum_{i=1}^{44} \frac{x_i}{Y_i} Y_i$$

where  $x'$  is the estimate of the characteristic for the area obtained through the use of the ratio estimation procedure,  $x_i$  is the count of sample persons with the characteristic for the area in one (i) of the 44 groups,  $Y_i$  is the count of all sample persons for the area in the same one of the 44 groups, and  $Y$  is the count of persons in the complete count for the area in the same one of the 44 groups.

probably only a minor effect on the totals as compared to other nonmeasurable factors influencing the quality of the data. For estimated totals of 50,000 or less, errors introduced by rounding the data to the nearest thousand will frequently be as great as sampling error or greater. The sampling errors for these numbers will be under 2,000 at the 99-percent confidence level. For estimated numbers above 50,000, the effect of other nonsampling errors, response and processing errors, generally have the greatest effect on the quality.

Rough estimates of the sampling error of estimated percentages can be obtained from table A. Somewhat more precise estimates of the sampling error may be obtained by using the factors shown in table B in conjunction with table A. The tables do not reflect the effect of response variance, processing variance, or bias arising in the collection, processing, and estimation steps. Estimates of the magnitude of some of these factors in the total error are being evaluated and will be published at a later date.

Table A.--ROUGH APPROXIMATION TO STANDARD ERROR OF ESTIMATED PERCENTAGE

(Range of 2 chances out of 3)

Estimated percentage	Base of percentage					
	500	1,000	2,500	10,000	25,000	100,000
2 or 98.....	1.3	0.9	0.5	0.3	0.1	0.1
5 or 95.....	2.0	1.4	0.9	0.4	0.2	0.1
10 or 90.....	2.8	2.0	1.2	0.6	0.3	0.2
25 or 75.....	3.8	2.7	1.5	0.7	0.4	0.2
50.....	4.4	3.1	1.6	0.8	0.5	0.3

Table A shows rough standard errors of data in the form of percentages. Linear interpolation in table A will provide approximate results that are satisfactory for most purposes.

For a discussion of the sampling variability of medians and means and of the method for obtaining standard errors of differences between two estimates, see 1960 Census of Population, Volume I, Characteristics of the Population, Part 1, United States Summary.

Table B provides a factor by which the standard errors shown in table A should be multiplied to adjust for the combined effect of the sample design and the estimation procedure.

Table B.--FACTOR TO BE APPLIED TO STANDARD ERRORS

Characteristic	Factor
Age, by sex (by farm, nonfarm).....	1.8
Color or race (by farm, nonfarm).....	1.8
Nativity and parentage.....	1.4
Years of school completed, by sex.....	1.0
Labor-force status, by age and sex.....	1.0
Occupation of employed, by sex.....	1.0
Income in 1959 of families and unrelated individuals.....	1.0

To estimate a somewhat more precise standard error for a percentage of a given characteristic, locate in table B the factor applying to the character-

## XVIII

istic. Where data are shown as cross-classifications of two characteristics, locate each characteristic in table B. The factor to be used for any cross-classification will usually lie between the values of the factors. When a given characteristic is cross-classified in extensive detail (e.g., by single years of age), the factor to be used is the smaller one shown in table B. Where a characteristic is cross-classified in broad groups (or used in broad groups), the factor to be used in table B should be closer to the larger one. To obtain a somewhat more precise estimate of the standard error of a percentage, multiply the standard error as shown in table A by the factor from table B. The result of this multiplication is the approximate standard error.

Illustration: Table 3 shows that in rural-farm areas of SMSA's the proportion of women 65 and over who were in the labor force was 9.1 percent. The base of the percentage is 75,000. Table A shows that the standard error of an estimated percentage of 9.1 with a base of 75,000 is 0.2. Table B gives a factor of 1.8 for data classified by age and sex, by farm and nonfarm. Multiplying the 0.2 by 1.8 gives an approximate standard error of about 0.4. This means that the chances are about 2 out of 3 that the difference between the estimated 9.1 percent and the result of a complete census is less than the 0.4. Similarly, the chances are 99 out of 100 that the difference is less than 1.0 percent--that is,  $2\frac{1}{2}$  times the estimated standard error.

List 1.--COMBINATIONS OF STATES

Delaware, Maryland, and D.C.

North Carolina and Virginia

Appalachian States

Kentucky  
Tennessee  
West Virginia

Deep South

Alabama  
Arkansas  
Georgia  
Louisiana  
Mississippi  
South Carolina

Oklahoma and Texas

Northern Mountain States

Colorado  
Idaho  
Montana  
Wyoming

Oregon and Washington

List 2.--TEN LARGEST STATES, 1960

New York  
California  
Pennsylvania  
Illinois  
Ohio

Texas  
Michigan  
New Jersey  
Massachusetts  
Florida

List 3.--CHARACTERISTICS OF POPULATION: DENSITY IN 1960

Population Per Square Mile

Less than 10

Alaska  
Idaho  
Montana  
Nevada  
New Mexico  
North Dakota  
South Dakota  
Wyoming

10 to 49

Arizona  
Arkansas  
Colorado  
Iowa  
Kansas  
Maine  
Minnesota  
Mississippi  
Nebraska  
Oklahoma

10 to 49--Con.

Oregon  
Texas  
Utah  
Vermont  
Washington

50 to 99

Alabama  
Florida  
Georgia  
Hawaii  
Kentucky  
Louisiana  
Missouri  
New Hampshire  
North Carolina  
South Carolina  
Tennessee  
Virginia  
West Virginia  
Wisconsin

100 to 249

California  
Delaware  
Illinois  
Indiana  
Michigan  
Ohio

250 to 499

Maryland  
New York  
Pennsylvania

500 or more

Connecticut  
District of Columbia  
Massachusetts  
New Jersey  
Rhode Island

List 4.--CHARACTERISTICS OF POPULATION: CHANGE, 1940 TO 1960

Percent Change

Decrease

Arkansas  
Mississippi  
North Dakota  
Oklahoma  
West Virginia

Less than 20 percent increase

Alabama  
District of Columbia  
Iowa  
Kentucky  
Maine  
Massachusetts  
Missouri  
Nebraska  
Pennsylvania  
South Dakota  
Vermont

20 to 34 percent increase

Georgia  
Idaho  
Illinois  
Kansas  
Minnesota  
Montana  
New Hampshire  
New York  
North Carolina  
Rhode Island  
South Carolina  
Tennessee  
Wisconsin  
Wyoming

35 to 49 percent increase

Connecticut  
Hawaii  
Indiana  
Louisiana

35 to 49 percent increase--Con.

Michigan  
New Jersey  
Ohio  
Texas  
Virginia

50 to 99 percent increase

Colorado  
Delaware  
Maryland  
New Mexico  
Oregon  
Utah  
Washington

100 percent or more increase

Alaska  
Arizona  
California  
Florida  
Nevada

## List 5.--CHARACTERISTICS OF POPULATION: STANDARD METROPOLITAN STATISTICAL AREAS IN 1960

Percent in SMSA'sLess than 15

Alaska  
Idaho  
Mississippi  
North Dakota  
South Dakota  
Vermont  
Wyoming

15 to 24

Arkansas  
Maine  
Montana  
North Carolina  
New Hampshire

25 to 49

Alabama  
Georgia  
Indiana  
Iowa  
Kansas

25 to 49--Con.

Kentucky  
Nebraska  
New Mexico  
Oklahoma  
South Carolina  
Tennessee  
West Virginia  
Wisconsin

50 to 74

Arizona  
Colorado  
Delaware  
Florida  
Louisiana  
Michigan  
Minnesota  
Missouri  
Nevada  
Ohio  
Oregon

50 to 74--Con.

Texas  
Utah  
Virginia  
Washington

75 to 84

Connecticut  
Hawaii  
Illinois  
Maryland  
New Jersey  
Pennsylvania

85 and over

California  
District of Columbia  
Massachusetts  
New York  
Rhode Island

## List 6.--CHARACTERISTICS OF POPULATION: URBAN POPULATION, 1900

Percent UrbanLess than 15

Alabama  
Arkansas  
Idaho  
Mississippi  
New Mexico  
North Carolina  
North Dakota  
Oklahoma  
South Carolina  
South Dakota  
West Virginia

15 to 29

Alaska  
Arizona  
Florida  
Georgia  
Hawaii  
Iowa  
Kansas

15 to 29--Con.

Kentucky  
Louisiana  
Nebraska  
Nevada  
Tennessee  
Texas  
Virginia  
Vermont  
Wyoming

30 to 44

Indiana  
Maine  
Michigan  
Minnesota  
Missouri  
Montana  
Oregon  
Utah  
Washington  
Wisconsin

45 to 59

California  
Colorado  
Connecticut  
Delaware  
Illinois  
Maryland  
New Hampshire  
Ohio  
Pennsylvania

60 and over

District of Columbia  
Massachusetts  
New Jersey  
New York  
Rhode Island

## List 7.--CHARACTERISTICS OF POPULATION: GAINFULLY OCCUPIED IN PRIMARY INDUSTRY, 1930

Percent of Gainfully OccupiedLess than 10

Connecticut  
District of Columbia  
Massachusetts  
New Jersey  
New York  
Rhode Island

10 to 19

California  
Delaware  
Illinois  
Maryland  
Michigan  
New Hampshire  
Ohio  
Pennsylvania

20 to 29

Florida  
Indiana  
Maine  
Missouri  
Oregon  
Vermont  
Washington  
Wisconsin

## List 7.--CHARACTERISTICS OF POPULATION: GAINFULLY OCCUPIED IN PRIMARY INDUSTRY, 1930--Con.

Percent of Gainfully Occupied--Con.

<u>30 to 39</u>	<u>40 to 49</u>	<u>40 to 49--Con.</u>
Arizona	Alaska	Texas
Colorado	Hawaii	West Virginia
Iowa	Idaho	Wyoming
Kansas	Georgia	<u>50 and over</u>
Louisiana	Kentucky	Alabama
Minnesota	Montana	Arkansas
Nebraska	New Mexico	Mississippi
Nevada	North Carolina	North Dakota
Utah	Oklahoma	South Carolina
Virginia	Tennessee	South Dakota

## List 8.--CHARACTERISTICS OF POPULATION: NATIVITY AND INDUSTRIAL STATUS, 1930

Percent Native, Native Parents

<u>95 and over and agrarian</u>	<u>75 to 94 and industrial--Con.</u>	<u>Less than 55 and agrarian</u>
Alabama	Indiana	Arizona
Arkansas	Maryland	Hawaii
Georgia	West Virginia	Minnesota
Kentucky	<u>55 to 74 and agrarian</u>	Montana
Mississippi	Colorado	North Dakota
North Carolina	Idaho	South Dakota
South Carolina	Iowa	Wisconsin
Tennessee	Nebraska	<u>Less than 55 and industrial</u>
Virginia	New Mexico	California
<u>75 to 94 and agrarian</u>	Utah	Connecticut
Kansas	Vermont	Illinois
Louisiana	Wyoming	Massachusetts
Missouri	<u>55 to 74 and industrial</u>	Michigan
Oklahoma	Alaska	Nevada
Texas	Maine	New Hampshire
<u>75 to 94 and industrial</u>	Ohio	New Jersey
Delaware	Oregon	New York
District of Columbia	Pennsylvania	Rhode Island
Florida	Washington	

## List 9.--CHARACTERISTICS OF POPULATION: LABOR FORCE IN PROFESSIONAL, TECHNICAL, AND KINDRED OCCUPATIONS, 1960

Percent of Labor Force

<u>Less than 8</u>	<u>8.0 to 9.9--Con.</u>	<u>12.0 to 12.9</u>
Alabama	Montana	Colorado
Arkansas	New Hampshire	Connecticut
Georgia	Oregon	Massachusetts
Iowa	Pennsylvania	New Jersey
Kentucky	Rhode Island	New York
Maine	Texas	Utah
Mississippi	Vermont	Washington
Nebraska	West Virginia	<u>13.0 and over</u>
North Carolina	Wisconsin	Alaska
North Dakota	<u>10.0 to 11.9</u>	California
South Carolina	Arizona	Delaware
South Dakota	Hawaii	District of Columbia
Tennessee	Illinois	Maryland
<u>8.0 to 9.9</u>	Michigan	New Mexico
Florida	Minnesota	
Idaho	Nevada	
Indiana	Ohio	
Kansas	Oklahoma	
Louisiana	Virginia	
Missouri	Wyoming	

## List 10.--CHARACTERISTICS OF POPULATION: FAMILIES WITH HEADS COMPLETING FOUR OR MORE YEARS OF COLLEGE, 1960

Percent of FamiliesLess than 6.5

Alabama  
Arkansas  
Kentucky  
Mississippi  
West Virginia

6.5 to 8.4

Georgia  
Indiana  
Iowa  
Louisiana  
Maine  
Michigan  
Missouri  
Nebraska  
North Carolina  
North Dakota  
Pennsylvania  
Rhode Island  
South Carolina

6.5 to 8.4--Con.

South Dakota  
Tennessee  
Vermont  
Wisconsin

8.5 to 10.4

Florida  
Idaho  
Illinois  
Kansas  
Minnesota  
Montana  
Nevada  
New Hampshire  
Ohio  
Oklahoma  
Oregon  
Texas  
Virginia  
Wyoming

10.5 to 12.4

Alaska  
Arizona  
California  
Connecticut  
Hawaii  
Maryland  
Massachusetts  
New Jersey  
New Mexico  
New York  
Washington

12.5 or more

Delaware  
District of Columbia  
Colorado  
Utah

## List 11.--CHARACTERISTICS OF POPULATION: FAMILIES WITH INCOMES IN 1959 OF \$10,000 OR MORE, 1960

Percent of FamiliesLess than 10.0

Alabama  
Arkansas  
Georgia  
Kentucky  
Louisiana  
Maine  
Mississippi  
North Carolina  
North Dakota  
South Carolina  
South Dakota  
Tennessee  
Vermont  
West Virginia

10.0 to 12.4

Florida  
Idaho  
Iowa  
Kansas

10.0 to 12.4--Con.

Missouri  
Montana  
Nebraska  
New Hampshire  
Oklahoma  
Rhode Island  
Texas

12.5 to 14.9

Arizona  
Colorado  
Indiana  
Minnesota  
New Mexico  
Oregon  
Pennsylvania  
Utah  
Virginia  
Wisconsin  
Wyoming

15.0 to 19.9

Delaware  
Maryland  
Massachusetts  
Michigan  
New York  
Ohio  
Washington

20.0 and over

Alaska  
California  
Connecticut  
District of Columbia  
Hawaii  
Illinois  
Nevada  
New Jersey