

# SOCIOECONOMIC DATA

Robert Voight  
U. S. Bureau of the Census

The 1970 Census of Population and Housing will provide many thousands of items of socioeconomic data for a variety of geographic areas of importance to transportation planning. The tabulations yielding this information have already begun and will continue over a period of another 24 months. Two major media will be utilized to present the results of the 1970 census: (a) printed reports containing some 175,000 pages of statistical summaries, and (b) magnetic computer tapes containing nearly 10 times as many data as the printed reports. Microfilm and printouts from the tapes will also be available. A brochure is available that gives a brief description of the various types of statistical output presently planned for the 1970 census (1). Later revisions or addenda to this brochure will be issued to include minor changes in timing and descriptions of additional reports on various subjects as they are finally determined. Announcements and order forms are available from the Bureau of the Census or any U. S. Department of Commerce Field Office. Census reports are also filed in many libraries and are available for examination or purchase at any field office.

## SUMMARY TAPES

One series of computer tapes containing statistical summaries of various categories of data will be available, subject to suppression of certain detail where necessary to protect confidentiality, at the cost of preparing the tape (microfilm or printouts). A reel of tape costs about \$60. The major portion of the results of the census will be produced in 6 tabulation counts. The first 3 counts will contain summaries for very small areas and will relate to the subject items collected on a 100 percent basis. The second 3 counts will relate to the bulk of the socioeconomic items collected on a sample basis but will also generally include the 100 percent items for purposes of cross-classification. Complete descriptions of these counts and itemized data included in each count are available in a series of brochures titled "Data Access Descriptions." Brochures covering the first 4 counts have been printed. The Data Access Descriptions series also describe the census maps available and other items of interest to potential users of census data. For almost all data, except state, SMSA, or county summaries, it is essential that the user have the census maps to identify the various geographic areas for which data are summarized.

## SUMMARY TAPE PROCESSING CENTERS

As a part of the bureau's effort to be more responsive to the specialized needs of users, some 60 Summary Tape Processing Centers have been recognized by the bureau but are not organized or supported by it. Centers develop through local initiative and interest, and their form, purposes, and services are determined by the organizers. They may be at universities, in regional planning organizations, or in profit-making companies. Many will obtain tapes for their immediate states or regions only; several have placed orders for the complete national file of summary tapes. It is anticipated that these centers will provide more immediate service to

potential users of census data by eliminating the inevitable backlog by the bureau. This activity will also enhance the bureau's ability to meet the requests for special tabulations that require the use of basic tapes. These contain data in such small-area detail as to risk identification of the source, even though names and addresses were deleted at the start. They can only be processed by the bureau to delete certain detail, as noted previously, and to ensure the confidentiality of census information.

#### EARLY DATA

The first responsibility of the Bureau of the Census is to provide final certified state population totals to the President by December 1, 1970. In tabulating the returns to determine these totals in the first count, the bureau will summarize the official population counts in a series of state reports, Series PC(1)A, that will present the totals for counties (by urban-rural residence), SMSA's, urbanized areas, minor civil divisions, all incorporated places, and unincorporated places of 1,000 or more inhabitants. Also statistics on 100 percent housing subjects, Series HC(1)A, will be presented for states, counties, SMSA's (by urban-rural residence), urbanized areas, and places of 1,000 or more. File A of this count will provide some 400 data items for each of some 250,000 enumeration districts or groups of blocks in cities of 50,000 or more across the country; each district or group of blocks contains about 800 to 900 persons. The characteristics include sex by age, race, marital status, household relationship, types of families, and housing value and rent. It also includes occupied and vacant housing units by tenure and race of head of household, plumbing facilities, toilet facilities, persons in occupied units with 1.01 and 1.51 or more persons per room, occupied units by number of persons in unit, tenancy status by race, telephone availability, vacancy status, number of rooms, type of structure, and many other characteristics of interest to transportation planners. File B of this count provides summaries of these characteristics for the state, counties, minor civil divisions, places, and congressional districts.

The second count of 100 percent data is also tabulated to yield 2 files. File A is limited to census tracts and presents population and housing data for specific areas. For the nation as a whole there are about 35,000 census tracts established. File B presents data for some 70,000 individual census areas including places, minor civil divisions, counties, SMSA's, urbanized areas within the state, and combinations of various types of areas. A total of 1,426 population items and 2,159 housing items will be tabulated for each tract in File A and each geographic area in File B. The socio-economic data will include race, age, household relationship, marital status, and type of household by race of head, age of head, and family type. It also includes value and rent by race (white and black), vacancy status, type of structure, plumbing facilities by tenure and race of household head, overcrowding by tenure and race of household head, and other characteristics relating to the economic level of the housing units.

#### SMALL-AREA DATA

Of particular interest to transportation planners are the data by city blocks. The number of census blocks tabulated in 1970 are about double the number in the previous census. Almost 250 data items will be tabulated for each of the 1,500,000 census blocks delineated in the urbanized area of the 233 SMSA's. In addition to the statistics in the regular block program, the bureau will collect and tabulate, on a contractual basis, statistics for about 125,000 blocks located in more than 900 areas outside urbanized areas. The data for these blocks will also be available both in printed reports and on computer tapes.

Population data to be tabulated for each city block include total population by sex, race, 21 age groups, marital status, and household relationship. Housing items include occupancy-vacancy status; occupied units by tenure by race of household head; type of structure; number of rooms by tenure and race of household head; number of units in multiunit structures by number of units at address; plumbing; toilet; and value of kitchen facilities by occupancy status and race of household head; control rent for renter-occupied units by occupancy status and race of household head; vacancy

characteristics; units with roomers, boarders, or lodgers; and overcrowding by race of household head and by presence of plumbing facilities. Many of these characteristics are significant to land use studies made by transportation planners.

#### SMALL-AREA SAMPLE DATA

Some of the most significant socioeconomic data of interest to transportation planners are contained in the sample questions asked of every fifth household in the 1970 census. Many of these items, such as migration and place of work, require manual coding; hence, the tabulation of this information will be accomplished from January through October 1971.

These tabulations will be the fourth in the census series and will contain information from the 5 and 15 percent samples; the commonality of some questions in both samples will also, in effect, create a 20 percent sample. The 100 percent items are generally included for the purpose of cross-tabulation. File A of this count will contain census tract summaries; File B will be minor civil division summaries; and File C will include summaries for the state, counties, places, SMSA's, and their component parts. Files A and B will present about 13,000 cells of data for each tract or minor civil division. File C will also present 13,000 data cells for each place, but 30,000 cells for each of the larger geographic areas where the sample items are presented for urban-rural and rural nonfarm and farm residence.

This count provides many of the socioeconomic characteristics of critical importance to many types of planning and analysis in a variety of local programs. It will include information on country of origin of the foreign-born population, citizenship, state of birth, migration, place of work, means of transportation to work, educational attainment and enrollment by type of school, types of families, types of group quarters, disability and employment status of persons 16 to 64 years, age of persons 16 years and older in the labor force by sex, occupation and industry of employed persons by sex for some 40 categories, weeks worked, work status in 1970 and in 1965, family income, income of persons by sex, earnings and occupations of males and females, low-income status of families, family heads and unrelated individuals by sex, labor force status, low-income families receiving income assistance, and value of dwelling or rent paid by low-income families.

Housing characteristics to be tabulated in the fourth count include a number of significant items for transportation analysts. Stories in structures (1 to 3, 4 to 6, 7 to 12, and 13 or more) provide a measure of density for forecasting travel. Also included are number of rooms, presence of basement, units at address, value and rent, duration of vacancy, plumbing facilities, household income, year moved into unit, value-income ratio, asking rent for vacants, sale prices for vacants for sale, automobiles available (0, 1, 2, and 3 or more) for owners and renters, and household appliances owned. A subset of these characteristics will also be tabulated (but not published) for ZIP code areas—at the 3-digit level outside SMSA's and at the 5-digit level for the SMSA's.

#### LARGE-AREA DATA

A sixth count of 1970 population and housing census items based on the sample will provide a great deal of socioeconomic detail for large geographic areas. Here the full distribution of occupation and industry detail will be displayed for the state, SMSA's, cities of 100,000 and more, and central cities of SMSA's. This count will provide a total of 150,000 cells of population information and 110,000 cells of housing data.

Examples of social characteristics for SMSA's, urbanized areas, and urban places of 10,000 or more that will be published are as follows: percentage of population foreign born, percentage of native population of foreign or mixed parentage, percentage of native population who reside in their state of birth, percentage of total population who moved into their dwelling unit after 1968, percentage of persons 25 years and older who completed 4 years of high school or more and median years of school completed, and percentage of families with own children under six.

Economic characteristics published for these areas include nonworker and worker ratio, percentage of females 14 years and older in labor force, percentage of total married women in labor force and those with own children under six, percentage of males 18 to 24 years in labor force, percentage of males 65 years and older in labor force, percentage unemployed in the civilian labor force, percentage of employed persons in manufacturing industries and in white-collar occupations, percentage of workers working outside county of residence during census week, percentage of workers using public transportation, percentage of those who worked in 1969 who worked 50 to 52 weeks, median income of families, percentage of families with incomes of \$3,000 or less, and percentage of families with incomes of \$10,000 or more.

A somewhat condensed set of social and economic characteristics will be published for urban places of 2,500 to 10,000 inhabitants and for each county.

A series of reports, Series HC(2), covering most of the 1970 housing census subjects in considerable detail and cross-classifications will be issued between April 1971 and February 1972. There will be one report for each of the 233 SMSA's presenting data for the SMSA as a whole and for the large cities it contains. The series will also include a national summary.

Tables 1, 2, 3, and 4 give summaries of the social and economic characteristics to be made available from the 1970 census.

In 1972 the bureau expects to issue a series of subject reports. Each report will concentrate on a particular social or economic characteristic of the population. Some of these reports will include data for SMSA's and states. Among the characteristics to be covered as currently planned are migration, education, employment and unemployment, occupation and industry, income, and place of work.

#### DATA SUMMARIES

Analysts and planners who find data compendia useful reference tools will be interested to know that a 1972 County and City Data Book will be issued by the bureau.

TABLE 1  
GENERAL POPULATION CHARACTERISTICS, 1970, CONTAINED IN STATE REPORTS, SERIES PC(1)B

Characteristics	State	SMSA's	Urbanized Areas	Places of 10,000 or More	Places of 2,500 to 10,000	Places of 1,000 to 2,500	Counties	Rural Population of Counties	Minor Civil Divisions
<b>Race</b>									
White, Negro, Indian, Japanese, Chinese, Filipino, other	X	X	X	X	X		X	X	
White, Negro, other						X			X
<b>Age<sup>a</sup></b>									
Single years to 100 years and over	X								
Single years to 21 years and over and 5-year intervals to 85 years and over	X	X	X	X			X		
5-year intervals to 75 years and over					X			X	
Median age, persons under 18 and 65 and over	X	X	X	X	X	X	X	X	X
<b>Relationship to head of household<sup>a</sup></b>									
For all persons	X	X	X	X	X		X	X	
For persons under 18 years old	X	X	X	X	X	X	X	X	
For persons 65 years old and over	X	X	X	X	X		X	X	
Persons per household	X	X	X	X	X	X	X	X	X
<b>Type of family and presence and number of own children<sup>a</sup></b>	X	X	X	X			X		
<b>Marital status<sup>a</sup></b>	X	X	X	X			X		

Note: Complete count data.

<sup>a</sup>Cross-classified by race (total, white, Negro) for the state, SMSA's, UA's, and places of 10,000 or more.

TABLE 2

GENERAL SOCIAL AND ECONOMIC CHARACTERISTICS, 1970, CONTAINED IN STATE REPORTS, SERIES PC(1)C

Characteristics	State	SMSA's, Urban- ized Areas, Places of 25,000 or More	Places of 10,000 to 25,000	Places of 2,500 to 10,000	Counties	Rural Farm and Nonfarm Popu- lation of Coun- ties	Areas With Negro Population of 1,000 or More	
							SMSA's, Urbanized Areas, and Places of 25,000 or More	Counties
Age	X					X		
Relationship to head of household	X					X		
Families by number of own children	X							
Nativity and parentage	X	X	X		X			
Country of origin	X	X	X		X			
Mother tongue	X	X	X		X			
State of birth	X	X	X	X	X		X	X
Residence in 1965	X	X	X	X	X		X	X
Year moved into present house	X	X						
Place of work	X	X						
Means of transportation	X	X						
Veteran status	X	X						
School enrollment	X	X	X	X	X	X	X	X
Years of school completed	X	X	X	X	X	X	X	X
Vocational training	X	X						
Children ever born	X	X	X		X	X	X	X
Family composition	X	X	X		X			
Previous marital status	X	X						
Group quarters population by type	X	X	X		X			
Disability	X	X						
Employment status	X	X	X	X	X	X	X	X
Occupation	X	X	X	X	X	X	X	X
Industry	X	X	X	X	X	X	X	X
Weeks worked	X	X						
Class of worker	X	X	X	X	X	X	X	X
Last occupation of unemployed	X	X	X		X	X	X	X
Work status in 1965	X	X						
Family income	X	X	X	X	X	X	X	X
Income of persons	X	X	X		X	X	X	X
Median earnings for selected occupations	X	X						
Type of income	X	X	X		X	X	X	X
Characteristics of families and persons with income below poverty level	X	X	X	X	X	X	X	X

Note: Sample data. For many subjects the amount of detail has been collapsed in moving from large to small areas.

TABLE 3

HOUSING UNITS AND POPULATION CHARACTERISTICS, 1970

Characteristics	Places of 2,500 or More	Blocks Within Census Tracts	Blocks Within Block Numbering Areas or Census Tracts
Total population			
Percent of total population			
Negro			
In group quarters			
0 to 17 years			
62 years and older			
Year-round housing units			
Total			
Lacking some or all plumbing facilities			
Units in			
1-unit structures			
Structures of 10 or more units			
Occupied housing units			
Owner			
Total			
Lacking some or all plumbing facilities			
Average number of rooms			
Average value (\$)			
Percent Negro			
Renter			
Total			
Lacking some or all plumbing facilities			
Average number of rooms			
Average contract rent (\$)			
Percent Negro			
1.01 or more persons per room			
Total			
With all plumbing facilities			
1-person households			
With female head of primary family			
With roomers, boarders, or lodgers			

Note: Data exclude seasonal and vacant migratory housing units.

TABLE 4  
 PLANNED CONTENT OF HOUSING VOLUME REPORT AND CENSUS TRACT REPORTS

Subject	State	SMSA's and Component Parts	Places of 10,000 to 50,000 <sup>a</sup>	Places of 2,500 to 10,000 <sup>a</sup>	Places of 1,000 to 2,500 <sup>a</sup>	Counties			Census Tract	Census Tracts With Negro or Spanish- American Population of 400 or More
						Total <sup>a</sup>	Rural <sup>b</sup>	Occupied Farm <sup>b</sup>		
100 percent items										
Access	X	X	X						X	
Rooms	X	X	X	X	X	X <sup>c</sup>	X <sup>c</sup>	X <sup>c</sup>	X	X
Units in structure	X	X	X	X	X	X				
Basement	X	X	X							
Population, 1970	X	X	X	X	X	X	X <sup>c</sup>	X		
Persons per room	X	X	X	X	X	X	X <sup>c</sup>	X <sup>c</sup>	X	X
With plumbing	X	X	X	X	X	X	X	X <sup>c</sup>	X	X
Race	X	X	X	X	X	X	X	X	X	
Tenure	X	X	X	X	X	X	X <sup>c</sup>	X <sup>c</sup>	X	X
Vacancy status	X	X	X	X	X	X	X		X	
Duration of vacancy	X	X	X	X	X	X	X		X	
Bath tub or shower	X	X	X	X		X	X <sup>c</sup>	X		
Plumbing facilities	X	X	X	X	X	X <sup>c</sup>	X <sup>c</sup>	X	X	X
Flush toilet	X	X	X	X		X	X	X		
Water supply	X	X	X	X		X	X <sup>c</sup>	X <sup>c</sup>		
Complete kitchen facilities	X	X	X	X		X	X	X	X	
Value	X	X	X	X	X	X	X		X	X
With plumbing	X	X	X	X		X	X			
Contract rent	X	X	X	X	X	X	X		X	X
With plumbing	X	X	X	X		X	X			
Telephone	X	X	X	X		X	X <sup>c</sup>	X		
Persons	X	X	X	X	X	X	X <sup>c</sup>	X <sup>c</sup>	X	X
20 percent items										
Year structure built	X	X	X	X		X	X <sup>c</sup>	X <sup>c</sup>	X	X
Units in structure	X	X	X	X		X	X	X	X	X
Gross rent	X	X	X	X		X	X <sup>c</sup>	X	X	X
Heating equipment	X	X	X	X		X	X	X	X	X
15 percent items										
Complete bathrooms	X	X	X	X		X	X	X	X	X
Sewage disposal	X		X	X		X	X <sup>c</sup>	X <sup>c</sup>	X	X
Source of water	X		X	X		X	X <sup>c</sup>	X <sup>c</sup>	X	X
Air conditioning	X	X	X	X		X	X	X	X	X
Automobiles available	X	X	X	X		X	X	X	X	X
Year moved into unit	X	X	X	X		X	X	X	X	X
5 percent items										
Bedrooms	X	X <sup>d</sup>	X <sup>d</sup>			X <sup>d</sup>	X	X		
Second home	X	X <sup>d</sup>	X <sup>d</sup>			X <sup>d</sup>	X	X		
Clothes dryer	X	X <sup>d</sup>	X <sup>d</sup>			X <sup>d</sup>	X	X		
Clothes washer	X	X <sup>d</sup>	X <sup>d</sup>			X <sup>d</sup>	X	X		
Dishwasher	X	X <sup>d</sup>	X <sup>d</sup>			X <sup>d</sup>	X	X		
Home food freezer	X	X <sup>d</sup>	X <sup>d</sup>			X <sup>d</sup>	X	X		
Cooking fuel	X	X <sup>d</sup>	X <sup>d</sup>			X <sup>d</sup>	X	X		
House heating fuel	X	X <sup>d</sup>	X <sup>d</sup>			X <sup>d</sup>	X	X		
Water heating fuel	X	X <sup>d</sup>	X <sup>d</sup>			X <sup>d</sup>	X	X		
Television (sets)	X	X <sup>d</sup>	X <sup>d</sup>			X <sup>d</sup>	X	X		
Television (UHF-equipped)	X	X <sup>d</sup>	X <sup>d</sup>			X <sup>d</sup>	X	X		
Battery-operated radio	X	X <sup>d</sup>	X <sup>d</sup>			X <sup>d</sup>	X	X		
Elevator in structure	X	X <sup>d</sup>	X <sup>d</sup>			X <sup>d</sup>				

<sup>a</sup>Data for units with Negro or Spanish-American head only shown for areas with 400 Negro or Spanish-American inhabitants or more.

<sup>b</sup>Only items shown for units with Negro head are those to which footnote c applies.

<sup>c</sup>Data shown for units with Negro head if 400 Negro inhabitants or more.

<sup>d</sup>Data for units with Negro head only shown for areas with 10,000 Negro inhabitants or more.

These data books provide summaries of a broad spectrum of social and economic data for regions, census divisions, states, counties, SMSA's, and cities of 25,000 or more. The information will also be available on computer tapes and punchcards. Nearly 150 data items will be presented for each city of 25,000 or more including the most recent information available on population, vital statistics, education, employment, income,

housing, banking, manufacturing employment, establishments and payrolls, retail trade establishments and sales by major kinds of business, wholesale trade and selected services, and city government data covering general revenue and expenditure categories, employment, and payrolls. This data book provides a ready means for making comparisons of the characteristics of various cities within a single state or region or of various geographic areas.

#### SUMMARY

The products of the 1970 census will be the most extensive ever provided by the bureau. There has been a concentrated effort to meet the demands for social and economic characteristics of the population and the homes they live in at the finest levels of geographic detail that will still permit the tabulation of meaningful data. There has been an effort to provide for maximum flexibility of tabulation summaries to permit the recombination of these into administrative or operational areas of significance to local organizations. The bureau will make the data available in a variety of media—publications, computer tapes, printouts, microfilm, and microfiche—so that users may select and purchase the data in the format most suitable for their purposes.

To make the information from future censuses of greater value, we invite criticisms and suggestions for improvements in the data and the data delivery systems based on actual experience with the 1970 census.

#### REFERENCE

1. Tentative Publication and Computer Tape Program for the 1970 Census. U. S. Bureau of the Census.