

SMALL-AREA DATA ACTIVITIES

Issued occasionally by the Bureau of the Census with the assistance of the Small-Area Data Advisory Committee.

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The Economic Censuses

Preparations are now in the final stages for the 1967 Economic Censuses. This series of censuses which is conducted every five years will include the Business Census, the Census of Manufactures and Mineral Industries, The Census of Transportation, and, for the first time, a Construction Census. The latter was described in the last issue of Small-Area Data Activities; the others are described below.

The Business Census

The Business Census, covering retail and wholesale firms and selected services, deals for the most part with individual businesses or establishments. The Bureau reports data on the number of establishments, sales or receipts, employees, and payrolls as well as various other statistics. A direct mail canvass is employed to obtain the census returns from multi-unit employers and from large single unit employer establishments. Data for "non-employer" businesses, and from small single unit employers are obtained from federal tax returns. The tax returns are classified by location through an address register file we have established and given an approximate census tract in the cities of 25,000 or more inhabitants.

Data are published for SMSA's, counties, and cities down to 2,500 inhabitants, in corresponding fewer levels of detail to preserve confidentiality. Data also are published for retail trade establishments in central business districts and major retail centers.

Although it is not a part of the 1967 Economic Census, another source of business small-area data is County Business Patterns (CBP). It is published annually providing information for counties by industry group. It shows data on number of reporting units, first quarter payroll, and number of employees by employment-size class. Administrative and auxiliary units, as well as regular establishments, are covered in CBP. CBP is concerned with all parts of the private, non-agricultural economy covered under the social security system.

Census of Manufactures and Mineral Industries

The 1967 Census of Manufactures will closely follow the pattern of the 1963 census. For example, the questions on employment and payrolls are identical to those used in 1963 and in subsequent Annual Surveys of Manufactures. In 1963 an inquiry on the gross value of assets and rental payments was added. Then in 1965 the asset and rental inquiries were made separately for (a) buildings and structures and (b) machinery and equipment. There will be two or three supplemental canvasses done in connection with the basic census for 1967--(1) distribution of sales by class of customer, last done in 1958 and programed on a 10-year cycle; (2) a survey of industrial water use during 1968 covering large consumers only; and (3) a report on Government-owned and operated establishments. Other information concerning quantity and value of products shipped and materials used, cost of fuels and electrical energy, capital expenditures, inventories, man-hours, value added by manufacturing, number of establishments, and number of companies is also compiled.

The Minerals Census will parallel that for 1963 with new inquiries in the oil and gas areas. The added data will relate to development costs by depth of well, expenditures for mineral rights, and related items on geophysical costs.

Tabulation plans for both censuses will parallel those of the 1963 censuses. Administrative records from the Social Security Administration and Internal Revenue Service will be used in lieu of direct collection for manufacturers with fewer than 10 employees and mineral companies with fewer than five employees. A corrected, nondisclosure output tape will be created to permit the derivation of publication copy from the high-speed printer. This step will facilitate meeting requests from data users for computer tapes with the final tabulated data for use in data banks and for further statistical manipulation.

Census of Transportation

The various surveys of the Transportation Census were set up primarily to provide national figures. The data will be published in the following series of reports:



U.S. DEPARTMENT OF COMMERCE
Alexander B. Trowbridge, Secretary
William H. Shaw, Asst. Secy., Economic Affairs

U.S. BUREAU OF THE CENSUS
A. Ross Eckler, Director

1. The National Travel Survey produces statistics showing national and regional passenger transportation patterns for 1967, and their relationship to socio-economic and geographic factors.
2. The Truck Inventory and Use Survey yields data concerning the Nation's trucking resources; such as the number of trucks classified by physical characteristics, their occupational use, and geographic distribution of vehicles by States and regions.
3. The Commodity Transportation Survey will provide data for 1967 concerning the physical and geographic distribution of commodities shipped by the manufacturing sector of the national economy.

Twenty-five Production Area Reports are available from the Commodity Transportation Survey, giving information on the flow of traffic from manufacturing plants located in each of 25 selected production areas composed of one or more adjacent Standard Metropolitan Statistical Areas. These reports provide statistics on total tons and ton miles of commodities shipped from each production area, classified by means of transport, distance, and destination. The designation of the production areas makes possible comparisons between traffic flow data and economic and demographic statistics available in other Census reports.

4. The Bus and Truck Carrier Survey supplies statistics concerning for-hire carriers that are not subject to economic regulation by the Interstate Commerce Commission.

Present plans for the 1967 Census of Transportation call for covering essentially the same subject matter as the 1963 program with the added potential of measures of change between the two Censuses. On the basis of the 1963 experience and improved processing techniques, the 1967 program is expected to be completed in about half the time of the 1963 program.

Federal-State Cooperative Plan For Local Population Estimates

Meetings with representatives of the various States were held at the Bureau of the Census during the past several months to discuss the feasibility, desirability, and means of establishing a Federal-State cooperative plan for local population estimates. The basic objective of the plan is to encourage States to prepare county population estimates on a regular basis by recommended, preferred methods, mutually agreed upon by the States and the Bureau of the Census. The estimates would be consistent with (and tied in with) State totals now published by the Census Bureau. These estimates would be accepted by the Bureau of the Census and recommended for use by various Federal, State, and local programs requiring such estimates. The Bureau of the Census would publish these local estimates in lieu of any competing or conflicting estimates.

As a first step, a large-scale evaluation and testing program would be undertaken in which the States would prepare county estimates by alternative procedures to be tested against the 1970 Census results. The results of the evaluation and testing program would provide the basis for selecting methods to be used in the cooperative program during the 1970's.

The State representatives were strongly in favor of the proposed plan and indicated a general willingness to participate, particularly in the first phase involving the testing program for 1970. To date, 22 States are officially participating in the program. The first "workshop" meeting was held with the designated technical staffs of some of the States. These meetings are planned to establish criteria, qualifications, operational ground rules, and the step-by-step mechanics of methods to be used. Additional workshop sessions are planned to cover all States in the program. The States agreeing to participate in the program to date are: Arizona, Arkansas, California, Colorado, Florida, Illinois, Iowa, Louisiana, Massachusetts, Michigan, Minnesota, Nevada, New Hampshire, New Jersey, New York, North Carolina, Oklahoma, Pennsylvania, Vermont, Virginia, West Virginia, and Wisconsin.

Data Access and Use Lab Established at Census Bureau

Problems of data access are receiving increased attention at the Census Bureau with the recent establishment of the Data Access and Use Laboratory. The Laboratory, under the direction of John C. Beresford, is undertaking a variety of activities which should substantially improve the Bureau's ability to provide better service to a growing number of users. These efforts are presently concentrated on the development of procedures and techniques which will facilitate the quick and inexpensive retrieval of data resulting from the 1970 Decennial Census. These efforts are also focused on the development of applications of census data to user and public needs.

Current Projects

For example, planning is now underway for the production of a special summary tape for release late in 1970 which will provide geographic and population data for use in dealing with the problems of apportioning congressional districts, state legislatures, and other special districts.

Another major project now in progress is the development of a software system designed to create a capacity for statistical description and preparation of interpretive and comparative reports by computer. Such a system would have many applications. One application—the production of a general descriptive and comparative report for small areas—is now being tested. Reports will be produced for tracts in New Haven, based on the 1967 Test Census taken there.

Other projects will lead to the further development of reference guides to the unpublished data available and to the creation of facilities for more effective

guidance, consultation, and training in the use of the data. The Data Access Descriptions and Summary Tape User Workshops described in this issue are two examples of such developments.

Many more projects are now underway or being planned. These and other new developments will continue to be reported in this section of subsequent issues of "Small-Area Data Activities."

Comments and Suggestions Welcomed

It is apparent that if the Laboratory is to be successful in improving the accessibility of census data, knowledge of the users of those data, their needs and plans must be obtained. Your comments concerning your own data requirements for decision-making, research, etc., will greatly aid the Lab in obtaining this knowledge. Additional comments and suggestions concerning Data Access and Use Lab activities and developments will also be welcomed. These may be addressed to Mr. John C. Beresford, Bureau of the Census, Washington, D.C. 20233.

Decennial Census Preparations

New Haven Pretest Conducted

Operations for the census pretest conducted in the New Haven area have now been completed. The major objective of that pretest was to further test and refine the mail-out/mail-back procedure which will be used for collection of information from approximately 60 to 65 percent of the population in 1970. The balance of the population will be enumerated by the direct enumeration procedure.

Two preliminary census measures of the New Haven results suggest that further improvements in procedures are needed. The rate of mail returns was slightly lower than had been hoped for and the proportion of incomplete returns was somewhat greater than experienced in previous tests. The return rate was 81 percent for the short form used for the complete count, 1 percent above the rate in the Cleveland pretest. However, the 25 percent sample (long form) return of 68-69 percent was about 5 points below the Cleveland experience.

The census office in New Haven closed June 30th after announcing preliminary counts of 140,891 for the city of New Haven and 346,983 for the entire SMSA. The city population has declined from its 1960 level of 152,048 persons while the SMSA has increased from 323,207 persons in 1960. The data are now being processed to test editing methods on the new SPD 413, which rapidly converts microfilm copies of the census questionnaires to computer tape and at the same time performs some preliminary edits of the material, as well as to test regular computer edit and tabulation procedures.

Current Unpublished Papers Related to Small-Area Data Matters

The following papers are all available on request from Publications Distribution Section, Bureau of the Census, Washington, D.C. 20233.

"Making Census Results More Readily Accessible." John C. Beresford. Presented at the April 1967 meeting of the Population Association of America (PAA).

"Recent Developments in Studies of Uses of Census Data." Robert B. Voight. Presented at the April 1967 meeting of the PAA.

"The New Haven Census Use Study." Robert B. Voight. Presented at the June 1967 meetings of the Council of Social Science Data Archives (CSSDA).

"Plans for the 1970 Censuses." Conrad Taeuber. Presented at the June 1967 meetings of the CSSDA.

"The 1970 Census Pretest Program—Scope and Results to Date." David L. Kaplan. Presented at the April 1967 meeting of the PAA.

"Needed Innovations in 1970 Census Data—Collection Procedures: A Census View." Conrad Taeuber. Presented at the Conference on Social Statistics and the City, Washington, D.C.

"Completeness of Coverage of the Nonwhite Population in 1960 Census and Current Estimates, And Some Implications." Jacob S. Siegal. Presented at the Conference on Social Statistics and the City, Washington, D.C.

"Problems in Area Identification." William Fay. Presented at the June 1967 meetings of the CSSDA.

"A Problem in Planning a Federal Statistical Center." John C. Beresford. Presented at the June 1967 meetings of the CSSDA.

Small-Area Data Activities is issued and distributed by the U.S. Bureau of the Census as news accumulates. Individuals and organizations who are interested in the development and use of small-area statistics, but are not already on the mailing list for this newsletter may receive future issues by writing to Small-Area Data Activities, Director's Office, Bureau of the Census, Washington, D.C. 20233.

The purpose of this publication is to serve as an information exchange to keep both the users and producers of small-area data informed as to needs, new programs, new publications, and other relevant items which may be of interest to readers. Suggestions on articles or notes for future issues are welcomed. Articles contributed by outside authors are subject to review prior to publication.

Speeding Access to 1970 Census Small-Area Data on Computer Tape

The Bureau of the Census is planning to establish specifications for complete count and sample tabulations of the 1970 Census data for small areas after the census rehearsals in 1968. This will permit the development of documentation and test reels for 1970 block and tract summaries well in advance of the actual tabulations.

Summary Tape User Workshops Under Discussion

One way to take advantage of the early development of documentation and test reels would be to put them in the hands of everyone who planned to work with the small area summaries on magnetic tape as soon as documentation and test reels were available. Workshops on the use of these materials would serve the purpose of transmitting the materials, opening up discussion of problems associated with their use, assessing demand for the 1970 summaries, and bringing together tape users for a discussion of mutual problems. The most important benefit to the workshop participants would be the time saving they would gain in planning their use of 1970 census tapes. If workshops were held in the spring of 1969, the participants would have a full 18 months to prepare and test programs for use of complete-count-census summaries. This would mean that summary tapes could be used as soon as they were available, while the data were as timely as possible.

Current Developments

The present plans call for investigating the possibility of locally sponsored one-day workshops in cities or multi-city areas in which an interest is shown. If plans mature, one person would be designated the local sponsor in each area; and he would make arrangements for space, mailings, meeting time, workshop topics, and other matters. The Bureau of the Census would suggest persons to be invited (based partly on the response to this article), would be represented at the workshop by a person familiar with the 1970 Census operations, and would supply documentation to all participants. Participants would receive test reels through the Bureau of the Census or the local sponsor at the cost of the test reel itself. This cost would be part of the workshop registration fee. The total registration fee would be kept as low as possible.

Role of the Local Sponsor

If the plan should become a reality, the role of the local sponsor would probably follow the pattern described below.

Local sponsors would work closely with census tract key persons (if they were not already census tract key persons) to help identify all the interested parties in their area. The local sponsor would receive the test reel in advance of the workshop and display it

with his equipment to create print-outs of the test reel contents for the participants. He might also prepare copies for the participants.

The local sponsor would keep the registration fee low by providing meeting space, secretarial service, etc., for the workshop itself.

The local sponsor should be interested in serving as a summary tape processing subcenter for his area after the census. In this role he would make copies of summary tapes available at cost for others, and aid persons without computing facilities who need work done on census summary tapes. The aid could consist of finding a party equipped to do the work, or doing it himself.

The local sponsor would be in close contact with the Bureau of the Census during the period after the 1970 Census and could expect to have transferred to him requests for tally tapes, or work with summary tapes, which were sent to the Bureau in Washington from people in his area.

The fees for local sponsors' consultation time or computer time would not be a matter of Bureau concern, although the Bureau would offer a standard charge for tape copying, by type of machine, which would have the effect of setting the cost for that work. The local sponsor would receive from the Bureau a standard format version of the summary tapes for his area at no cost.

Where a person selected as workshop sponsor did not wish to become involved in a summary tape processing subcenter, he would identify possibilities for that service in his area.

Further Developments

The development of firm plans depends on response to these proposals. If you are interested in attending a summary tape user workshop, serving as a local sponsor, or setting up a summary tape processing subcenter, please write to Mr. John Beresford, Bureau of the Census, Washington, D.C. 20233. Let him know whether you would like to be considered as a potential local sponsor.

After analyzing replies to this request, the Bureau will be in a position to judge the workshop potential, where the most fruitful workshop locations would be, and how to make agreements with local sponsors.

Persons who write expressing an interest in the workshops will be kept informed of developments in their area.

Data Access Descriptions

The Bureau of the Census has initiated a series of "Data Access Descriptions" intended as introductions to means of access to unpublished data of the Bureau, for persons with data requirements not fully met by the published reports.

The first, Matching Studies Series (MS-1), Obtaining Census Statistics for a Selected Group of Persons, describes the procedures the Census Bureau has developed for receiving lists of names and addresses from sponsoring organizations, finding the census records which match these names and addresses, and preparing statistical summaries of the census characteristics for the entire list. The confidentiality of replies to census questions is preserved because, although the sponsoring organization pays for the service, all work with the lists is done at the Census Bureau and the sponsor never obtains access to census returns for individuals on the lists. The steps a sponsor would take to obtain the service are specified. Most of this first Data Access Description is devoted to the possibilities for computer matching of addresses after the 1970 Census for the portion of the population enumerated by mail.

A second, Address Coding Guide and Register: General Applications (AAC-1), is in the "Automated Address Coding Guide and Data Retrieval" series. This Data Access Description describes the creation of the Address Register and the associated Address Coding Guide and their use in sampling, records retrieval, and obtaining greater flexibility in summarizing data at the small-area level.

Other Data Access Descriptions will be released soon on general Bureau policy regarding data access and special services and on costs of data access. More are planned on other aspects of the use of the Bureau's unpublished data, for example, possibilities for special tabulations of data from particular censuses, geographic coding by computer, and computer tape compatibility problems.

They are prepared essentially to provide convenient answers to questions which are received by the Census Bureau staff with increasing frequency as more and more organizations acquire data-processing facilities and then begin to explore the possibilities of making use of the Bureau's data for particular research purposes.

Persons wishing to be placed on the mailing list to receive Data Access Descriptions should write to John C. Beresford, Bureau of the Census, Washington, D.C. 20233.

New Haven Use Study Progress

At the present time some 25 separate projects have been established in the New Haven Census Use Study which involve the cooperative efforts of a wide range of local, State, and Federal agencies. Using the data collected in the census pretest and observing the usual census confidentiality restrictions, the Use Study staff is performing a series of feasibility tests in providing data for users' areas of various types, testing computer maps and graphs, matching local operating and administrative records against the Census to provide socio-economic analyses of specified populations, and gaining the experience needed to suggest standard data development programs for general urban area use after 1970.

Tabulations

The Census Bureau's proposed standard tabulations of complete count, or 100 percent, data will fulfill many local needs in New Haven when tabulated for particular administrative and operational areas used by local organizations. This will be accomplished by using block faces as "building blocks."

It is also expected that the 1970 prototype Census 25 percent sample tabulations will satisfy many of the requests from local sources when aggregated by their administrative areas. In addition, special tabulations are being planned to meet other local user requests.

Mapping and Computer Graphics

A method has been developed for preparing the details of the Census Bureau city block maps (tract numbers, block numbers, street names and coordinates) for input to computer. Computer programs have been prepared for editing this material for consistency and completeness and for using it to reproduce the original map with fair accuracy. Census statistics for New Haven will soon be available for each tract and block; and programs are being developed to display the statistics, or socio-economic indices based on them, on computer produced maps.

Plans for the near future call for the development of computer programs for assembling "tailored" statistics and maps for locally defined special areas. Mapping techniques using plotter, printer, and cathode ray tube are being developed.

Feasibility Studies

Addresses of a sub-sample of the 25 percent sample households in the test Census for the New Haven SMSA have been selected for an Origin and Destination mail-type Survey (New Haven Area Travel Survey). Wording and format of this survey questionnaire have been made compatible with the Census Bureau schedule. In this way the home-to-work information collected on a sample basis during the travel survey will be more compatible with the journey-to-work data from the Census. Should the New Haven Study prove feasible, the Bureau of Public Roads will hope to arrange for such surveys in all SMSA's following the 1970 Census to attain greater comparability between areas and substantially reduce the cost of such surveys by using a sample determined by Census and relating the travel data to Census characteristics. Also, comparisons of tabulated results with census data on place of work may show that many purposes can be served by the census results and that the number of individual origins and destinations might be greatly reduced.

A second feasibility study involving a "Family Health Survey" is also in the final planning stages. The survey, which contains questions pertaining to the health of all family members and child care detail for working mothers, is being conducted for the Maternal and Child Health Section (MCHS) of the State of

Connecticut. It is funded by the Children's Bureau and State Health Department. MCHS officials hope to use this study to evaluate how well the regular Census results can be used to determine the areas of the SMSA where they should direct their funds and efforts to assist families and communities in providing better child care through more adequate child care and health centers.

Of significance to the Children's Bureau is the possibility that such surveys will help them determine the best location of child care facilities in all large urban areas after the 1970 Census.

Matching Studies

Several matching studies have been proposed and fall into three different categories: area, address, and individual. The area match involves locating the household address on agency records in the block-face using the Address Coding Guide. These are geographically coded and matched to the geographic codes of Census records. The local data users may then be provided with aggregated tabulations of census data for the matching addresses. Some of the matching studies require only the characteristics of the population and/or housing in the block-face, block, or group of blocks in which the person lives. Other matching studies will require matching at the address level, e.g., Census housing and property records, and others will require matching the individual within a household with a similar individual data record. Such individual matching studies are carried out by the Census Bureau staff to protect fully the confidentiality of the census information. Only statistical summaries are made available. No tabulations would be released that would allow identification of the individual. Although matching studies have been carried out in previous censuses, the new geographic coding scheme for the mail-out/mail-back 1970 Census should make matching operations much more successful.

Since individuals' names are never carried on the Census data tapes, a screening system involving age, race, household composition and other characteristics will be machine tested in achieving matches to the individual.

Data Inventory Study

The Federal agencies participating in the Census Use Study are interested in the kinds of data used and generated by the local city and town departments, quasi-governmental agencies, hospitals, etc., in relation to the source of data and its adequacy. The Census Use Office in cooperation with the local planners developed a questionnaire to obtain an inventory of local data uses and needs. A second phase of interviews with local users, emphasizing the use of census data in local decision-making, is being planned with the Community Council of Greater New Haven.

The success of the New Haven Study will depend on a fairly extensive program of education-communications, and technical aid to the local data users. For this reason, both written and visual materials are being prepared which can be used to explain the objectives and conclusions of the study to other interested groups in all parts of the country. In addition, the final report will include specific recommendations on how the results can be implemented most effectively.

From the outset it was the Bureau's intention to encourage the widest possible cooperation by Federal, State, and local agencies and organizations in the New Haven Census Use Study. The following have contributed materially to the success of this study:

City and town planning departments in the New Haven SMSA
 City of New Haven
 City of West Haven
 Community Council of Greater New Haven
 Community Progress, Inc., of New Haven
 Connecticut Interregional Planning Program
 Connecticut State Highway Department
 Department of Commerce
 Department of Health, Education, and Welfare
 Department of Housing and Urban Development
 Department of Transportation
 Economic Development Administration
 New Haven Redevelopment Agency
 Office of Economic Opportunity
 South Central Connecticut Planning Region
 State Health Department
 Yale University



U.S. DEPARTMENT OF COMMERCE
BUREAU OF THE CENSUS
WASHINGTON, D.C. 20233

POSTAGE AND FEES PAID
U.S. DEPARTMENT OF COMMERCE

OFFICIAL BUSINESS

SADAN F 208710
STOP 98
LIBRARY
DEPT. OF HOUSING URBAN DEVELOPMENT
ROOM 103, NORMANDY BUILDING
1626 K STREET, N.W.