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Representatives of Three Groups Hold Meeting on Classification of Areas

Members of three different groups participated in a meeting in Washington on December 21, 1966, to discuss problems related to the present definition of a Standard Metropolitan Statistical Area (SMSA) and alternative approaches to the classification of areas for statistical purposes.

The three groups represented were:

1. Social Science Research Council Committee on Areas for Social and Economic Statistics
2. Federal Committee on Standard Metropolitan Statistical Areas
3. Bureau of the Census Statistical Areas Committee

During the first part of the meeting, Professor Brian J. L. Berry of the University of Chicago presented the results of his research on SMSA's and functional economic areas. He noted the wide acceptance and influence that SMSA's have had and described the four categories of definition criteria currently followed by the Bureau of the Budget; namely, (1) county units as building blocks, (2) size of central city (50,000), (3) metropolitan character, and (4) integration.

Professor Berry pointed out the criticism of the criteria of metropolitan character and the even stronger criticism concerning the fact that there was no satisfactory grouping of counties into integrated areas for all of the country. He discussed the use of commuting data in applying the criterion of integration. He stated that he has been tabulating 1960 census data for 43,000 unit areas to show the numeric distribution of workers and the percent of workers commuting to 4,300 work place locations.

Some suggested that two sets of unit areas be utilized, one for the entire United States and one for the SMSA system or a modification thereof.

The following points were offered as justification for a system of functional areas:

1. Functional areas are defined in terms of three hierarchical levels—consolidated urban regions, areas based on the remaining SMSA's, and areas based on smaller cities—with each level performing a different function.

2. Functional areas are closed economic areas; that is, they are large enough to include both place of work and place of residence and almost all short distance migration.

3. Functional areas are closed social and cultural areas which are built around centers of business, education, and culture.

4. Unlike State Economic Areas, which do not cross State boundaries, functional areas ignore State lines to form "national areas."

Advantages and disadvantages of functional areas and other alternative classifications were discussed during the meeting. Dr. Berry advised participants that work on defining functional areas for the entire United States would be continued.

Users of Unpublished Data Will Benefit From New Tape-to-Microfilm Process

In terms of reduced costs and quicker service, purchasers of special tabulations of unpublished census data benefit from a new machine now in operation at the Bureau.

Until recently computer output has been tied to mechanical printers, but today, the S-C4411 Computer Document Recorder, using proven microfilm methods, is replacing mechanical printers.

The S-C4411 converts computer tape into readable microfilm records without the need for any intervening paper. These records may be stored, read in a viewer, or used for producing readable paper prints. Although the need for paper copies is greatly reduced in this microfilm system, such a need is easily accommodated. When limited copies of selected information are required, microfilm images can be retrieved and full size hard copy prints prepared by one of several available methods. Plates for offset printing are readily produced from microfilm records if large quantities of copies are needed.

The systems concept of the Computer Document Recorder permits the acceptance of digital signals from a magnetic tape; that is, the machine takes bit patterns that represent characters on the tape, decodes them, and displays the equivalent ordinary language character on a cathode ray tube. These images are exposed on 16mm microfilm as they appear on the cathode ray tube. This is accomplished at extremely high speeds—the character by character conversion takes place sequentially at the



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rate of 40,000 per second in the same manner that a typewriter records characters. When a page is completed, fresh film advances to the next position and the next page of information begins to appear on the cathode ray tube. The new machine is capable of recording 400,000 lines per hour, compared to the 20,000 lines per hour span for off-line mechanical printers. It also has the ability to convert computer codes into retrieval code patterns interspersed between data frames.

When compared with the cost of conventional computer systems now in use, the S-C4411 effects economies in several areas. For example, the cost of microfilm is far less than the cost of paper and, because of its high speed of operation, unit costs for printing are greatly reduced.

Also, since one microfilm cartridge contains over 1,900 ordinary pages of information and measures about the size of two king-size cigarette packages lying side by side, storage cost is greatly reduced. Under this setup, microfilm storage and retrieval systems permit finding one page out of many in 15 seconds or less. Further, since microfilm is 1/50th the volume and weight of tabulating paper forms, the handling costs are considerably reduced.

To date, the Bureau has used the system advantageously in answering requests from individuals to search old census records and provide them with transcripts of information about themselves. Most of these people lack birth certificates and want to prove their age; others need evidence of citizenship or of relationship to a certain person.

In regard to unpublished foreign trade information, the S-C4411 provides to purchasers of quick-copy subscription services very detailed data concerning a limited number of commodities. Since data are more readily available now at less cost, many more uses are anticipated.

Data Series Committee of AIP Meets With Officials of Census Bureau

The Data Series Committee of the American Institute of Planners (AIP) met with staff members of the Bureau of the Census on January 16, 1967. The purpose of the meeting was to present to census officials some of the data needs of planners from the viewpoint of a variety of planning groups related to transportation studies, regional accounts, land use, and community renewal projects. In turn, Bureau officials gave their views on what the immediate possibilities might be for providing data for such uses. The mutual exchange of ideas was considered to be extremely helpful to members of both groups and it was agreed that additional meetings should be scheduled from time to time.

Mr. George B. McGimsey, Regional Planning Council, Baltimore, Md., is chairman of the AIP Data Series Committee.

Construction Industries to be Included in the 1967 Business Census

Coverage of the construction industry is being planned by the Bureau of the Census as part of the regular census of business, which is one of a series of economic censuses taken every 5 years and is next scheduled to cover the year 1967.

Although the Bureau now publishes current construction statistics, such as housing starts, building permits, and value of new construction put in place, no attempt has been made since 1939 to provide a detailed picture of the businesses and establishments in the construction industry. This industry is an important segment of the national economy, there being about 800,000 construction firms in the United States with about one-half of these having paid employees. New construction alone was estimated to have amounted to about \$75 billion in output during 1966.

Information will be obtained by mail and will cover contract construction, subdividing and developing, and operative or merchant builders as well as all types of subcontractors or specialty contractors. It is planned that statistics will be provided on the number of construction establishments, employment in the industry, payrolls, receipts, payments to other contractors, costs of materials, capital expenditures, and other items. National figures and figures for individual States will be published. Details for publishing data for areas smaller than States are not yet complete.

Second Seminar for State Statistical Officials Held

The Bureau of the Census conducted its second seminar on "Federal Statistics for Planning Needs of State and Local Governments" from October 31 through November 4, 1966, with 18 officials from the following 11 States attending: Alabama, Georgia, Indiana, Kentucky, Louisiana, Maryland, Minnesota, North Carolina, Tennessee, Virginia, and Wisconsin. Nineteen officials from 11 States attended the first such seminar in July 1966 (as described in the November 1966 issue of *Small-Area Data Activities*).

During the seminar discussions, State participants made a number of useful comments relative to services, better working relationships with Federal agencies, and better coordination among States.

The third and fourth seminars in this series are tentatively scheduled for May 1-5 and May 22-26, 1967, respectively. Representatives of each of the 50 States will have been invited to attend one of the four seminars.

Historical Statistics on Housing Construction

A unique 805-page volume that brings together the available historical statistics on housing construction in the United States has been published by the Bureau of the Census. The book, *Housing Construction Statistics 1889 to 1964*, will be of interest to specialists in housing, economic historians, persons in the construction industry, and others.

Data in the book are presented in 26 statistical series, ending with 1964 and beginning at varying dates, depending on the availability of the figures. Descriptive text and source notes provide an evaluation of the data shown.

The book is divided into two sections. The first section deals with housing starts and presents data at national and regional levels only. The second section is concerned with housing authorized by building permits. It provides annual data at the national level for 76 years and data for States, regions, and standard metropolitan statistical areas from 1954. Annual totals covering 44 years are given for large cities. Annual totals covering

5 years or less are shown for all permit-issuing places, about 12,000 in number.

Copies may be purchased from the Superintendent of Documents, U.S. Government Printing Office, for \$6.00 each.

Use of Census Data in Transportation Planning

The Highway Research Board, National Academy of Sciences, National Research Council, has published two articles of interest to transportation groups who now use who may in the future use census data in their planning. Each article is described briefly below:

1. Use of Metropolitan Area Census Data for Transportation Planning by Edward L. Kanwit, United States Bureau of Public Roads, and David M. Glancy, D.C. Department of Highways and Traffic (In Highway Research Record Number 106).

The need for effective use of available statistical material has been intensified by the requirement for comprehensive urban planning. The 1960 Census of Population made available for the first time data on availability of automobiles, modes of travel to work, and on general commuting patterns. From the hundreds of other statistical items in the 1960 and earlier censuses, six characteristics relating to population, employment, and income were selected as the major factors in generating traffic. This article illustrates the implications which can be drawn from these data and how they can be utilized in the forecasts upon which sound, comprehensive urban and transportation planning must be based.

2. Census Data as a Source for Urban Transportation Planning by Ronald J. Fisher and Arthur B. Sosslau, Tri-State Transportation Commission (In Highway Research Record Number 141).

Population, housing, and other socio-economic data published decennially by the Bureau of the Census have been a valuable source to urban transportation planning studies for analyses and forecasts. Journey-to-work and automobile ownership information, collected for the first time in 1960, have greatly enhanced the value of the census for urban transportation studies. In addition to the printed reports, the 1960 data are also available on computer tapes for use by other agencies. The Tri-State Transportation Commission has made considerable use of the census data both in printed form and on magnetic tapes. The experience gained in the use of this source may be of value to others contemplating its use. The purpose of the article is fivefold:

1. To present the uses made of the census data by the Tri-State Transportation Commission.
2. To indicate possibilities for the use of future censuses.
3. To describe the census data sources available on magnetic tape.
4. To discuss the limitations of the data for transportation planning.

5. To help those interested in the census as a data source for transportation planning to form suggestions for improving future censuses.

Urban Research News Published Biweekly

In November 1966, Sage Publications, Inc., began publishing a biweekly newsletter entitled Urban Research News. The publication contains news of research projects, meetings, seminars, publications, and other items of interest to urban specialists. For information write Sage Publications, Inc., 275 South Beverly Drive, Beverly Hills, Calif.

Information Services in Urban Economics Planned for Early 1967

Information Services in Urban Economics (ISSUE) was inaugurated in February 1967 by the Communication Service Corporation in Washington, D.C., in cooperation with the Institute for Urban and Regional Studies of Washington University, St. Louis, Mo. Initial activities include a bimonthly newsletter, News in Urban Economics, semiannual collections of literature reviews, Reviews in Urban Economics, and a reprint service. Initial costs are underwritten by a grant from Resources For The Future to Washington University with the expectation that the information services provided will operate on a self-sustaining basis after a two year developmental period. Editorial direction is provided by an Advisory Board chaired by Professor Charles Leven, Director of Washington University's Institute for Urban and Regional Studies. Other members of the Advisory Board include: Professors Jesse Burkhead, Syracuse University; Edgar Hoover, University of Pittsburgh; Richard Netzer, New York University; Ben Stevens and Britton Harris, University of Pennsylvania. In addition, an editorial board of graduate students from universities throughout the country will be responsible for the materials appearing in Reviews in Urban Economics.

Reviews in Urban Economics, will not carry articles containing original research results but will review and evaluate major research areas in urban economics. As examples of appropriate areas for review, Professor Leven suggested the following as possibilities: Urban Transportation Studies, Classifications of Urban Land Use, Models of Residential Location, Evaluation of Metropolitan Social Overhead Investment, Regional Projections of Economic Activity, Intergovernmental Fiscal Relations at the Metropolitan Level, and a number of other areas of research. The first issue of Reviews in Urban Economics is planned for mid-1967.

News in Urban Economics, will appear in newsletter format bimonthly during the first year and on a monthly basis thereafter. It will contain news of current research activities throughout the country and serve to alert researchers to information available from government agencies, metropolitan transportation studies, and other data sources. It will not be a source of original research results but will serve as a guide to such sources, according to John Martinson of Communication Service Corporation, who will be responsible for publishing the newsletter. The reprint service operated in connection with the newsletter will facilitate the distribution of journal articles presently out of print or difficult to obtain as well as materials which often exist as mimeographed reports unavailable in the regular journal literature.

These information services will be undertaken on an experimental basis within a two-year developmental period during which other services may be started as the demand for them is demonstrated. Inquiries concerning subscription rates and reprint prices should be addressed to: ISSUE, Room 62, 1150 Connecticut Avenue, N.W., Washington, D.C., 20036.

Unpublished Materials Available From the Census Bureau

The Bureau of the Census maintains a large inventory of unpublished materials in a form ready for manipulation on electronic computers or punchcard equipment. These files of machine-readable data are byproducts of the work of processing information for publication. Only the most essential and most widely useful data are presented in published reports. The files of unpublished data are utilized by researchers in different ways, depending upon whether they contain confidential information.

Computer tapes or punchcards which contain only statistical totals and can in no way reveal confidential information regarding individuals or firms may (a) be purchased for use by the buyer himself, or (b) be used by the Census Bureau to prepare special tabulations for the buyer. Tapes or cards that contain confidential information may be used only by the Bureau to prepare special tabulations. The Bureau of the Census Catalog states some of the limitations involved, the method for obtaining estimates of costs for these data, and other pertinent information.

Examples of special tabulation work being done for others which may be of interest to Small-Area Data readers are listed below. Some of these projects have just been completed while others are still in progress.

Tennessee Tabulations—Special tabulations of data based on the 1960 census 25-percent sample providing cross-classifications of age, color, occupation and income for Nashville, Knoxville, Memphis, and Chattanooga.

Unskilled Workers in SMSA's—Aggregates of wage and salary income, hours worked, and weeks worked for male workers by selected occupation and industry for 50 SMSA's.

Bergen County Tract Tabulations—Special tabulation of 1960 census 25-percent sample to present data on family income and household relationship by age of persons under 18 for census tracts in Bergen County, N.J.

Migrants to Maryland—Special tabulations of occupation and education, by county of residence in 1960.

Journey-to-Work for Nassau and Suffolk Counties—Special tabulation of 25-percent sample data from 1960 census (place of work by means of transportation, income, occupation, and industry) for census tracts in Nassau and Suffolk Counties, N.Y.

Some examples of computer tapes that may be purchased are as follows:

Census of Agriculture County Summary Data—This is the same information that is published in the preliminary reports of the 1964 Census of Agriculture.

Migration Counts for State Economic Areas—These are tallies for each of the 509 State Economic Areas (SEA's) providing counts of the total population in 1950 and 1960, the number of within-SEA migrants and the number of in-migrants by each SEA of 1955 residence.

Census of Population Income Data for Enumeration Districts—Data on the 1959 income of families and of persons by selected characteristics are available for each census enumeration district (ED) in the United States.

In addition to the machine-readable files described above, work sheets and tabulation sheets, which show more detail than is found in published reports, can be made available through some method of duplication such as photocopying or transcription. Many tabulations are available on microfilm.

Two New Statistical Maps

Employment in manufacturing and in professional, technical, and kindred occupations are the subject of two new reference maps issued by the Bureau of the Census in its series GE-50, United States Maps. Data from reports of the 1960 Census of Population are presented on United States maps showing the names and boundaries of all counties. Data are shown by class intervals for counties with each interval identified by a distinctive color. The maps are printed on single sheets (30 x 42 inches) at a scale of 1:5,000,000.

These latest 2 of 13 maps issued to date in the GE series are listed below. They may be purchased (\$.50 each) from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C., 20402.

Map No.	Title
12	Employment in Manufacturing, by Counties of the United States: 1960.
13	Employment in Professional, Technical, and Kindred Occupations, by Counties of the United States: 1960.

Small-Area Data Activities is issued and distributed by the Bureau of the Census on an irregular schedule. Individuals and organizations interested in the development and use of small-area statistics may receive subsequent issues by writing to Small-Area Data Advisory Committee, 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.