

Uses of 1990 Census Data

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This report of the findings of the first workshop, Use of 1990 Census Data, relies on notes by the recorders for the four working groups: Bob Griffiths, Metropolitan Washington Council of Governments; Ed Christopher, Chicago Area Transportation Study; Gene Bandy, Baltimore, Maryland; and Ron Tweedie, New York State Department of Transportation.

There was much commonality among the findings of the four groups. However, there were some differences and conflicting opinions; for example, some said that the Census Transportation Planning Package (CTPP) was critical to smaller MPOs, and others said that smaller MPOs are not using it for a variety of reasons, such as staff and resource availability.

The four issues discussed were as follows:

- What has been the experience in using the 1990 census data for transportation planning?
- What problems have limited your agency's use of census data?
- Which agencies have relied on the data, and to what extent?
- Which products are most useful and which were not useful?

EXPERIENCE WITH CENSUS DATA

The variety of uses for census data was surprising and impressive. They are summarized here since many uses were discussed earlier in the conference.

Descriptive analysis, such as with travel times, and trend development are major uses, as well as model estimation and calibration, such as development of trip generation, trip distribution, and mode choice; K-factor development for work trips; and production and attraction checks.

In many areas, highway and transit corridor studies are made using CTPP trip tables directly. This use differs from modeling in that the data from the trip tables are used directly rather than in a modeling sense, to see what the activity is relative to the various modes and their origins and destinations.

The census data are used to weight and adjust household travel surveys and to develop sample designs; to estimate or in some cases to check local-area estimates of small-area employment; to analyze transit markets; and to develop land use forecasts.

Other uses mentioned included geocoding household travel surveys, truck surveys, and so on, with the enhanced Topologically Integrated Geographic Encoding and Referencing (TIGER) file that is available from the census activities.

It appears that the Transportation Model Improvement Project (TMIP) relies quite heavily on data from the census. The approach being taken for this activity may be greatly hampered if some of the information on the long form is not available.

Still other uses mentioned include ethnic analysis, ridership estimates for rail extensions, environmental justice studies, adverse impact analysis, and various kinds of litigation. The census provides a baseline for congestion management and commute trip reduction plans.

Several agencies use census data in expanding their cordons. The census provides the information in the added areas, including the number of workers arriving from outlying areas. In a similar vein, the census often provides the only information for new MPOs' planning activities, especially number of households, population, and automobile ownership.

Descriptive statistics and presentation of data to the media are important uses. The census is often the best source of information for responding to local requests for data. Often it is the only source of data available. The census provides data to the private sector, developers, and real estate agents for activities like marketing studies. It is also used by banks, corporations, and retail stores for marketing studies. Especially useful is daytime population, where employees are accumulated at their workplace.

It appears that many state departments of transportation do not use the census data directly but act as clearinghouses for dissemination of data to local agencies.

Data on commuting are used by the Office of Management and Budget to designate metropolitan statistical areas and in job-housing balance analysis to see the results of moving jobs closer to housing.

PROBLEMS LIMITING USE OF CENSUS DATA

In small MPOs the major problem appears to be limited availability of staff resources, which is also sometimes true, but to a lesser extent, in the larger MPOs.

The issue of timely release was mentioned by several participants. First, it seems that there would have been a preference to have the Urban Element released before the Statewide Element if doing so resulted in an earlier release of the urban data. Second, the availability of adequate computer programming support at the Census Bureau should have been given a higher priority. There were comments that the CTPP data should have been designed in a PC format from the beginning and maybe Internet accessibility provided, all indicating that the data are needed earlier.

Another major problem in many areas related to geographic coding. This problem was pointed out graphically by the Baltimore experience, which was discussed earlier in the conference. It was commented that the Census Bureau is not using the latest information available, MPO address files provided to the Census Bureau were not always used, and small-level geography knowledge is best at the local area level, and local agencies need to be involved more. This involvement would both reduce the amount of allocation done and produce a better, more accurate allocation. In any case, place-of-work coding was not very accurate below the county level. One of the potential solutions mentioned to address geocoding problems is use of 911 address coding.

Relative to the file formats, the structure of the data files and the documentation provided were problems. Documentation was difficult to use. Some believe the file sizes are too large, and compression of files is required, resulting in high front end costs to reformat the data and process it before use. The geographic subtotals are confusing and not very useful, causing errors in accessing the data in which the wrong level of geography is sometimes picked up. This

problem of file format is also related to importing the data into Geographic Information System (GIS) packages.

Another problem is that the census data are not collected frequently enough. Perhaps continuous sampling will be the solution.

A problem related to software availability and problems in the software were brought up. TransVU was not available when the CTPP came out, which hampered the use of the data in the beginning.

Some users expressed the need to have block-level data available to them. This possibility should be thoroughly investigated for the future.

Combination of modes was presented as a problem. Sometimes the wrong mode is picked as the major one by the respondent. There also appear to be differences in the local vernacular for different travel modes, often causing confusion in responses to the mode question.

Since most users do not match zone boundaries to tract boundaries, the use of census products on a zonal basis is a problem before CTPP availability. It is difficult to match TAZs with the other census geography.

RELIANCE ON DATA

Small areas are using the census data for basic information on population, car ownership, and employment and for some model development such as trip generation. It appears that the STF-3 is used mostly and not the CTPP, perhaps because it is difficult to use or because it was late and they do not have the staff. There appear to be a number of reasons, which should be addressed, since one would think that small areas would be prime users of such data.

The census provides data at low cost for large MPOs for purposes such as survey enhancements, providing universe totals, and trip tables for special studies such as corridor analysis.

Transportation consultants appear to like the consistency of census data from the CTPP and STF-3 from area to area because if they do a study in one location, they have a ready source of information elsewhere with which they are experienced. Sometimes these are the only data available to do some of their work. One consultant mentioned the difficulty in doing transportation planning in international markets, where such data as the census provides are not available.

The private sector uses population, socioeconomic, and demographic data from the census in media campaigns, market research, and so on. The data on commuting are used for the publication *Commuting in America*, published by the Eno Foundation.

The research and academic community finds the census data useful, especially the Public Use Microdata Sample (PUMS).

It appears that federal agencies use the data for policy studies and for National Highway System work. The data should be useful for national policy studies because they constitute one of the few data sources that is consistent across the country.

The public and its officials make numerous requests of MPOs for information from the census. The Puget Sound MPO mentioned about 150 accesses a day to information provided via the Internet.

The transit industry appears to be a user of various census products but is hampered by the lateness of the products, especially the CTPP, which is used for studies such as transit alternatives for corridors, ridership estimates for rail extensions, ethnic make-up estimates for various routes, and so on.

The major activity for state departments of transportation relative to the CTPP appears to be as a clearinghouse for the data and for some special studies. Looking at the four individual working group reports, there does not appear to be extensive use of the CTPP in statewide planning. Some major uses were cited in the four case studies summarized by James Covil, but use does not appear extensive across the rest of the states.

USEFULNESS OF CENSUS PRODUCTS

The working groups concluded that the population, sociodemographic, income, and housing data from the census are essential to just about everyone involved in transportation planning.

The PUMS is a rich source of data that is especially useful for research purposes, but many still do not know about it or use it.

The STF-3 is the most used census product, perhaps because it comes out early.

It does not appear that the CTPP, including the trip flows, has been used extensively by small MPOs, probably because of resource availability. Some small MPOs have used it; more probably have not.

There were some comments about not needing all the detailed cross-tabulations in the CTPP; the comments were based on the finding that people are using STF-3 to a great extent. Perhaps these detailed cross-tabulations delay early release of the basic STF data items by TAZ in the CTPP.

There was some question about the importance of the statewide package. Again, there have been examples of major use, such as those reported by Covil. It appears most useful in states with a small number of large metropolitan areas. However, the statewide package has not received the use anticipated. Naturally, the importance and use of the statewide package vary by state.

The Urban Element of the CTPP, Parts 1, 2, and 3, was found to be useful to states, MPOs, and transit agencies.

Last, Part 3 of the CTPP Urban Element was most important to large MPOs, being the only census product where work flows are available and by zone.