

APPENDIX P

NPTS AND CENSUS JOURNEY TO WORK

USING NPTS AND CENSUS JOURNEY TO WORK

SUPPLEMENT EACH OTHER

The Census journey-to-work data provide a wealth of data on commuting, particularly data that is valid for small geographic areas, such as a city, town, place or census tract. NPTS provides coverage on travel for all purposes, not just commuting, and NPTS provides greater detail on travel characteristics than Census. However, NPTS data may not be valid for individual states or metro areas.

HOW TO USE NPTS DATA AT A STATEWIDE OR REGIONAL LEVEL

There are two ways NPTS may be used. First, NPTS can provide default values for data such as trip rates from areas of similar size in your region of the county.

Second, the 1995 NPTS data **may** allow for the construction of synthetic datasets for states or metro areas. This is a researchable concept that must be tested. With the 1990 NPTS, there were limited variables which could be used to select a "similar population" to reflect one's own region. These were variables such as MSA size categories and residential zipcode population densities. In the 1995 NPTS, many variables have been added to describe the residential area and the workplace location of respondents, without disclosing the actual geography. Among the many variables are:

- population density at the tract and block group,
- median household income and median housing value at the tract and block group,
- employment density at the tract level,
- housing tenure (own/rent) at the tract and block group level, and
- types of industries at the workplace location.

For a complete description of these variables, see **Appendix L**.

TO USE NPTS WITH CENSUS JOURNEY TO WORK

These two datasets may be used to supplement each other, but the user needs to be aware of the differences in the two sources, as described below.

COMPARISON OF NPTS AND CENSUS JOURNEY TO WORK

POPULATION COVERAGE

- Census journey-to-work data covers the entire country with a sampling rate of approximately 1 in 12 households and a simple random-sampling procedure, meaning that all households throughout the country had an equal probability of being included
- NPTS covers the entire country, but uses a stratified sampling procedure. The overall sampling rate is approximately 1 in 4800 households, but the sampling strategy means that households in some areas have a greater probability of being selected than households in other areas
- With the addition to the data release of the add-on samples, the overall sampling rate changes to about 1 in 2400 households, but the differences in probabilities of households in add-on areas become much greater than households in other areas.
- The census samples from a sampling frame that purportedly includes all mailing addresses in the U.S.
- The NPTS samples from a sampling frame that effectively includes all residential telephone numbers in the U.S., so that households without telephones are excluded from the sample. In addition, households in which persons are out of the home so much of the time that the telephone was never answered, or an answering machine was the only response received will not have participated in the survey.
- See summary of differences in Table P-1.

DIFFERENCES IN TRAVEL COVERAGE BETWEEN NPTS AND CENSUS

- Census requests details only about the journey to work
- NPTS requests details about all travel made by persons in the household, whether employed or not, and including travel for all purposes
- Census requests data about the "usual" journey to work, at least in reference to the week preceding the census, or the last full week the person worked
- NPTS requests travel data for a specific day for each household.

- Census collects limited data on the journey to work, including collecting only the main mode of travel (defined as the mode used for the longest time)
- NPTS collects data on both the usual or typical journey to work as well as the actual work trip, if a work trip was made on the household's travel day. For travel day trips, extensive data is collected on each trip, including data about all modes of travel used on any trip in which transit or Amtrak was used for a part of the trip.

DIFFERENCES IN SAMPLE SIZE AND GEOGRAPHY

- On the average, the Census journey-to-work data will contain data on about 40,000 households in an urban area of 1 million population.
- On the average, the NPTS will contain data on only about 80 households in an urban area of 1 million population.
- Similar contrasts will exist at other levels of jurisdiction, except for add-on areas.
- The most important implication of this is that journey-to-work data can be used for individual urban areas, even relatively small ones, while NPTS cannot provide reliable results for individual urban areas, except for add-on areas.

**Table P-1
COMPARISON OF NPTS AND CENSUS JOURNEY TO WORK**

ITEM	NPTS	CENSUS JTW
Sampling Frame	all residential telephone numbers in U.S.	all household mailing addresses in U.S.
Sampling Rate	approximately 1 in 2400 households	1 in 12 households
Sample Size	about 80 households in a metro area of 1 million people, except add-ons	about 40,000 households in a metro area of 1 million people
Sampling Procedure	list-assisted sample	simple random sample
Survey Instrument	one-day travel diary and telephone interview	mail-out self-administered survey form (long form of the decennial census)
Travel Coverage	all travel for one day	typical journey to work in previous week
Persons Reporting	Everyone 5 years and older	Workers
Period Coverage	full year	week prior to April 1 of decennial Census year
Travel Details	Usual trip - all modes, main mode, time trip started, travel time, trip distance Travel day - mode, time, vehicle occupancy, etc.	Usual trip - main mode, time trip started, travel time
Frequency	currently every 5 to 7 years, possibly a continuous survey in the future	every 10 years

Reference: Stopher, Peter and Metcalf, Helen M. A., PlanTrans, Draft of Training Modules for NPTS Data Releases, Summer, 1997