

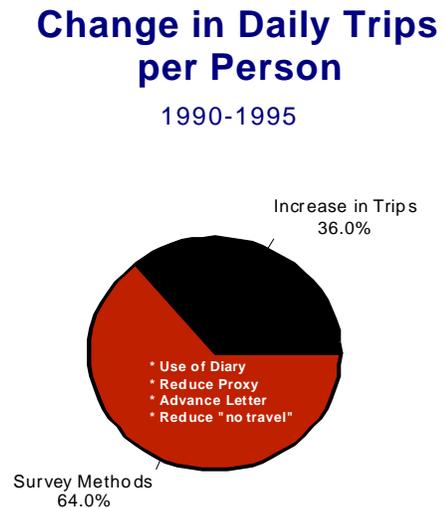
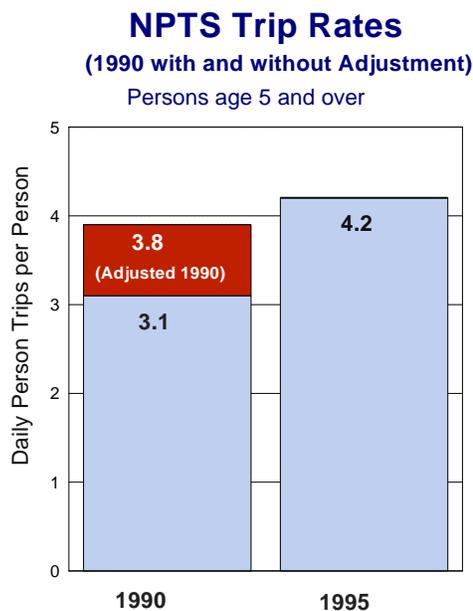
# CHAPTER 6. 1995 NPTS RESULTS

## 6-A. COMPARABILITY OF 1995 RESULTS WITH EARLIER NPTSs

### CHANGES IN TRAVEL BETWEEN 1990 AND 1995

It is important that the data user not attempt to directly compare the data on daily travel from the 1995 NPTS with the 1990 or any of the earlier NPTSs.

When comparing the 1995 and 1990 NPTS datasets directly, there is nearly an increase of about 1.1 trips per person per day in 5 years, or 35% increase (3.1 trips in 1990 compared to 4.2 trips in 1995). However, much of this apparent increase is due to changes in survey methods. **We estimate that one-third of this increase is a real increase in travel, and two-thirds due to changes in survey methods implemented in the 1995 survey.** That is, between 1990 and 1995, daily person trips increased from 3.8 trips to 4.2 trips. By comparing the 1990 and 1995 NPTS data to regional data, we estimate that an increase of 0.4 trips per person per day can be attributed to "real" increases in travel, and 0.7 trips per day are attributable to changes in survey methods. Thus, to make 1990 NPTS more comparable to 1995 NPTS, the 1990 overall trip rates should increase by 22%. The remainder of this section describes the basis for these adjustments to the 1990 data.



## **METHOD OF COMPARISON**

**Step 1.** Using regional data sets from approximately the same time period.

Six regional travel surveys for 1990 were used in the analysis, and seven different regional surveys were used for 1995 data. Data for these cities was extracted from the 1990 and 1995 NPTS for comparison.

**Step 2.** Making the data sets comparable

Several controls were established to reduce the possible impact of differences in survey implementation, between the various regional data sets, and with the NPTS. These controls, which were placed on the regional data sets and the NPTS, included:

- Travel days Monday through Friday only
- Persons age 5 and over
- Bike and walk trips included ONLY if traveling to/from work
- People who made no trips were excluded
- Proxy reports excluded (when identifiable)
- Travel reported within 3 days of assigned travel day (when identifiable).

**Step 3.** Calculating daily trips rates per person- total and by trip purpose.

Using these controlled datasets, the 1990 NPTS daily person trip rate is slightly lower than the 1990 regional data. In 1995, the reverse is true. When the data were controlled by the attributes listed above, NPTS shows an increase of 0.6 daily person trips per person between 1990 and 1995. With the same controls in place, the regional datasets show an increase of 0.4 trips per person over the same time.

**Step 4.** Adjusting for the difference.

Overall, to adjust for total trips, it is estimated that the 1990 trips should be increased by 22% to account for the difference in survey methods. NOTE: When using the datasets with the

controls in place an adjustment of 0.5 daily trips per person is sufficient. However, once the controls are removed a 22% increase in the 1990 NPTS is required.

**IMPACT OF TRIP PURPOSE**

The accuracy of trip reporting varies by trip purpose. Typically, important trips, such as to work or school, are less likely to be forgotten even when a diary is not used. Thus the 1990 NPTS, which was conducted from memory, has good coverage of home to work trips. Less important trips, such as trips to the gas station, dry cleaner, post office, etc. which may be considered incidental are more likely to be forgotten. Therefore, the number of trips directly from home to work or from work to home are overstated, and the non-home and non-work trips are understated. For basic comparisons, one should reduce the 1990 NPTS home-based Work trips, and increase both the home-based non-work trips and the non-home-based trips.

<b>Trip purpose</b>	<b>Percent change</b>	<b>1990 daily trips per person</b>	<b>1990 adjusted daily trips</b>
<b>Home-based Work</b>	<b>Decrease by 14%</b>	<b>0.87</b>	<b>0.75</b>
<b>Home-based Other</b>	<b>Increase by 19%</b>	<b>1.60</b>	<b>1.91</b>
<b>Non-home based</b>	<b>Increase by 55%</b>	<b>0.73</b>	<b>1.13</b>
Total		3.2	3.8

In the 1995 NPTS, which used a diary, there is a dramatic increase in the number of non-home-based trips, such as trips from work to shopping or personal errands, before going home. Concurrently, there is a decrease in the number of home-based work trips. Again, this indicates that people were more likely in 1990 to report a trip made directly from work to home, rather than reporting that they stopped along the way before returning home. Note that people are more likely to make stops on the way home from work, compared to making stops on the way to work.

(Reference: 1990 NPTS, Strathman and Dueker, "Understanding Trip Chaining".)

The most significant difference is that in 1990, the NPTS reports many more home-based work trips relative to the number of non-home-based trips. In 1995, the results are much more similar to the data collected in regional surveys all over the country.

**FOR MORE  
DETAIL AND  
FURTHER  
ANALYSIS**

A copy of the full report on this comparison of trip rates can be obtained from FHWA, NPTS User Support (see below).

FHWA will also be conducting and publishing further analysis of how to adjust 1990 NPTS data, so that it can be compared with 1995 NPTS results without the change in survey methods skewing the results. This analysis will cover trips and travel by major mode and major purpose. Data users on the FHWA mailing list will be issued updates to this User's Guide, or the reader may contact either the NPTS Website at:

<http://www-cta.ornl.gov/npts>

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