

2000 Travel Behavior Inventory

About the Study

- The Travel Behavior Inventory (TBI) is a comprehensive survey of travel characteristics in the region.
- The TBI was previously conducted in 1990, 1982, 1970, 1958 and 1949 (about every 10 years to coordinate with demographic data available from the decennial censuses).
- TBI purpose:
 - To update the regional computerized travel-forecasting model to estimate future travel by purpose, time of day, travel mode and travel route.
 - To provide a factual basis for decisions about highway and transit improvements.
- New with the 2000 TBI:
 - Nonmotorized travel (walking and biking) is included as well as vehicular travel.
 - Travel data are included from counties outside (adjacent to) the seven-county area.
- Lead agencies: Metropolitan Council and the Minnesota Department of Transportation (Mn/DOT)
- TBI consists of several coordinated surveys conducted over a 12-month period. The first survey began in August 2000 and the final survey was completed in August 2001.
 - Home Interview Survey: Data from 6,219 randomly selected households who kept a travel diary for one day (the centerpiece of the TBI). Of that total, 5,032 households lived in seven-county metro area and 1,187 in the surrounding 13 counties.
 - External Station Survey: Measured travel coming into the seven-county area.
 - Highway Speed Survey: Gauged travel speed measured by Mn/DOT's Traffic Management Center and an on-the-road survey.
- Relationship to 2000 Census travel data:

The Census "long form" collected data solely about the journey to work made by workers residing in the household. The Travel Behavior Inventory Home Interview Survey collected data concerning all trip types by all persons five years of age or older in the household.

About this Briefing Memo

- This is the first in a series of brief reports on data from the TBI surveys. Study findings will be released throughout 2003.
- Although the TBI collected data on bicycle and walking trips, this briefing memo highlights data for motorized trips only so as to be comparable to the 1990 TBI data.
- This briefing memo does not include travel data collected from adjacent counties.
- A summary report will be published about mid-summer, which will compile all the results of the TBI surveys.

Data Highlights

Both person trips and vehicle trips continue to grow faster than the number of housing units or the population.

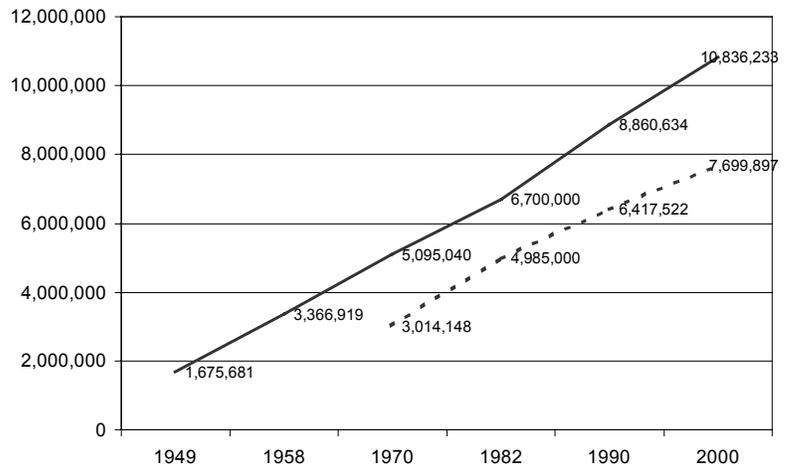
A *person trip* is a one-way journey between two points by one person. A *vehicle trip* is a one-way journey made by an auto, truck or bus, regardless of the number of people transported. For example, a trip by a mother and child traveling together from home to the grocery store would constitute two person trips but one vehicle trip.

Total person trips by motorized modes increased 22% between 1990 and the 2000 TBI. The most recent TBI reported 10,836,233 person trips per average weekday, up from 8,860,634 in 1990—an increase of 1,975,599.

Total vehicle trips increased by 20% over the same period. The 2000 total was 7,699,897 vehicle trips per average weekday, up from 6,417,522 in 1990—an increase of 1,282,375.

By contrast, the number of housing units in the seven-county area increased by 14% during the same period, and the population grew by 15%, according to the Census.

Trends in Daily Person Trips and Vehicle Trips



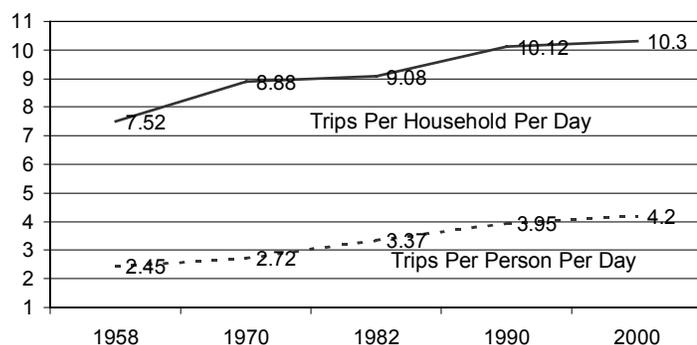
Both person trips and vehicle trips grew at a slower rate between 1990 and 2000 than they did in the preceding decade. Between the 1982 TBI and 1990, person trips grew more than 2,160,000, a 32% increase. Vehicle trips grew 1,432,522, a 29% increase. They slowed generally because the forces driving the increase during the 1970s and '80s moderated somewhat by 2000. By 2000, the percentage of two-income households, of women in the workforce, of car owners and of licensed drivers reached very high levels with less potential for growth.

The number of trips per person and per household continues to increase.

With the number of trips growing faster than either housing units or the population, trip rates (trips per person and per household) continued to grow.

The 2000 TBI reported a household person trip rate of 10.3 per day, up from 10.12 in 1990. The person trip rate is 4.2 per day, up from 3.9 in 1990.

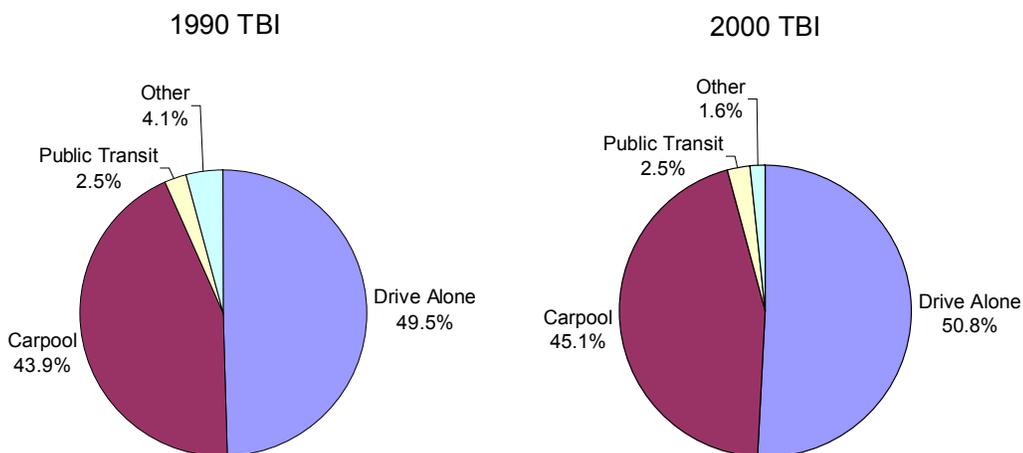
Trends in Twin Cities Daily Trip Rates



Transit maintains its share of trips.

For all trips taken in the region for all purposes, transit use grew from 225,128 transit trips in 1990 to 266,662 in 2000, maintaining a mode share of 2.5%. The number of daily drive-alone trips by residents of the region rose by 1,123,400 between 1990 and 2000, an increase of more than 25%. The increase boosted the drive-alone share of motorized trips slightly from 49.5% in 1990 to 50.8% in 2000.

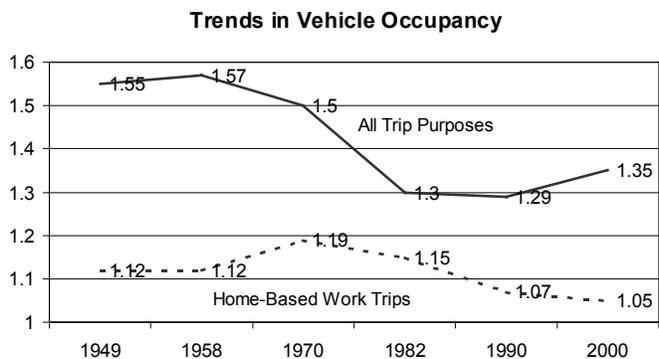
Person trips in car pools rose by 1,001,400 during the decade, an increase of over 25%. Person trips in car pools increased their share of total trips from 43.9% in 1990 to 45.1% in 2000. Person trips using other modes (school buses, motorcycles, taxi and other) decreased from 4.1% of all trips in 1990 to 1.6% in 2000.



Average vehicle occupancy continues to decline for work trips.

The average number of occupants in cars for work trips—when highway congestion is greatest— continues its historic decline. In 1990, it was an average of 1.07 persons per vehicle; in 2000, it was 1.05.

The average vehicle occupancy for all trips rose from 1.29 in 1990 to 1.35 in 2000. This reverses a trend to lower vehicle occupancies that has been observed since the 1950s.

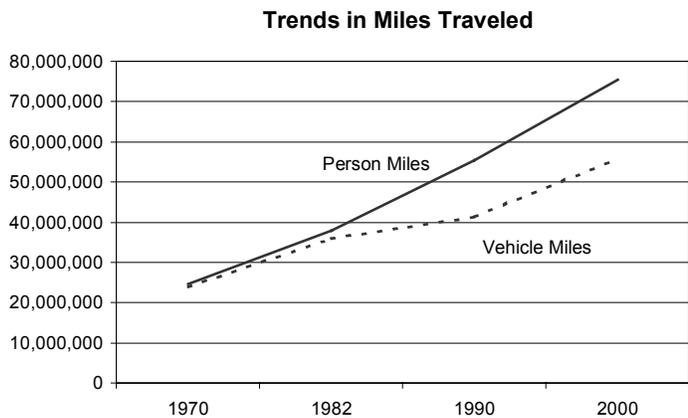


Person miles and vehicle miles traveled continue to grow

A *person mile* is one mile traveled by one person. A *vehicle mile* is one mile traveled by a vehicle, regardless of how many people are transported.

Person miles grew more than 36% between 1990 and 2000, from an average of 55.4 million per weekday to 75.4 million. Vehicle miles traveled grew just under 35%, from an average of 41.5 million to 55.9 million per weekday.

Both grew faster than the number of trips, indicating that trip length is increasing. As mentioned earlier, person trips grew 22% and vehicle trips grew 20% over the same time period.

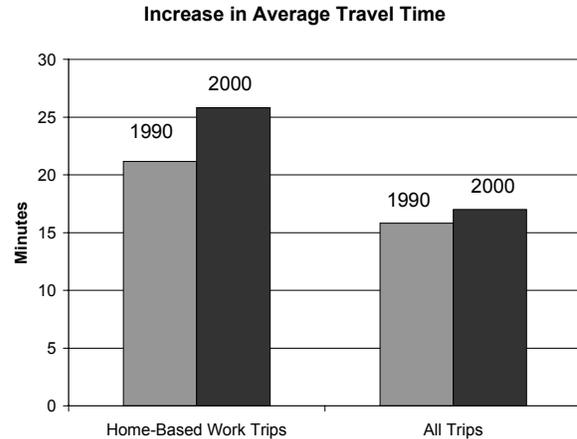


Travel time continues to increase.

Travel time for the home-based work trip and for all trip purposes continues to increase.

The TBI found that the commute trip lengthened from an average of 21 minutes in 1990 to an average of 24 minutes in 2000. The Census also reported an increase in commuting travel time during the same period, from 20.8 minutes in 1990 to 23 minutes in 2000.

The average duration of all trips increased from 15.8 minutes in 1990 to just over 17 minutes in 2000.

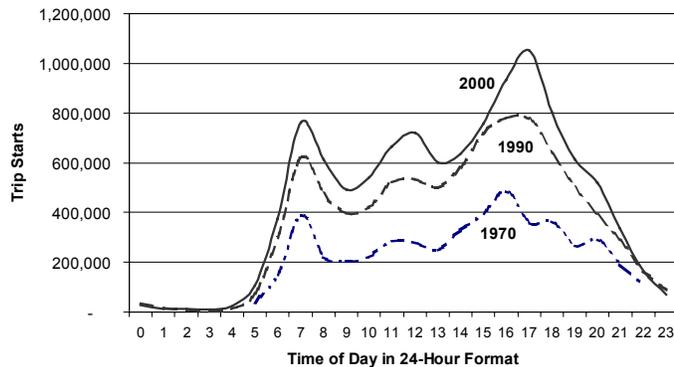


Morning and afternoon peak travel periods are broadening and becoming more intense.

Both the morning and afternoon peak periods are becoming longer in duration and entail more trips than in 1990. Both the AM and PM peak periods are each an hour longer in duration and peak later than in 1990.

Midday travel is becoming more pronounced. The number of trips starting during the noon hour exceeds those starting during the 1990 morning peak hour.

Person Trip Starts: 1970, 1990 and 2000



Further Information

Additional information will be provided in reports to be released in the summer and fall of 2003. Questions concerning the 2000 Travel Behavior Inventory should be directed to Mark Filipi at 651-602-1725.