HOW CONGESTED ARE THE ROADS? ARE THEY GETTING WORSE?

Congestion levels and the trends in congestion growth are important aspects of the database. Where and when congestion occurs is important within an urban network, as well as for comparing urban areas to each other. Comparisons should include considerations such as, areawide congestion levels tend to be worse in the larger urban areas, but there are some isolated pockets of very bad traffic congestion in smaller urban areas that rival some locations in larger cities. Comparisons with areas of similar population are usually more informative than broader comparisons.

Conclusions

In general, traffic congestion is worse in the larger urban areas than in the smaller ones. Traffic congestion levels have increased in every area since 1982. Congestion extends to more time of the day, more roads, affects more of the travel and creates more extra travel time than in the past. And congestion levels have risen in all size categories, indicating that even the smaller areas are not able to keep pace with rising demand.

The need for attention to transportation projects is illustrated in these trends. Major projects or programs require a significant planning and development time—10 years is not an unrealistic timeframe to go from an idea to a completed project or to an accepted program. At recent growth rates, the urban area average congestion values will jump to the next highest classification—medium areas in 2017 will have congestion problems of large areas in 2007.

The Travel Time Index is one of two primary measures of extra travel time for travelers. (See Exhibit B-1). It measures the amount of additional time needed to make a trip during a typical peak travel period in comparison to traveling at free-flow speeds.

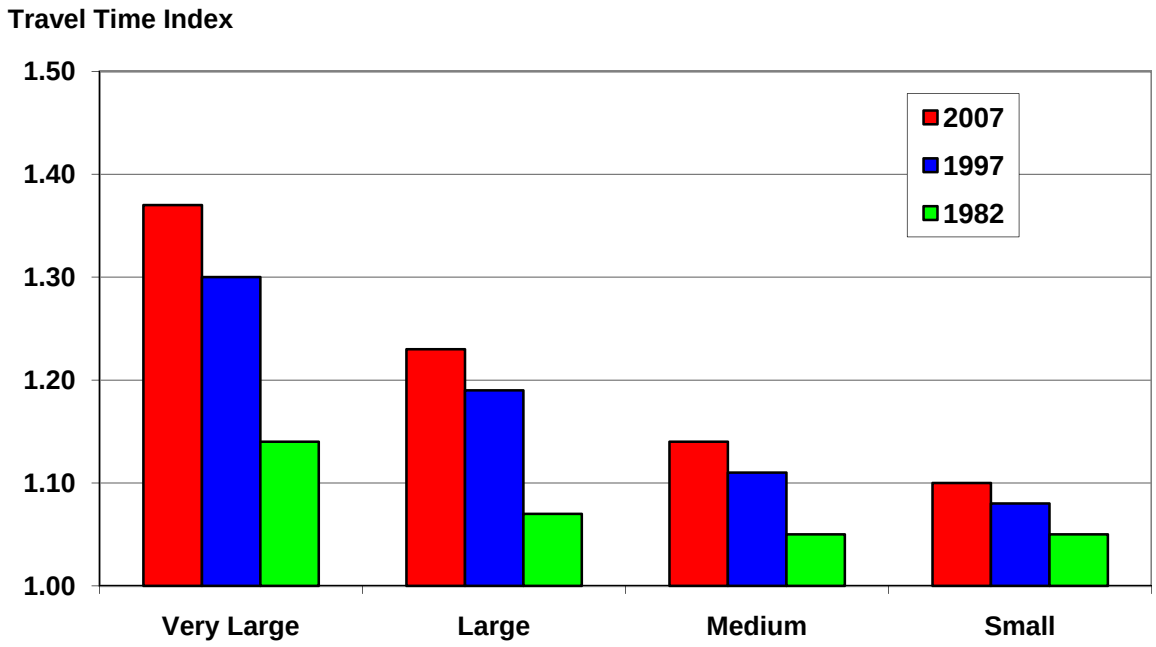
Travel delay per peak traveler is the other individual measure that provides estimates of the mobility levels (see Exhibit B-2). The extra travel time per year can be related to many other activities and may be more relevant for some discussions.

The extra travel time each year is a combination of the extra travel time for each trip (as measured by the TTI), the trip distance and the number of trips. The effect of this difference is relatively modest in most areas—that is, the TTI and delay per traveler tell basically the same story. The rankings are similar and the pattern of growth or decline are about the same. In some areas, however, the two values lead to different conclusions.

Portland is one area where the multiple performance measures help illustrate the effect of the transportation and land use policies that are being pursued to create a denser urban area that is better served by public transportation. The Travel Time Index and the delay per traveler values have both increased since 1982, indicating an increase in congestion. The Travel Time Index for Portland grew faster from 1982 to 2007 than it has for the majority of the other areas in the Large urban group. Delay per traveler, however, has grown at a rate closer to the Large area average,

indicating that delay has not grown as rapidly as the per-minute travel time penalties have declined. Perhaps the urban growth and transportation policies are encouraging shorter trips and travel on light rail and other modes.

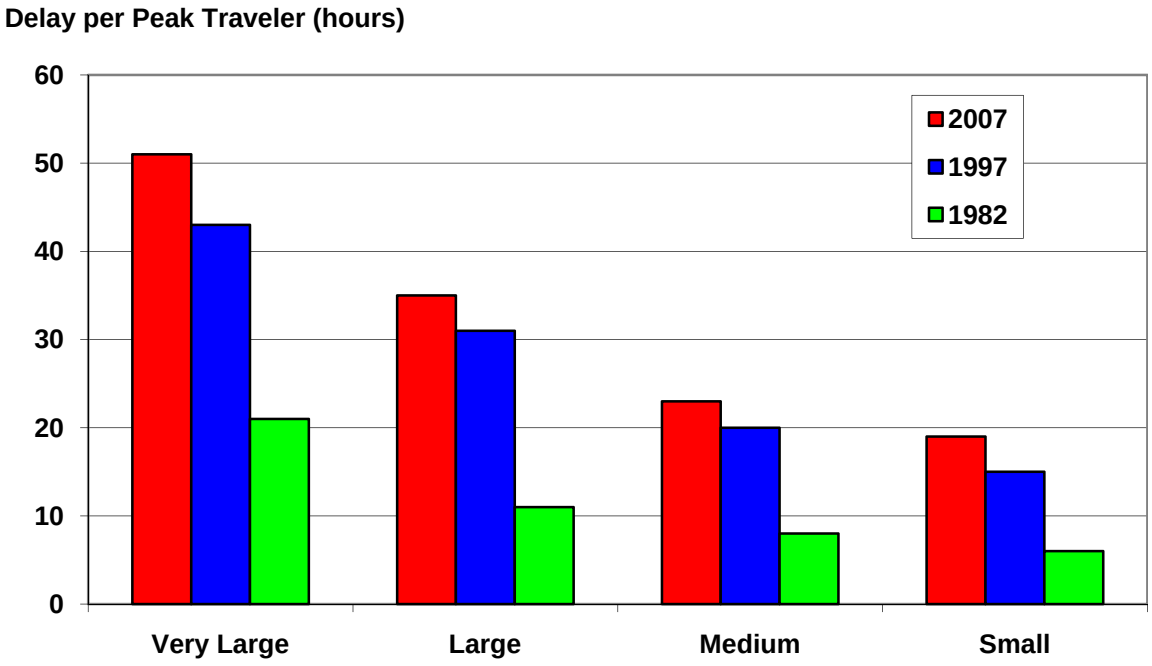
Exhibit B-1. Travel Time Index Trends



Note: The Travel Time Index is a ratio of average peak period to free-flow travel time. A value of 1.30 indicates a free-flow trip of 20 minutes takes 26 minutes in the peak due to heavy traffic demand and incidents.

- The average TTI for all 439 urban areas is 1.25. Thus, an average 20-minute off-peak trip takes 25 minutes to complete during the peak due to heavy traffic demand and incidents.
- Congestion problems tend to be more severe in larger cities. The average TTI for each individual population group ranges from 1.37 in the Very Large areas down to 1.10 in the Small urban areas.
- The average increase in the travel time penalty was 19 points (1.10 to 1.29) between 1982 and 2007. This gap ranges from 23 points in the Very Large group to 7 points in the Small population group.
- Nineteen of the 439 urban areas have a TTI of at least 1.30. All of these urban areas are in the Very Large and Large population groups—they have populations greater than one million.

Exhibit B-2. Delay per Peak Traveler Trends



- The average delay per peak traveler in the 439 urban areas is 36 hours.
- There are 9 urban areas with delay per peak traveler values in excess of 50 hours, showing the effect of the very large delays in the areas with populations larger than 1 million.
- The average delay per peak traveler in the Medium population group is about the same as the average delay in the Very Large population group in 1982.

The average delay per peak traveler in the Small population group is about the same as the average delay in the Medium group in 1997.