

# Commuting Patterns and Trends in America



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## *Implications for the future*

Collectively, the worker boom, suburban commuting boom, and auto commuting boom have created an explosion in commuting by private vehicle. In rapidly growing areas, which are areas normally already heavily dependent on private vehicles, use of autos in commuting tends to exceed the very rapid growth in workers, sometimes by substantial margins, as in Houston and San Diego. In slower growing areas, growth in the use of private vehicles exceeds growth in workers by substantial amounts, obtaining users from other modes, as well as from worker growth. The implications of these data are clear—all metropolitan areas, independent of rates of population growth, have undergone substantial growth in workers and even greater growth in the use of private vehicles for commuting.

### **Implications for Commuting Demand**

Each of the identified trends militate in favor of increased levels of commuting travel beyond earlier expectations. It appears that impacts from the baby boom, job boom, and the infusion of women into the workforce will persist through the remainder of the century, maintaining high levels of commuting growth.

Beyond the basic impetus to travel demand, these trends will cause changes in commuting patterns that will affect existing transportation plans and the need to plan

in the future. Among key factors for consideration are these trends:

- Huge growth in the availability of vehicles to households, and especially to workers, has permanently affected the modal choice decision, assuring use of private vehicles as the mode of choice for the vast majority of work trips.
- Popular expectations of the potential for working at home and alternative travel modes to appreciably reduce commuting by private vehicle have not been realized. Thus, highway demand has increased even beyond the high growth expected from the job boom.
- Suburb-to-suburb commuting flow has become the predominant national commuting pattern.
- While suburban flows predominate, growth in traditional suburb-to-center-city commuting has been significant and will require continuing interest and concern.
- Growth in the commuting activity is occurring around outer borders of metropolitan areas, in that area between the suburbs and what was considered to be rural area until recently. This has become an important component of metropolitan highway demand, and will need to become a major element in future highway planning.

A crucial characteristic of commuting travel is overall trip length. It is also among the more difficult to evaluate. If the notion that jobs are now following population to the suburbs is a correct assessment of current trends, shorter potential trip lengths may result as jobs get closer to workers.

This is suggested by the fact that suburb-to-suburb work trips are 50% shorter than suburb-to-center-city work trips. As the proportion of suburban work-trip origins that also terminate in the suburbs grows, overall average metropolitan trip lengths should decline. This could promise a significant increase in commuting efficiency. At the same time, continuing metropolitan expansion creates a countertrend in which the typical lengths of suburb-to-suburb trips and suburb-to-center-city trips are increasing slightly each year. Trip length changes will be a crucial barometer of changes in the character and quality of future commuting travel.

Travel times and speeds depend on these variables: trip lengths, travel demand patterns, and characteristics of the transportation facilities provided. Current commuting speeds are the product of the interactions of these variables.

- The average travel time for all commuters has reached about 21 minutes for a typical journey of about 10 miles, indicating an average commuting speed of about 28 miles per hour.
- Nationally, public transit travel time is now about twice that of the private vehicle. In large metropolitan areas with high transit use, the average transit travel time is 1.7 to 1.8 times the travel time of private vehicles.
- Part of the attraction of work travel to the suburbs has been that present lower suburban densities make suburban travel speeds on some routes better than suburb-to-center-city speeds. But, generally, low road capacity can quickly shift speeds downward as commuting growth occurs.

Future travel times and speeds will be a function of travel demand interacting with transport supply.

### **Implications for Transportation Facilities**

Clearly, the character of commuting demand has been changing, and will continue to do so through the remainder of the century. Changes in commuting demand have, and will continue to have, a substantial impact on the existing transport system. These changes will also affect our thinking and planning for future transportation facilities. The following are some considerations:

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- One of the effects of the substantial growth in commuting, and particularly the growth in auto commuting identified here, is that it calls into serious question the adequacy of transport plans based on population growth as a principal determinant of future travel demand. This study has shown that substantial increases in commuting have occurred even in areas of population decline, and, more broadly, commuting rates of increase have led population rates of increase by substantial margins, irrespective of the rate of metropolitan population growth. No area, regardless of population growth rate, is immune from the need to respond to increasing commuting travel demand.
- The effects of these changing patterns of commuting flow on the highway system are substantial. The most evident is that the tremendous growth in suburban commuting has occurred in areas ill-prepared, in terms of public facilities, roads, and transit, to meet the challenge. While the new trip patterns hold some prospect for greater future efficiencies, in that suburban trips are shorter and more balanced in direction, their occurrence on a road system more oriented to radial patterns than circumferential flow and with inadequate capacity has seriously strained metropolitan infrastructure.
- New patterns of employment and trip patterns will serve to reduce the importance of the "peak hour" and "peak direction" as the driving forces in system design and operations. This will affect parking, signalization, and other elements of highway operations.
- The spreading out of commuter travel in both time and direction will increasingly cause competition with local nonwork travel and with interstate commerce for limited road space.
- One effect of the competition for available road space is that interstate highways and other facilities serving interstate commerce functions are often heavily used for commuting in the absence of adequate local facilities. This seriously imperils the ability of the interstate system to perform its interstate commerce mission, and will eventually require relief in the form of local substitutes for lost interstate capacity, or new interstate facilities to do the job intended for the original system. The present competition between the needs of the local commuter

and the needs of long-distance interstate traffic (along with other local traffic) on the same limited road space will be a critical concern in the future.

- The opportunities for public transit to make substantial contributions to commuting needs outside the markets it currently serves will be limited in the future by available technology and institutions. The suburb-to-suburb market will represent only a very small and very expensive market for traditional forms of transit to serve. As the suburban market becomes more dense, opportunities may increase for innovative transit services to meet specialized needs.
- The potential for greater "community balance" between workers and jobs in suburban areas exists, with promise for more efficient commuting patterns, and other far-reaching benefits. This suggests that new requirements for interaction and cooperation between metropolitan jurisdictions will arise.

It is clear that the trends indicate changes in commuting that are substantial in scale and character, with equally extensive implications in the areas of:

- Traffic operations and management;
- Transport system planning and development;
- Transit routing and system planning;
- Government organization and programs; and
- Metropolitan form, development, and governance.

What is required is the formation of a new metropolitan strategy focused on needed public policies and private understanding in these areas based on appreciation of the trends and their implications.

The next step in the development of needed strategies is to identify and analyze more fully the implications of the trends presented here. Among areas of future work should be: detailed case studies of a number of metropolitan areas to gain the detailed understanding of trends not possible at the national scale; analyses of changes in traffic demand patterns, looking at facility volumes by direction and time relative to available capacity; and development of better data to support a more comprehensive understanding of perceived trends. (IRWA)

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