

Drivers of Change in Transportation

Preliminary Report from the 2015 APA Conference Work Session

At the 2015 National APA Conference, Terry Moore facilitated a ‘deep-dive’ work session on long-range factors influencing transportation. Four national experts presented on key demographic, technological, economic, and political trends that could change the demand for and supply of urban transportation in the U.S. over the next thirty years.

After the presentations, the audience worked in groups to explore these trends by creating scenarios of the future. Working with a template and a pre-determined scenario title, they selected the trends or ‘drivers’ they thought would contribute to the scenario and discussed the implications these drivers would have for transportation.

Below, we summarize some of the key findings from that exercise. ECONorthwest is engaged in [a project with Washington County in Oregon exploring similar questions](#). As that research progresses, we will elaborate on the drivers and their likely role in transportation planning and modeling. Check back for more updates.

Drivers

Across the scenarios, participants selected some drivers more consistently than others. The selection of these drivers across multiple scenarios is an indication of how likely the audience thought the drivers would be. These drivers were selected across at least four scenarios.

- Migration to metropolitan areas
- Aging population
- Increase in service- and technology-based industries
- Congestion road pricing and VMT taxes
- Advanced ubiquitous intelligent transportation systems (ITS)
- Decline of federal funding

All of these shifts create new challenges and opportunities for transportation planning across the U.S.

Impacts

The drivers can impact transportation supply and demand in multiple ways. Participants discussed how the combination of drivers in their scenarios would impact eight variables in a U.S. metropolitan area. They rated likely impacts on a Lickert scale, with 1 = significantly

decrease and 5 = significantly increase. Here, we report their average score and the level of variance across all groups, with a low score indicating consensus.¹

Implications	Average Score	Variance
Population	4.6	0.3
Household Size	2.4	0.3
VMT per Capita	2.5	1.6
Non-auto Mode Split	3.9	1.6
Development Density	4.0	1.6
Employment	3.9	1.6
Metro GDP	3.8	1.9
Cost of Transportation per Mile	3.6	3.1

Implications for Scenario Planning

Participants reported that they enjoyed being able to discuss the drivers, but they felt it was challenging to imagine their impacts without thinking of a specific metropolitan area. Different cities and regions will experience these in different ways. For example, drought- or weather-related migration would impact emigrant v. immigrant regions differently. In addition, some planners thought costs would direct political will and decision making, and concerns over under-funded maintenance would trump interest in new technologies and limit resources to deploy them. Overall, there was widespread acknowledgement that these drivers were important for planning and that many current planning processes do not incorporate them well.

¹ We had 10 total discussion groups. This provided us with a large amount of information but not enough for statistical analysis. We examined for trends and relationships, but we did not attempt to isolate relationships between individual scenarios, drivers, and implications.