



Assessing Importance and Satisfaction with Factors in Intermodal Work Commuting

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A frequently referenced public policy goal is to reduce or limit the growth of single-passenger private vehicle use for routine trips. This policy goal continues to have limited success in the densely populated travel corridors of California. The work commute is the most routine local commuting. While work travel is about 20% of total travel in the U.S., it remains important because of its absolute size and the predictability of travel times.

The studies we report use samples of work commuters from two travel corridors in Santa Clara County, California. Intermodal commuters who are regular users of public transportation were compared with privately owned vehicle (POV) commuters traveling to work in each corridor. The destinations in the travel corridors differ based on the predominant employers in each respective corridor. In one of these, high technology firms are the predominant employers. In the other, state, county and city offices are the predominant employers. The studies answer questions such as

- What factors have high importance in each travel corridor?
- How does rated satisfaction with these factors differ in each travel corridor?
- What are the design implications in each corridor?
- What lessons can be learned from studies of different travel corridors in a county with diverse employers and work locations?

Study Methods

In investigating the importance of factors in intermodal work travel, we assessed intermodal commuters' subjective judgments of importance and satisfaction with factors in public transportation in multiple travel corridors in the same urban county. We reported the results with multiple measures of satisfaction. Additionally, we used importance-satisfaction analyses (ISA) to highlight factors that are most important to commuters, as well as how they perceive shortcomings in satisfaction.

Findings

In the high tech travel corridor we studied, income and education differences between POV and public transportation commuters were relatively small. In this corridor, public transportation commuters tend to be long-time commuters whose incomes could allow them more discretion in choice of travel mode than their counterparts who commute to the urban city center we studied. Among commuters in the high-tech travel corridor, service offerings in travel time and distance were more important than cost.

Work commuters in urban travel corridors in close geographic proximity can exhibit markedly different ratings of importance and satisfaction with public transportation offerings.

Age and income of the public transportation commuters in the urban city center suggests that they may use this commute mode more out of necessity. These commuters are less satisfied with public transportation in the corridor than are commuters in the high tech corridor. This result is unexpected because the light rail corridor is often considered preferable to the bus modes available in the high tech corridor. Among these commuters, the ISA and an importance-weighted dissatisfaction measure indicated that cost was of predominant importance to public transportation commuters and was the basis for the largest differences in satisfaction between the public transportation and POV commuter groups.

In many previous studies, travelers in different corridors have been studied as common entities across the county. The different results when comparing across both public transportation commuters and POV commuters in each sample suggest that independent studies of travel corridors with different mode alternatives can be informative even when they are within the same county and in close geographical proximity.

Policy Recommendations

- Differences between travel corridors in close geographical proximity imply that segmentation of local travel markets can be important to designs that increase overall satisfaction.
- Education level is more important than income level to public transportation users. Appeals should be directed to higher education commuters by using factors other than cost.
- Affect, as in satisfaction judgments, is more important to public transportation usage than often recognized. Place greater emphasis on understanding non-cost factors that generate satisfaction among different user segments. For example, appeals such as “Be a hero to your community” may be an effective appeal to higher education commuters.
- Emphasize retaining public transportation usage in younger commuters rather than converting POV users to public transportation commuters.
- Wait time and total travel time appear to be more burdensome to intermodal bus commuters than to rail commuters even when reported wait time and total travel time do not differ significantly. Place more emphasis on ensuring coordination and information accessibility to bus travelers than to rail travelers.
- Consider programs such as travel point accumulation when reducing fares is not a feasible alternative to cost-conscious commuters.

About the Authors

Steven Silver is a professor in the Lucas Graduate School of Business and College of Business at San José State University and an MTI Research Associate.

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For more details about the study, download the full report at transweb.sjsu.edu/project/1033.html