

Project Title: The Economic Demography of Passenger Intermodal Transportation: Opportunities and Challenges

Principal Investigator

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Project Summary

The research on intermodal transportation is vast. However, most of the efforts have focused on the freight side. There is much less research on intermodal passenger transportation—largely due to the lack of a comprehensive dataset for effectively studying it (Goetz and Vowles 2005; Paez 2004). It is essential to understand passenger usages of the intermodal transportation system because passengers are the biggest users of transportation systems and passenger benefits are one of the important factors, if not the most important factor, in transportation planning and decision making.

The Principal Investigator (PI) received funding from NCITEC in 2012 to study passenger usages of intermodal transportation using the most comprehensive 2009 National Household Travel Survey (NHTS) data. The preliminary results, which are summarized in more than three dozen tables and figures, indicate a variety of differences in passenger usages of intermodal transportation by trip purposes and travel modes and by age, gender, race/ethnicity, and metro/nonmetro status. The results beg further research questions related to the causes of these differences in passenger intermodal transportation; answering these questions would provide insights to decision makers, transportation planners, and the public for promoting efficient passenger intermodal transportation systems. Therefore, the PI requests that NCITEC support the continuing research effort to investigate passenger intermodal transportation.

Specifically, the objectives of this continued research include: 1) examining the gender, racial/ethnic, and socioeconomic differences in passenger intermodal transportation usage (economic competitiveness); 2) exploring intermodal transportation usages in response to the aging population and identifying strategies to promote passenger intermodal transportation systems for the elderly and disabled populations (safety); and 3) examining opportunities and challenges for improving and utilizing passenger intermodal transportation systems (livable communities). The results will contribute to the literature on passenger intermodal transportation and passenger travel behaviors and patterns. To the best knowledge of the PI, this research is the first attempt to comprehensively understand passenger intermodal transportation from the economic and demographic perspectives. Further, the findings of the research will be used to provide suggestions for enhancing and optimizing passenger intermodal transportation, an area that has received rapidly increasing attention from decision makers, transportation planners, and the public.