

**Project Title:** Economic and Demographic Impacts of Passenger Rail Systems: A Scenario Analysis of Restoring the Passenger Rail Corridor between New Orleans and Orlando

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**Project Summary**

The economic and demographic impacts of highways, airways, and public transportation have been studied in several disciplines, resulting in an assortment of theoretical and empirical studies. Yet, little work has been undertaken to study the economic and demographic impacts of passenger rail systems, especially in the U.S. To the best knowledge of the Principal Investigator (PI), no existing studies have examined intermodal passenger transportation accessibility as provided by passenger rails, highways, and airways as well as their collective impacts on the economy and population change.

It is important to study the impact of passenger rails because there is an increasing debate over whether passenger rails, rail transit, and high-speed trains should be expanded or built in the U.S. It is also important to study them within the context of passenger intermodal transportation because intermodal systems have become increasingly important for transportation performance and efficiency, and planning practices are focusing more attention on intermodal systems as a whole rather than any single mode of transportation.

The PI has published research on the economic and demographic impacts of single modes of transportation, the impact of intermodal transportation as provided by highways and airways, and passenger usage of intermodal transportation. Building upon this research, the PI will 1) investigate the economic and demographic impacts of passenger rails with highways and airports in the continental U.S. at the county level, where local policy making occurs and rich data are available; and 2) conduct a scenario analysis of the impacts of restoring the rail corridor between New Orleans and Orlando.

The intellectual merits include 1) development of an accessibility measure as provided by passenger rails, highways, and airports; 2) examination of the intermodal passenger transportation impact on population and employment growth; and 3) extension of location theory by adding passenger rail systems. The broader impacts include 1) involvement of various stakeholders of the potential New Orleans-Orlando Corridor (NOOC), 2) outreach of restoring the NOOC in relation to community livability and environmental sustainability, and 3) recommendation of strategies for optimizing intermodal transportation systems to better facilitate passenger travel and proposed resilience enhancement strategies, especially for evacuation purposes and providing relief services after disasters. To the best knowledge of the PI, this proposed research is the first attempt to comprehensively understand the economic and demographic impacts of passenger rail systems within the context of intermodal transportation.