Air Passengers Shift to High-Speed Rail, Says New Research Report

Mineta Transportation Institute's report shows global trends likely apply to California

San Jose, CA – June 23, 2014 – Evidence from the high-speed rail (HSR) systems of Europe and Asia demonstrates that the mode is very attractive to travelers who otherwise may have chosen airlines or other modes, according to a new Mineta Transportation Institute (MTI) report, *Modal Shift and High-Speed Rail: A Review of the Current Literature*. The author, Peter Haas, PhD, examined the evidence concerning HSR and modal shift in a large variety of HSR systems, time periods, data sources, and means of analysis. The results could apply to the new California HSR system. The report is available for free, no-registration download at http://transweb.sjsu.edu/project/1223.html

"Essentially, the literature affirms that HSR has resulted in dramatic or significant transportation mode shifts where it has been introduced and systematically evaluated," said Dr. Haas. "In both Europe and Asia, HSR systems have greatly reduced or even curtailed air service when serving the same routes. The most dramatic effects of HSR ability to attract market share have been frequently observed under specific circumstances. It is reasonable to conclude that these factors will likely apply to the California HSR system, as well."

Several factors come into play

When HSR is faster from beginning to end of city pairs, for example, HSR will gain market share rapidly and decisively. Other possible mediating factors include:

- Time to access and egress the system
- Fare cost versus that of other modes
- Service frequency
- Service quality
- Number of transfers required

According to the report, the planned California HSR system seems to encompass many of the key variables regarding capturing market share, such as travel distance and time.

Other modes are affected, as well

Aside from airline travel, there is much less definitive research concerning direct competition with automobiles. The completed research generally confirms that adding HSR substantially reduces automobile travel, with a few exceptions that seem linked to extraneous factors and not the competitiveness of HSR *per se*. In some markets served by express buses (e.g., Taiwan), there is evidence of modal shift to HSR as well, but the evidence is relatively scant.

When it competes directly with conventional rail, HSR has emerged as the dominant force in the market, although conventional rail also serves as a complement in many HSR systems.

Dr. Haas noted, "The fact that HSR systems have proven competitive in a great diversity of settings in industrialized countries is documented with a variety of data and research approaches in the studies compiled here. Although this study does not include analysis of new data that would address the California HSR system, the findings from the research reviewed for this report are highly consistent with the expectation that the planned HSR system is well-positioned to achieve comparable modal shift."

Economic competition is not the objective

Most of the literature explored in this analysis explicitly uses the concept of competition to explore modal shift, although competition in the sense of economic battle is not the ultimate objective for HSR systems. Rather, these systems are intended to advance a number of policy goals – including environmental objectives, more rational allocation of public infrastructure, and other goals.

"To achieve these targets," said Dr. Haas, "significant modal shift to HSR is paramount, and hence the emphasis on competition in the literature. This competition assumes a diversity of forms, but it tends to focus on point-to-point travel times, costs, and quality of the travel experience."

The full 50-page report is available for free PDF download at
http://transweb.sjsu.edu/project/1223.html

ABOUT THE PRINCIPAL INVESTIGATOR
Peter Haas, PhD, has been a faculty member in the Mineta Transportation Institute's Graduate Transportation Management Program since 1999 and was appointed its Education Director in 2001. He earned a PhD in political science (public policy and public administration) from the University of North Carolina at Chapel Hill in 1985. A former director of the SJSU Master of Public Administration program, he also has consulted at every level of government and for nonprofit agencies. Dr. Haas has authored numerous reports and other publications covering transportation and is co-author of the text *Applied Policy Research: Concepts and Cases*. He also received a grant from the Fulbright Foundation to teach and study in Latvia.

ABOUT THE MINETA TRANSPORTATION INSTITUTE
The Mineta Transportation Institute (MTI) conducts research, education, and information transfer programs regarding surface transportation policy and management issues, especially related to transit. Congress established MTI in 1991 as part of the Intermodal Surface Transportation Efficiency Act. MTI won national re-designation competitions in 2002, 2006 and 2011. The Institute is funded by Congress through the US DOT Research and Innovative Technology Administration, by the California Legislature through Caltrans, and public and private grants. In 2006 the US Department of Homeland Security selected MTI as a National Transportation Security Center of Excellence. The internationally respected members of the MTI Board of Trustees represent all major surface transportation modes. MTI is the lead institute for the Mineta National Transit Research Consortium, an affiliation of nine university transportation research centers. MTI is affiliated with San Jose (CA) State University's College of Business. Visit transweb.sjsu.edu

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