Cities Can Spur Economic Growth through More Efficient Transit

Mineta National Transit Research Consortium publishes free peer-reviewed report with findings, policy recommendations

San Jose, Calif., December 18, 2013 – Changes wrought by mass transit service planning can heavily influence regional economic growth, even in tough economic times. But how can cities assess transit performance, determine the efficiencies, and develop policies to boost that efficiency? The MINTRC) publication, Longitudinal Analysis, addresses those questions and offers policy recommendations using Ohio as a role model. The peer-reviewed research report is available for no-cost, no-registration download at http://transweb.sjsu.edu/project/1135.html. The author is Hokey Min, PhD.

"Ohio's economic growth has been lagging behind the national average for 13 out of the last 15 years, according to some experts," said Dr. Min. "To reverse this trend, Ohio leaders are seeking ways to improve the state's economic vitality and job opportunities. One way to do this is to improve the mobility of Ohio residents by increasing their access to public transportation. This can boost economic activities such as job commuting and retail shopping."

Given the public's growing concerns over government budget deficits, the continuous under-utilization of a mass transit system can increase public scrutiny of additional investments in mass transit services. To find ways to better use these systems across Ohio and thus make best use of public financial resources, the report evaluates operational efficiency of the current mass transit system relative to benchmark standards. Then it identifies the leading causes of any transit inefficiencies. To meet these goals, the researchers conducted window data envelopment analysis (DEA) on the past three years of time-series data for 24 of Ohio's 27 urban mass transit agencies.

Among its findings, the report said:

- The overall size of a city has no bearing on its mass transit efficiency.
- Local climate and economic conditions are not necessarily tied to transit efficiency.
- Using particular transportation modes could influence mass transit efficiency, based on the DEA analysis of 515 transit agencies across the US.

Recommendations include:

 State and municipal governments in Ohio should reward and prioritize the development of mass transit systems that serve densely settled urban areas (an

- average population of at least 7000 per square mile) while increasing the use of bus rapid transit.
- Where financial and human resources are not fully utilized, public policy makers must consider outsourcing the transit operation to private enterprises or building a long-term partnership with them.
- Public policy makers should eliminate duplications and/or have high-performing transit agencies manage services for low-performing adjacent areas.

Dr. Min said, "In particular, capital investment in public infrastructure, such as mass transit systems, is often linked with local economic improvement. Some experts have observed that such investment tended to yield long-term economic benefits, such as higher residential property value, higher real wages for local workers, lower unemployment, and reduced travel time.

Similar conclusions are drawn from recent studies of Africa's and China's transportation infrastructures. However, controlling mass transit operating costs while meeting service demand remains one of the greatest challenges for mass transit authorities, private transit service providers, and public policy makers.

The 37-page report includes ten tables and figures, such as descriptive statistics of input and output measures, efficiency scores of US transit systems, and more.

ABOUT THE PRINCIPAL INVESTIGATOR

Hokey Min, PhD, is the James R. Good Chair in Global Supply Chain Strategy in the College of Business Administration at Bowling Green State University. He earned his PhD in management sciences and logistics from Ohio State University. His research interests include health care management, green supply chains, global logistics strategy, benchmarking, mass transit systems, and supply chain modeling. He has published more than 155 articles in scholarly journals such as *Journal of Business Logistics, International Journal of Physical Distribution and Logistics Management, Transportation Journal*, and *Transportation Research*. He is editor of *International Journal of Logistics: Research and Applications* and is on the editorial review board of *Journal of Business Logistics, International Journal of Integrated Supply Management* and *International Journal of Logistics Systems and Management*.

ABOUT THE MINETA NATIONAL TRANSIT RESEARCH CONSORTIUM (MNTRC)

MNTRC is composed of nine university transportation centers led by the Mineta Transportation Institute at San Jose State University. The Consortium was organized in January 2012 after winning a competition sponsored by the US Department of Transportation to create consortia tasked with "Delivering Solutions that Improve Public Transportation." Member universities include Bowling Green State University, Grand

Valley State University, Howard University, Penn State University, Rutgers University, San Jose State University, University of Detroit Mercy, University of Nevada Las Vegas, and University of Toledo. Visit transweb.sjsu.edu/mntrc

ABOUT THE MINETA TRANSPORTATION INSTITUTE (MTI):

MTI conducts research, education, and information transfer programs focusing on surface transportation policy and management issues, especially related to transit. MTI was established by Congress in 1991 as part of the Intermodal Surface Transportation Efficiency Act and 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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