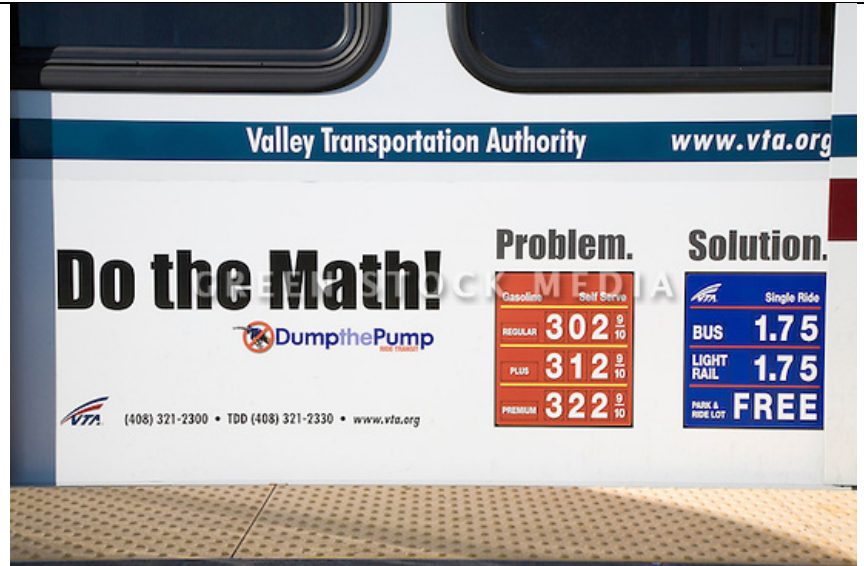


<b>UTC Project Information</b>	
Project Title	Net Effects of Gas Price Changes on Transit Ridership in US Urban Areas (Former title: Net Effects of Gas Price Changes on Transit Ridership in the US Urban Cities)
University	San José State University Mineta National Transit Research Consortium
Principal Investigator	Hiroyuki Iseki, Ph.D.
PI Contact Information	National Center for Smart Growth Research & Education University of Maryland, College Park College Park, MD 20742 oraa@umd.edu 301-405-6269
Funding Source(s) and Amounts Provided (by each agency or organization)	Research and Innovative Technology Administration University Transportation Centers Program (\$34,765)  California Department of Transportation Office of Research—MS42 (\$34,765)
Total Project Cost	\$69,530
Agency ID or Contract Number	DTRT12-G-UTC21
Start and End Dates	June 2012 – December 2014
Brief Description of Research Project	<p>Using panel data of transit ridership and gasoline prices for ten selected U.S. urbanized areas over the time period of 2002 to 2011, this study analyzes the effect of gasoline prices on ridership of the four main transit modes—bus, light rail, heavy rail, and commuter rail—as well as their aggregate ridership. Improving upon past studies on the subject, this study accounts for endogeneity between the supply of services and ridership, and controls for a comprehensive list of factors that may potentially influence transit ridership. This study also examines short- and long-term effects and non-constant effects at different gasoline prices.</p> <p>The analysis found varying effects, depending on transit modes and other conditions. Strong evidence was found for positive short-term effects only for bus and the aggregate: a 0.61-0.62 percent ridership increase in response to a 10 percent increase in current gasoline prices (elasticity of 0.061 to 0.062). The long-term effects of gasoline prices, on the other hand, was significant for all modes and indicated a total ridership increase ranging from 0.84 percent for bus to 1.16 for light rail, with commuter rail, heavy rail, and the aggregate transit in response to a 10 percent increase in gasoline prices. The effects at the higher gasoline price level of over \$3 per gallon were found to be more</p>

	<p>substantial, with a ridership increase of 1.67 percent for bus, 2.05 percent for commuter rail, and 1.80 percent for the aggregate for the same level of gasoline price changes. Light rail shows even a higher rate of increase of 9.34 percent for gasoline prices over \$4. In addition, a positive threshold boost effect at the \$3 mark of gasoline prices was found for commuter and heavy rails, resulting in a substantially higher rate of ridership increase.</p> <p>The results of this study suggest that transit agencies should prepare for a potential increase in ridership during peak periods that can be generated by substantial gasoline price increases over \$3 per gallon for bus and commuter rail modes, and over \$4 per gallon for light rail, in order to accommodate higher transit travel needs of the public through pricing strategies, general financing, capacity management, and operations planning of transit services.</p>
<p>Describe Implementation of Research Outcomes (or why not implemented)</p>	<p>Iseki, Hiro. "Panel Data Analysis of Gas Price Elasticity to Transit Ridership in Ten Major Urban." Presentation at the Annual Conference of the International Transportation Economics Association, Evanston, IL, July 12, 2013.</p> <p>Iseki, Hiro. "Fixed Effects Panel Data Analysis of Gasoline Prices, Fare, Service Supply, and Service Frequency on Transit Ridership in Ten U.S. Urbanized Areas." Presentation at the 54<sup>th</sup> Annual Conference of the Association of Collegiate School of Planning (ACSP), Philadelphia, PA, November 2, 2014.</p> <p>Iseki, Hiro. "Fixed Effects Panel Data Analysis of Gasoline Prices, Fare, Service Supply, and Service Frequency on Transit Ridership in Ten U.S. Urbanized Areas." Presentation at the 94<sup>th</sup> Annual Meeting of the Transportation Research Board, Washington, DC, January 12, 2015.</p>

Place Any Photos Here



<http://cdn.c.photoshelter.com/img-get/I0000YSMKKAaAp2o/s/550/GSM-0-03666-mass-transit-versus-driving-ad-stock-photo.jpg>

Impacts/Benefits of Implementation (actual, not anticipated)

Web Links

- Reports
- Project Website

Final report (MNTRC Website):  
<http://transweb.sjsu.edu/project/1106.html>

Final report (TRB Website):  
<http://trid.trb.org/view/2014/M/1334691>