

Marlon Boarnet

Measuring Rail Transit's Sustainability Goal: An Experimental Evaluation of the Expo Line

Tuesday, September 16th

Lewis Hall Auditorium, (RGL 101) USC Main Campus

Noon to 1:30 pm

RSVP to Janet Kleinman at janetkle@usc.edu



Marlon Boarnet is Professor and Senior Associate Dean, Academic Programs at the Sol Price School of Public Policy at USC. Boarnet's research focuses on land use and transportation; links between land use and travel behavior and associated implications for public health and greenhouse gas emissions; urban growth patterns; and the economic impacts of transportation Infrastructure. He is co-author of *Travel by Design* (Oxford University Press, 2001), a comprehensive study of the link between land use and travel. Boarnet is a fellow of the Weimer School of the Homer Hoyt Institute for Real Estate and currently serves on the governing board of the Association of Collegiate Schools of Planning. Since 2002, Boarnet has co-edited the *Journal of Regional Science*, a leading international journal at the intersection of economics and quantitative geography. Boarnet also serves as an associate editor of the *Journal of the American Planning Association* and is on the editorial boards of several other academic journals. Boarnet was a member of the National Academy of Sciences / National Research Council Committee on "Relationships Among Development Patterns, Vehicle Miles Traveled, and Energy Consumption" which authored the report "Driving and the Built Environment." He has been principal investigator on over 1.8 million dollars of funded research, supported by agencies that include the U.S. and California Departments of Transportation, the U.S. Environmental Protection Agency, the California Policy Research Center, the California Air Resources Board, and the Robert Wood Johnson Foundation.

ABSTRACT:

Using the recently opened Exposition (Expo) light rail line in Los Angeles as a case study, Boarnet and co-investigator Doug Houston collected 7-day travel data from 204 households. Households were divided into two groups – an experimental group, within ½ mile of the Expo Line stations, and a control group, from ½ mile to more than 2 miles from the new stations. Each household completed 7-day travel tracking in fall of 2011, before the Expo Line's April 2012 opening, and then again in fall, 2012, after the line was open. The data allow a comparison of before-after changes across experimental and control groups. The results show that households within ½ mile from the new stations reduced daily vehicle miles traveled by approximately 10 miles compared to control households. Results also show some increases in rail transit usage, and analyses that compare travel among households within and beyond 5/8 of a mile street network distance from stations show that the increase in rail trips among households near stations is statistically significant. Among study subjects who were the least physically active (approximately the bottom 40th percentile of daily physical activity in the sample), residence near stations is associated with after-opening increases in physical activity.