

Economics Seminar, Indian Statistical Institute, New Delhi.

SPEAKER: Deepti Goel, Delhi School of Economics

TITLE: The effect of metro rail on air pollution in Delhi.

TIME: 11:30 AM – 01:00 PM.

DAY & DATE: Friday, 15th February, 2013

PLACE: Seminar Room 2

Abstract:

In this paper we investigate the effect of the Delhi Metro, an intra-city mass rail transit system, on air pollution within Delhi. To identify effects on pollution, we exploit the discontinuous jumps in metro ridership, each time the network is extended. Our identifying assumption is that in the absence of the extension there would be a smooth transition in pollution levels. We find strong evidence to show that the Delhi Metro has resulted in reductions of two important vehicular emissions, namely, nitrogen dioxide and carbon monoxide. We estimate a cumulative impact of a 35 percent reduction in CO levels for the region around ITO (a major traffic intersection in Delhi). This is suggestive of a traffic diversion effect, where people are switching from private modes of travel to the Delhi Metro. Given, documented evidence on the adverse health effects of air pollution, our findings suggest that these indirect benefits must be considered in any cost-benefit analysis of a rapid mass transport system.

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