

Highways or Greenways: The Impact of Congestion Pricing on Urban Transport Emissions in the United States

Misak Avetisyan, Ali Jaffri

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Abstract

In this study we explore the potential impacts of congestion pricing on transportation emissions within the major metropolitan cities in the United States. The application of congestion pricing is modeled as an exogenous economic shock that stimulates changes in the consumer and producer behavior. This is intended to have noticeable repercussions for the traffic flow and emissions from road transport. In this paper we consider several scenarios to investigate the array of potential outcomes focusing on vehicle usage, shift to other transportation means, economic implications, and environmental gains. The results of this study indicate a significant reduction in urban transport emissions especially when shifts to less emission intensive transport means are considered. Our findings show that congestion pricing is an efficient means aimed at mitigating the deleterious effect of greenhouse gas emissions and it can be an important steppingstone for sustainable urban planning. This study will also give policy makers evidence for employing market-based instruments to improve the environmental quality in the United States. The results will not only draw attention to the environmental gains from such a pricing strategy but will also delve into the broader socio-economic dimensions of implementing transport congestion pricing in diverse urban landscapes.