

Public Abstract

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Title:An Analysis of Income Distribution Effects of a Gasoline Tax: Evidence from the U.S. Micro-Level Data

This is a study of an income distributional effect of a gasoline tax, taking account of behavioral responses of households depending on income levels. We focus on analyzing how the public transit system, which is considered an alternative to private driving, influences the distributional effects of a gasoline tax in particular for poor households. In order to see the different behaviors of households to gasoline price changes, we examine the price elasticities of gasoline demand within income groups based on different transit services in residential areas. The estimated results then are used to analyze the different tax burdens within income groups to analyze an income distributional effect by simulating the change of households' gasoline consumption in a hypothetical optimal gasoline tax policy. Empirical analyses are presented, adopting the Dubin-McFadden correction method, with the primary data drawn from the 2001 National Household Travel Survey. We find that a gasoline tax is generally regressive across all income levels. In particular, households living in areas that have greater transit supply than the U.S. average show the responses that tend to enhance the regressivity of a gasoline tax. If the government cares about equity more than economic efficiency for these households, then the gasoline tax would not be the best choice.