Vehicle mileage tax is best option for long-term highway funding

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A study that forecasts state and federal fuel tax revenues based on different fuel taxation policies found adoption of a vehicle mileage tax would best meet highway construction needs in the long run.

Current taxes on gasoline and diesel, levied at a fixed cents-per-gallon rate, are the primary sources of transportation funding at the state and federal levels.

But, due mainly to an increase in fuel economy and fuel tax rates that are not adjusted to inflation, revenue generated by those taxes is increasingly inadequate, according to the study.

Co-authored by Jerome Dumortier, an assistant professor in the School of Public and Environmental Affairs at Indiana University-Purdue University Indianapolis, and John Marron, formerly of the IU Public Policy Institute and currently working with IndyGo, the study, "State and federal fuel taxes: The road ahead for U.S. infrastructure funding," will be published in the January 2017 issue of the journal *Transport Policy*.

The study forecasts state and federal tax revenues that would be generated by:

- Indexing gasoline and diesel taxes to inflation.
- Applying state sales taxes to fuel prices in addition to an inflation-adjusted excise tax.
- Implementing a vehicle mileage tax.

According to the study, fuel tax revenue will decline by up to 50.5 percent between 2015 and 2040 in states that do not adjust fuel taxes to inflation.

The study notes that the federal gasoline tax was set to .184 cents per gallon in 1997. As a result of the increase in the Consumer Price Index since 1997, the purchasing power of the tax rate had declined 31 percent by 2012.

The fuel tax revenue decrease will be smaller, between 3.4 and 16 percent, in states that currently adopt inflation-adjusted fuel taxes.

For states that currently neither adjust for inflation nor impose any sales taxes, charging a vehicle mileage fee would increase tax revenue by 54-101 percent, with a median change of 62 percent by 2040.

"Our results indicate that although a mileage fee is politically and technologically difficult to achieve, it is the only measure that avoids a declining tax revenue in the long run," Dumortier said.

Since fuel economy is increasing over time, the cost per mile driven is decreasing for the average car driver under all tax and mileage fee scenarios.

"Think about the cost to fill up your gas tank as having two components: the fuel itself and the tax," Dumortier said. "The tax is relatively small compared to the cost of the fuel. Because your average car uses less fuel over time due to fuel-economy improvements, the cost associated with the fuel decreases significantly."

Changing the fuel taxing system won't be easy, the authors say, citing studies that show people oppose financing roads with vehicle mileage taxes, higher fuel taxes, sales and income taxes, and tolls. "But the conclusion that the U.S. surface transportation system will gradually deteriorate without a new or additional dedicated source of transportation funding is universal," Dumortier said.

Provided by Indiana University

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