Perceptions of Gasoline Taxes

by Ronald C. Fisher and Robert W. Wassmer

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In the debut of their column, Fisher and Wassmer discuss the public's and policymakers' perceptions of gas taxes. They write that according to data from surveys they conducted in California and Michigan, taxpayers have a skewed perception of how much they pay in gasoline taxes or under a mileage-based fee system. The authors urge policymakers to take greater responsibility in giving taxpayers more accurate information about the true cost of taxes and fees concerning transportation funding.

As summer begins, many individuals and families will be traveling and experiencing the quality (or lack thereof) of the nation's roads, not to mention serious congestion in many urban areas. This will bring increased attention to transportation infrastructure. Surveys suggest that the public and the officials who represent them favor increased transportation investment. Yet both groups often oppose increases in fuel tax rates, and there seems to be widespread skepticism and disagreement about alternative revenue sources, including use-based prices and other user-fee types of financing. Is this just the unending search for a free lunch, or is something else going on?

Recent polls conducted in California and Michigan as part of our research confirm past experience. In both states, there is strong support for improving highway quality and some support for increasing highway quantity through additional investment. Seventy-one percent of respondents in California and 89 percent in Michigan favor more spending on road maintenance, and 50 percent in California and 41 percent in Michigan favor more spending for new roads. However, when asked how much they were willing to pay for additional road investment, 42 percent of California survey participants and 43 percent of those in Michigan responded "nothing." Although most (54 percent in California and 53 percent in Michigan) were at least willing to pay some additional amount to fund road investment, the median amounts for both states were less than $5 per month.

Research about numerous tax issues has shown that inaccurate perceptions about the amount or distribution of taxes may influence voters to support positions that are not in their self-interest. That may be part of the reason why voters generally favor greater transportation investment but do not support raising the funds to pay for it. What taxpayers believe they will pay in federal and state fuel taxes may affect their opinions regarding the desirability of additional road investment. If taxpayers typically overestimate their fuel tax amounts or the amount of payments they would need to make under a system of user fees, their opposition to tax increases is less surprising.

In fact, our research shows that taxpayers in Michigan and California do not have a good understanding of the magnitude of state and federal fuel tax amounts. Surveys of likely voters in Michigan and California show that taxpayers greatly overestimate the amount they pay in fuel taxes. The results of those surveys are remarkably similar even though the two states have different tax structures, tax rates, and infrastructure quantity and quality. In Michigan, about 50 percent of the respondents (voters) overestimated the level of tax by at least a factor of five, and 75 percent overestimated the magnitude by at least a factor of three. In California, about 50 percent of the respondents (residents) overestimated the magnitude of the tax by at least a factor of 2.5.

The Michigan fuel excise tax is 19 cents per gallon of gasoline. If a typical driver travels 12,000 to 13,000 miles per year at 21.5 miles per gallon (the national average for existing vehicles), the excise tax cost is about $9 to $10 per month (or $108 to $120 per year). Adding to that the 18.4-cent federal excise tax, the amount essentially doubles but remains less than $20 per month. Yet in response to the question of how much would they estimate the average driver in Michigan pays in state gasoline tax each month, 50 percent of respondents said $50 or more.

The California fuel excise tax is 42.5 cents per gallon of gasoline, including the embedded sales tax. Someone traveling 20,000 miles per year in a vehicle that gets only 15 miles per gallon — perhaps the most extreme case — has a monthly tax cost of about $47. When California residents were asked how much would they estimate the average driver in California pays in state gasoline tax each month, 46 percent of respondents said the tax was $50 per month or more. So almost half of California respondents thought the monthly state gasoline tax amount was more than the worst-case scenario.

Our survey results suggest that a major reason for the misperception regarding the gasoline excise tax amount is that voters overestimate the excise tax rate. When asked the question what they would estimate as the amount of the combined state and federal government gasoline excise tax per gallon in Michigan, only 19 percent of respondents selected the correct answer (between 25 cents and 50 cents, which includes the correct amount of 37.4 cents). In California, only 18 percent of respondents selected the correct answer (between 50 cents and 75 cents, which includes the correct amount of 54.4 cents). Further, 48 percent of Michigan respondents thought the combined state and federal gas tax rate was 50 cents or greater, and 38 percent of California respondents thought it was 75 cents or greater.

Our formal statistical regression analysis found that voters who substantially overestimate the magnitude of state gasoline taxes are willing to pay much smaller amounts (including zero) for additional highway investment and are less likely to support user fee alternatives to taxes than those who correctly estimate the gas tax amounts. For instance, in Michigan, if someone believes the state's gas tax is more than $1, they are about 68 percent less likely to support spending $20 more per month on road improvements than other voters. A Michigan poll respondent who believes that the state's gas tax is lower than those in other states is a whopping 450 percent more likely to support spending more than $20 per month than to select the base category of nothing.

Moreover, poll respondents' willingness to pay nothing in any form for road improvements was 54 percent greater in California compared with all California respondents if they thought the per-gallon gas tax in their state was between 75 cents and $1, and 86 percent greater if they thought the tax was more than $1. Similarly, in Michigan, if the respondents thought the per-gallon gas tax was greater than $1, they were about 270 percent more likely to say they would pay nothing to improve the state's roads compared with all Michigan respondents.

Inaccurate gas tax perceptions clearly decreased respondents' willingness to pay more than $20 per month in any form for road improvements. California respondents who thought their state's gas tax was greater than $1 per gallon were 71 percent less likely to want to pay this upper-end amount for road improvement compared with California respondents. In Michigan, a respondent who thought the state's per-gallon gas tax was between 50 cents and 75 cents was 88 percent less likely to want to pay more than $20 per month for road improvement.

Individuals in California and Michigan also did not support increased road tolls or mileage-based user fees. Opposition to the increased use of toll roads exceeded support in both California (55 percent to 38 percent) and Michigan (49 percent to 45 percent), although no toll roads now exist in Michigan.

There was even less support for mileage-based user fees. Opposition to the use of in-vehicle electronic devices to measure mileage for road-use fees exceeded support in both California (66 percent to 30 percent) and Michigan (68 percent to 24 percent). Because opposition to increased spending for roads is related to misperceptions about the magnitude of gasoline taxes, it seems reasonable to believe that opposition to road tolls and road use fees is related to misperceptions about the amount of those tolls and fees.

In fact, poll respondents also overestimated the amount of potential road-use fees, even when told the amount of the fee. Asked to estimate what they would owe if Michigan adopted a new transportation fee equal to 1 cent per mile driven, only 29 percent of respondents correctly answered, "about $10," whereas most estimated the amount as being much higher.

Political ideology also seems to affect the opinion of spending nothing for additional road improvements. Our statistical research found that those who "strongly (or somewhat) support the Tea Party movement" are about 150 percent more likely to choose that option over the other positive amounts of spending offered. This result was remarkably similar to the California poll results, in which those expressing support for Tea Party ideals were about 145 percent more likely to favor the nil category.

An implication of those results for policymakers is that proposals to generate additional revenue for highway investment are likely to be more successful if accompanied by a public education campaign concerning the gasoline taxes actually paid in a state and the amount paid by the state's typical driver. The arithmetic for that education is pretty straightforward. Someone who drives 12,500 miles per year and gets about 21 miles per gallon (both good approximations of current averages) buys about 600 gallons of gasoline annually. This equals about $60 per year, or $5 per month, for each 10 cents of tax. A similar simple calculation applies for a mileage fee. A fee of 0.5 cents per mile would also cost about $5 per month.

It might surprise many taxpayers to learn how small those amounts are. The typical price drivers pay for road use — or the proposed additional payment for improved roads — is equivalent to two cups of coffee from Starbucks a month. Compared with a typical monthly bill for television or cellphone service, or electricity, that is low.

Therefore, state policymakers and revenue officials seem to have an additional responsibility to provide accurate information to taxpayers about the magnitude of taxes and fees. It seems dangerous for officials to assume that taxpayers have accurate information. If taxpayers believe they are paying $50 per month in state gasoline tax when the actual amount is $10 or $20, it is not surprising that they oppose additional revenues and investment. Rather than seeking a free lunch, taxpayers seem to believe incorrectly that they are already paying too much for lunch. ☆