Popular strategies for reducing gasoline use aren't getting a chance to work

November 22 2022, by David Colgan

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Around the world, governments have widely attempted two strategies meant to reduce the use of gasoline by making it more expensive.

One is implementing taxes in order to raise the price that consumers pay at the pump; the other is cutting back on the longstanding subsidies that governments have provided to producers, with the goal of making gas more costly for companies to sell.

But a UCLA-led study published in the *Proceedings of the National Academy of Sciences* found that such reforms are curtailed so quickly that they are not being given a chance to have any effect. The authors concluded that presidents, prime ministers and monarchs are highly constrained in their ability to change gas taxes and subsidies, uncovering a reality that may be tough for supporters of carbon pricing to swallow.

The study is the most extensive and far-reaching analysis of carbon pricing to date. The researchers discovered that 62% of the time, the tax increases and subsidy reductions were rescinded within one year. And 87% of the time, they were scrapped within five years.

Michael Ross, the paper's lead author, a UCLA professor of political science and member of the UCLA Institute of the Environment and Sustainability, called the results "surprising and disturbing."

"It's incredibly rare for governments anywhere to sustainably increase taxes on gasoline or reduce subsidies," Ross said.

Given those measures' failures, the authors write, more effective policies for curbing carbon emissions would include funding renewable energy, reducing its cost to consumers and making it more widely available.

The study found that the tax increases and subsidy reductions didn't last very long even when they were sponsored by political leaders whose demographics and ideology were aligned with those who are more likely to care about climate change: women, younger people, and those who are more educated and left of center politically.

Most shockingly, when the measures had been implemented by national leaders who had received the Champions of the Earth Award from the United Nations Environment Program, they were even shorter-lived than those of peer nations, the study found.

"Nobody seems to do better than anyone else," Ross said. "The results are almost completely fruitless across the board."

The data gathering and analysis took over a decade to complete. A team of researchers speaking a combined 12 languages compiled records from 155 countries for the period from 1990 to 2015. For 17 countries where records were initially unavailable, the researchers hired local contractors to visit finance departments in person.

Examples of tax and subsidy failures span the globe. In Brazil, Luiz Inácio Lula da Silva, popularly known as Lula, increased gas taxes during his first presidency, in the 2000s, but they were rolled back after his successor, Dilma Rousseff, took power in 2011. French president Emmanuel Macron's 2018 effort to raise gas taxes met with a vigorous national movement to roll them back. Similar situations have played out in Bolivia, Ghana, Indonesia, Kazakhstan and Nigeria.

The few times when carbon pricing measures remained in place for longer periods of time typically followed extreme crises, such as civil wars or economic collapses, Ross said.

Of all 155 countries in the study, the United States has gone the longest without raising gasoline taxes: The national tax remains $0.18 per gallon, the same as it was in 1993. In the Inflation Reduction Act of 2022, the landmark climate legislation, gasoline taxes and subsidies were completely left out—perhaps wisely, Ross said.

Ross said opinion polls, protests and riots all point to the deep unpopularity of gas taxes.

"The favorite policy of economists and many policy wonks is running up against the cold, hard reality of politics," he said. "This issue is so toxic that policymakers should not be counting on gas taxes as a viable tool."

Polls show that forward-looking policies that don't seem punitive enjoy stronger support—incentives for manufacturing electric vehicles and installing solar panels, for example. Those types of measures were included in President Joe Biden's climate plan, which became the Inflation Reduction Act.

Still, Ross believes that other market-based solutions are essential to combatting climate change. "We can't do this by governments alone," he said. "It's just too big of a task."

More information: Cesar B. Martinez-Alvarez et al, Political leadership has limited impact on fossil fuel taxes and subsidies, *Proceedings of the National Academy of Sciences* (2022). DOI: 10.1073/pnas.2208024119

Provided by University of California, Los Angeles