Political constraints are frustrating fossil fuel tax and subsidy reforms

Long-touted as a climate and fiscal solution, efforts to increase fossil fuel taxes and reduce subsidies are failing - because of the same political constraints that complicate income tax reforms.

Based on **Paasha Mahdavi, Cesar B. Martinez-Alvarez, and Michael L. Ross. 2022. "Why Do Governments Tax or Subsidize Fossil Fuels?"** *Journal of Politics.*

The Policy Problem

Governments have long faced pressure to address the climate crisis by increasing taxes on fossil fuels. However, it is difficult to keep track of whether governments have responded to this pressure. Fossil fuel taxes and subsidies are hard to measure and often hidden in complex policy instruments. We overcome this by collecting and analyzing a new measure of gasoline taxes and subsidies in 157 countries.

Key findings and proposed solutions

- From 2003 to 2015, taxes and subsidies for transportation fuels showed little change at a global level.

- Fuel tax and subsidy *reforms* are not associated with democratic accountability, elections, leadership turnover, or bureaucratic effectiveness. Reforms instead reflect idiosyncratic, country-specific conditions.

- Carbon taxes and fuel pricing policies are *taxes* first and foremost, with changes driven by fiscal pressures, not environmental policy considerations

- Instead of making gasoline and diesel more expensive, it may be easier politically for governments to make green alternatives cheaper.

What We Found

Our analysis yields three findings: despite rising alarm about climate change, from 2003 to 2015 there was little change in net fuel taxes and subsidies at a global level. At a country level, trends varied widely: fuel taxes rose modestly in 73 countries, fell modestly in 63 countries, and were unchanged in five. If we weight each country to reflect its annual gasoline consumption, net global gas taxes fell by 5.43 percent per year. Overall, governments collectively made little or no progress toward raising net gasoline and diesel taxes over the 2003-15 period.

Second, fuel taxes changes are not correlated with democratic institutions. Our data suggests reforms are linked to fiscal considerations such as income, debt, and fossil fuel revenues. These factors change slowly, and may help keep fuel taxes and subsidies in place through what David Victor calls "a political logic that is often difficult to alter." As a result, fossil fuel taxes may be determined by a country's revenue needs, not its environmental commitments. This result has significant implications for debates over policies to reduce greenhouse gas emissions.

Finally, our analysis is consistent with the importance of local political conditions. Short-term fluctuations in fuel taxes—while small—were overwhelmingly associated with idiosyncratic country-specific factors that vary over time.

What We Did

We collected monthly data on local retail gas prices from January 2003 to June 2015 for 157 countries, totaling 23,550 observations representing 97.1% of the world's population and accounting for 98.2% of all greenhouse gas emissions. We applied the "price-gap" method to construct a measure of net fuel taxes and subsidies based on an international supply cost benchmark. This generated the most detailed and accurate dataset ever compiled on fuel taxes. We then conducted a series of statistical tests to understand how net fuel taxes are jointly driven by a government's demand for revenues and the public's willingness to supply them, alongside other potential predictive factors.
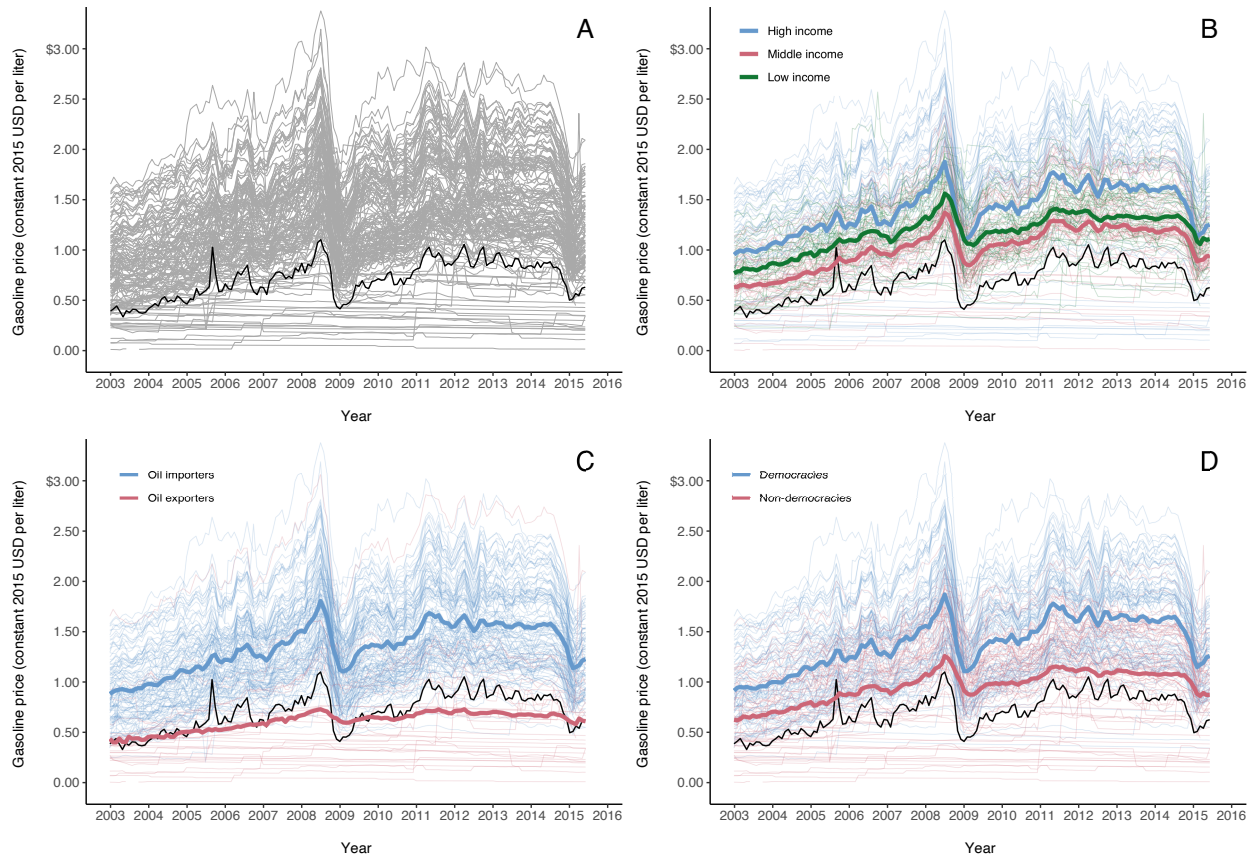
Fig. 1 Gasoline prices by country, 2003-15. Individual country price trends (A) and categorical averages (B, C, D). The global benchmark price is plotted in bold black in all four.

Further Reading

Ross, M., C. Hazlett, and P. Mahdavi. 2017. "Global progress and backsliding on gasoline taxes and subsidies". *Nature Energy* provides description of our data collection methods for fuel taxes and subsidies.