

Paying Too Much for Petrol

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Resources for the Future

LAST SEPTEMBER, LORRY DRIVERS AND FARMERS in Britain took to the streets in protest of soaring gasoline prices. The demonstrators blockaded oil refineries and depots, demanding government action to curb the rising costs. Their protests mirrored other demonstrations across Europe, where truck drivers blockaded the streets of Brussels and French protesters won government concessions on that country's gasoline tax.

The British demonstrations followed a three-fold increase in crude oil prices from December 1998 to September 2000. That increase resulted from the booming world economy's escalating energy demands and OPEC efforts to limit supply. However, the steep rise in crude oil prices is not the only cause of Britain's high fuel prices; the United Kingdom has the highest gasoline tax in the world. The current excise tax is fifty pence per litre — the equivalent of \$3.40 per gallon — and constitutes 60 percent of the British price of fuel. Due to increases over the past decade, the tax is 75 percent higher than its 1990 level, even after adjusting for inflation.

British protesters demanded an immediate cut in the petrol tax to provide some relief for trucking companies, farmers, taxi drivers, and other motorists. But the Labour government defended the petrol levy as necessary to reduce pollution and traffic congestion. Further, Labour leaders said, the tax is a needed source of government revenue that will help pay for promised increases in social spending.

This response raises an important question: Is it economically efficient to set a gasoline tax rate beyond the level intended to cover pollution and congestion costs? Is it best to use a tax on a specific commodity to finance social spending or should the British government look to some other source for needed revenue?

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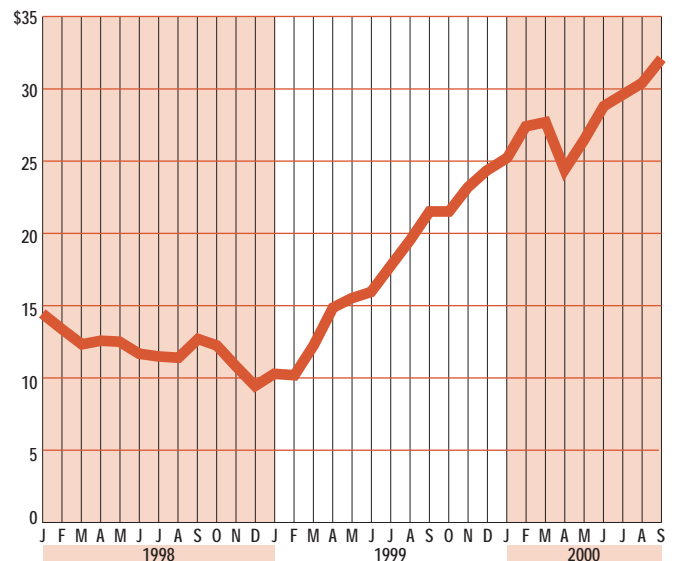
TAXING FOR POLLUTION AND CONGESTION COSTS

AS MOST PEOPLE KNOW, GASOLINE-POWERED MOTOR VEHICLES produce pollutants that harm human health and may affect the global climate. From an economic perspective, the appropriate fuel tax would equal the cost of this pollution damage per litre of gasoline. That way, motorists would have to consider pollution costs when they decide how much petrol to purchase and how much they drive.

A number of studies have attempted to quantify the pollution costs from gasoline combustion. These studies offer a wide range of damage estimates, but most amount to less than fifteen pence per litre of gasoline (\$1 per gallon). Some of the most recent studies, including one by Alan Krupnick, Robert Rowe, and Carolyn Lang, place the cost of

The Rising Cost of Crude

Imported crude oil prices, per barrel, tripled between December 1998 and September 2000.



Source: Petroleum Marketing Monthly, September 2000, Energy Information Administration, US Dept. of Energy.



ADAM BUTLER / AP

A British diesel tax protester, carrying a picket sign, talks with one of hundreds of lorry drivers who blockaded London streets to demand tax cuts.

damages at less than seven pence per litre. Given the general trend of these studies, let us assume that pollution costs justify a gasoline tax of five or ten pence per litre.

Besides reducing pollution, gasoline taxes are also beneficial because they discourage people from driving and, thereby, reduce traffic congestion. The economic benefits of reducing congestion can be fairly sizeable because there is a high cost to people wasting time sitting in traffic jams rather than putting in more hours at work or enjoying more time at home. One study for the United Kingdom by economist David Newbery suggests that congestion-related costs can amount to as much as 20 pence per litre (\$1.34 a gallon).

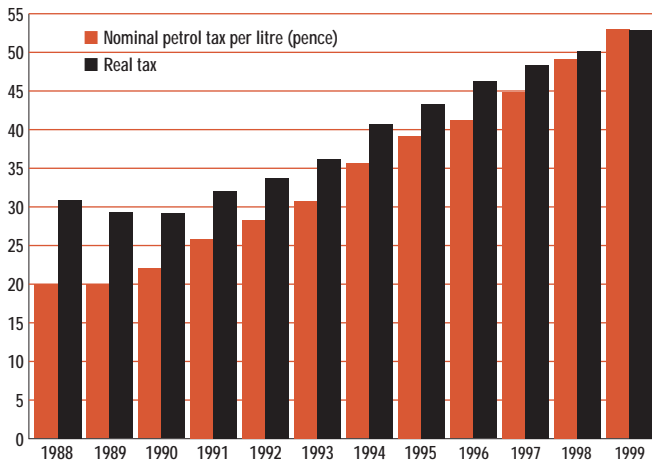
However, there is a limit to the effectiveness of a gasoline tax at reducing congestion. Because it uniformly applies to

all fuel uses and not just to gasoline consumed on busy roads, the tax does not encourage people to drive on less traveled roads or modify their work hours to avoid rush hour peak. The tax also penalizes driving on roads that are free-flowing, such as roads in rural areas. Instead of a uniform gasoline tax, a much better policy for reducing congestion would be to charge drivers for using busy roads during peak periods. But, in the absence of peak-period charges, it is still appropriate to consider the congestion benefits of gasoline taxes. Given Newbery's study, let us assume that congestion costs would justify an increase of 15 to 20 pence in the fuel tax.

The pollution and congestion arguments support a total gasoline tax of perhaps 25 pence per litre (\$1.70 per gallon). This would be a hefty tax — about four times the current U.S. rate. But it is only half of the British petrol tax.

A Decade of Fuel Tax Increases

Britain's previous Conservative government enacted a fuel tax escalator to reduce the large government deficit that emerged in the early 1990s. The escalator was recently scrapped, now that the government is running a budget surplus, but the current fuel tax is 75 percent higher than it was in 1990, when adjusted for inflation.



Source: Institute of Fiscal Studies, International Financial Statistics Yearbook. The real tax series is expressed in 1999 pence.

Beyond pollution and congestion concerns, Britain also uses gasoline taxes to provide revenue for public spending. This raises the issue of whether the gasoline tax should be set at a higher rate than 25 pence per litre, or whether revenue should instead be obtained from other taxes such as the personal income tax.

GASOLINE TAXES AS PART OF THE OVERALL TAX SYSTEM

ALL TAXES IMPOSE TWO COSTS ON SOCIETY: A REVENUE cost and an economic cost. The revenue cost is simply the amount of money that taxpayers hand over to government — money that taxpayers can no longer use for their own purposes. In response to such taxes, households and firms will alter their behavior. These efforts often lead to new costs that are known as economic costs or “excess burdens.”

The gasoline tax creates economic costs by penalizing driving. This means that people end up driving less and instead use other travel options such as public transportation. The tax also raises transportation costs for business, and this can lead to higher prices for products bought by households. Higher business costs make firms less competitive, and this can reduce the overall level of output and employment in the community.

Economists find that the economic costs of a tax are usually higher when people and businesses can easily alter their behavior to avoid the tax. For instance, a levy on carryout pizza would be easy to avoid — people could opt for other foods or make their own pizzas at home. But such a tax would raise little revenue for government as people avoid purchasing carryout pizza. Conversely, a tax on all labor income in the economy can only be avoided by people working less. Because labor taxes are difficult to avoid, they raise large amounts of revenue at a lower economic cost.

According to research I conducted, the costs of the recent gasoline tax increases in Britain are probably much larger than they would have been if the increased tax burden had instead been placed on income. This appears to be the case even when the environmental and congestion benefits of the gasoline tax are taken into account. This implies that it would be economically efficient to shift some of the tax burden off petrol and onto ordinary income, thereby lowering the petrol tax below fifty pence per litre.

THE POLITICS OF PETROL TAXES

BRITISH PROTESTERS WOULD PROBABLY NOT BE ENTHUSED about a petrol tax cut if they had to pay higher income taxes to finance it. The Blair government is also reluctant to pay the political cost of breaking its pledge not to raise personal income taxes. But such a shift of the tax burden from fuel to income would be more economically efficient and it would make people, as a whole, better off.

Economic analysis of the gasoline tax will have little impact on Britain's consideration of whether to offer motorists some short-term relief. The Blair government will make that decision by weighing the political cost of caving in to the demonstrators against the political cost of appearing insensitive to protesters' grievances. But government leaders need to reassess the appropriateness of gasoline taxation as a general revenue-raising measure. If they do cut petrol taxes, the economy as a whole would benefit, even if it meant higher taxes elsewhere. **R**

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