

DRIVEN to DISTRACTION

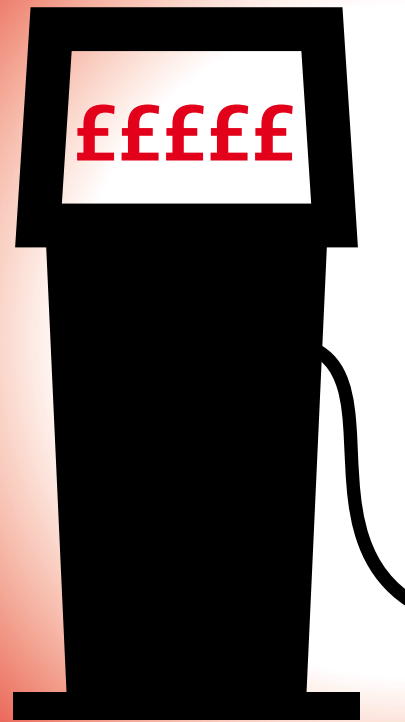
RICHARD WELLINGS on how bad economic thinking leads to bad taxes...

Fuel duty is the UK's most significant 'environmental tax'. In 2012, it raised £32 billion¹, approximately 5 per cent of government revenues.

Tax now makes up around 60 per cent of the price of a gallon of petrol, a much higher proportion than is imposed on most other goods and services. Accordingly, fuel duty would appear to break two principles of good tax policy.

The first principle is that tax rates should be kept low. There is a substantial body of work showing that high taxes suppress economic activity, for example by reducing incentives to work or trade. Fuel duty increases travel-to-work costs, lowering the financial incentives to enter employment. And, since over 90 per cent of domestic passenger traffic and almost 70 per cent of freight goes by road, the negative impact of fuel duty on trade is likely to be substantial. The tax means that many potential exchanges are no longer worthwhile. Benefits of trade are thereby lost, including a more specialist division of labour and economies of scale.

The second good-tax principle violated by fuel duty is that of neutrality – the rule that different economic activities should be treated similarly. If a tax system discriminates against certain activities while favouring others, economic resources will be misallocated. The government's policy of imposing fuel duty on road users while providing subsidies and tax breaks for the rail industry has severely distorted the transport



sector, for example. Demand for rail has been artificially inflated, leading to wasteful investment in new capacity.

Taxing externalities

As might be expected from a highly distorting and discriminatory levy that raises huge sums for the Exchequer, the negative effects of fuel duty are large in magnitude and broad in scope. Nevertheless, economic arguments have been used to justify the tax by the Treasury and some transport economists.

In the early 20th century, Cambridge economist A. C. Pigou developed the concept of externalities – conceived as the costs or benefits imposed on third parties as a result of an economic activity. Road transport is associated with a number of these externalities, including negative ones such as congestion, noise and air pollution.

Market failure is said to occur because, when individuals choose to drive, they do not take into account the wider external costs resulting from their actions. In the absence of state intervention, it is argued, there is more road transport than the socially optimum level. The wider 'social costs' of motoring are said to exceed the private benefits accruing to the individual driver.

Pigou suggested such problems could be solved through the imposition of a special tax set to reflect the costs imposed on others by the activity. In this way, according to the theory, overall welfare would be maximised. Fuel duty is advocated as just such a tax. There are, however, a number of difficulties with the Pigouvian approach to taxation.

Pigouvian taxes – not as simple as they seem

Firstly, it is highly problematic to measure external costs in order to determine the tax rate that maximises welfare. This is partly because individual valuations are time and place specific, as well as highly subjective. For example, living next to a noisy road might bother one person a lot more than another. Policymakers face severe methodological challenges

KEY FACTS ABOUT FUEL DUTY

- Level of fuel duty per litre in UK (including VAT on duty) 70p
- Level of fuel duty per litre in Canada 24p
- Tax as a percentage of retail price: (at £1.40 per litre) 58%
- Level of fuel duty implied by the Stern Review to deal with climate change:² 19p
- Road spending as a percentage of fuel duty and Vehicle excise duty revenues: 24%

² 2006 estimate adjusted to 2013 prices.



and political expediency. But, given that negative externalities are a genuine problem, is there an alternative approach?

Is there another way?

Another way to view externalities is to see them as resulting from the absence of markets. For example, there is a strong argument that congestion is caused by the state ownership of roads and in particular the absence of pricing and the disjunction between supply and demand. If roads were brought into the market economy and priced, toll rates could be adjusted to ensure free flowing traffic. The rationale for imposing fuel duty to reduce congestion costs would no longer hold.

Markets can 'internalise' many environmental externalities. Buyers and renters of housing next to a busy road might expect to pay less than those in a quieter and less polluted location. The former would effectively be compensated for pollution and noise costs. A land market freed of state planning controls would increase the scope for externalities to be internalised. Environmental amenities such as low pollution levels could be part of the package offered to potential residents of private housing developments. Freed markets would also allow affected parties to negotiate deals to address externality issues, as suggested by Ronald Coase. For example,

...CURRENT RATES OF FUEL DUTY ALREADY FAR EXCEED MOST ESTIMATES OF THE EXTERNAL COSTS OF THE CARBON EMISSIONS FROM ROAD TRANSPORT

a group of residents living near a road could pay its owner to prohibit the noisiest and most polluting vehicles – or the road owner could compensate the residents.

Unfortunately, such solutions are impractical for externalities such as anthropogenic climate change, where, if the hypothesis is correct, billions of individuals are affected and billions are responsible for emissions. Clearly a bargaining process is not plausible given the magnitude of the transaction costs involved. This does not mean, however, that Pigouvian taxes should be imposed. The knowledge and incentive problems facing policymakers are even more severe for highly complex, global issues. In any case, it is clear that current rates of fuel duty already far exceed most estimates of the external costs of the carbon emissions from road transport. Indeed, they even exceed by a large margin the very high estimates provided by the Stern Review.

At first sight, Pigouvian taxes might seem like an efficient way of addressing externality problems. However, the methodological difficulties of calculating the appropriate tax rate, the distortions caused by various state interventions, and the shortcomings of the policymaking process, make it highly likely that the costs of implementing such taxes will far exceed the benefits.

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obtaining, quantifying and aggregating such information.

Secondly, the situation is further complicated by the relationship between external costs and various state interventions. For example, levels of traffic congestion reflect historical patterns of government road investment amongst other factors. The cost of noise or air pollution will reflect planning policies that influence factors such as population density. The reality is far less simple than suggested by the doctrine of 'polluter pays'. Should drivers be taxed for external costs largely created by politicians and officials?

Thirdly, Pigouvian taxes must be implemented through political and bureaucratic processes. As the Public Choice school has demonstrated, policymakers are likely to consider their own self interest when setting tax rates. Politicians will be influenced by the impact on voter groups, including their need to 'buy off' target groups by increasing public spending on specific programmes. Both politicians and civil servants will also come under pressure from special interests when determining tax rates. The incentives facing policymakers mean that, in practice, they are unlikely to set an optimal rate – even if it could be accurately determined.

The limitations of Pigouvian taxes are all too evident in the case of fuel duty. Clearly it has proved highly problematic to measure the social costs of motoring and accordingly set a suitable tax rate. There are large variations between the different estimates provided by studies and, given the methodological difficulties, these findings must be treated with a high degree of scepticism.

Furthermore, there can be little doubt that the setting of fuel duty rates has become highly politicised with green campaigners calling for higher rates and heavy users such as farmers and hauliers calling for lower rates. At the same time, the observation that fuel duty receipts are relatively inelastic in the short-term means that rises in the rate have proved a popular method for chancellors to raise additional revenue.

In practice, attempts to introduce an efficient Pigouvian tax are undermined by methodological difficulties, special interests