

Road transport tax Vs trade seminar
15th June, 9am-4pm
DTI Conference Centre, 1 Victoria Street

1. The Stern Review held a seminar to discuss the merits of tax and trade for road transport, on the 15th June. Presentations and discussion were under Chatham House rules. This note outlines some of the discussion.

Attendees

| Name | Organisation |
|-----------------------|---|
| Vicki Bakhshi (CHAIR) | Stern Review |
| Sophie Cruickshank | Stern Review |
| Simon Dietz | Stern Review |
| Lorraine Hamid | Stern Review |
| Stephen Smith | University College London |
| Stephan Herbst | Representing Toyota and International Emissions Trading Association |
| Jack Frost | Johnson Matthey Fuel Cells |
| Jamila Fattah | BP |
| David Hone | Shell |
| Tim Gibbs | Institute of Public Policy Research |
| Robert Rabinowitz | ECX Associate Membership Ltd |
| Robert Walker | Society of Motor Manufacturers |
| Max Tse | Oxford University |
| Chris Nicholls | Department for Environment, Food and Rural Affairs (Defra) |
| Beth Child | Defra |
| Laura Fellowes | Department for Transport (DfT) |
| Sarah Love | DfT |
| Jamie Torrens | DfT |
| David Thompson | DfT |
| Alon Carmel | DfT |
| Iain Morrow | Department for Trade and Industry (DTI) |
| Stephen Hennigan | Energy Review |
| Matt Tyler | HM Treasury |
| Simon Jackson | HM Treasury |
| Nicola Thomas | HM Treasury |

Key messages coming out of the discussion

2. Economic theory tells us that tax and trade are largely equivalent and the distributional impacts of trade are the same regardless of whether permits are allocated upstream (to refineries) or downstream (to motorists).
3. In practice:

4. If road transport were included in the EU ETS, many participants envisaged that it would be additional to fuel duty (rather than an alternative).
5. The choice on whether to include road transport in the EU ETS will be influenced by the objectives for doing so. It was argued that trading may not be a good way of cutting emissions from road transport because the relatively high abatement costs in the sector means it is likely to be a net purchaser of permits (at least in the short run), but that road transport could play a useful role in the EU ETS by facilitating cost effective emission reductions in other sectors.
6. If permits were allocated upstream, it would be important to capture imports of fuel from outside the EU; otherwise, this would be a source of carbon leakage. Some participants believed that making use of existing processes (eg the 'duty point' at which fuel excise duty is currently levied) could provide an opportunity to capture these imports with little additional regulatory impact.
7. Some participants argued that if permits were allocated downstream, the motorist may be more likely to change their behaviour, because the psychological effect of a quantity instrument was different to a price increase. But others noted that this would be likely to involve substantially higher, perhaps prohibitive, administrative costs.

Possible areas for further analysis

8. In light of the discussion, there could be a number of avenues for future research:
9. If road transport was included in the EU ETS and received grandfathered permits to cover some of its emissions, what would be the effect on fuel prices? Economic theory suggests that regardless of whether permits are auctioned or grandfathered, the increase in fuel price faced by the motorist would be the same. This assumes the refinery and fuel retailer use marginal cost pricing. However, if the industry used average cost plus mark up pricing, then the increase in fuel cost faced by the motorist would be less under grandfathering than under auctioning. Some research on how refineries and retailers set prices and how cost increases may be passed on to consumers would be helpful.
10. Is there any evidence on how much downstream permit schemes might cost and how these costs could be reduced? Downstream permits seem likely to have high transaction costs; what mechanisms might exist to help reduce the admin costs of a downstream allocation (eg things like electronic swipe cards, linked to individual carbon accounts)?

11. The remit of this seminar did not include discussion of “regulation plus trade” for car manufacturers, though some participants highlighted this approach as a potential alternative. This is the idea that for each EU car manufacturer, average sales of cars have to comply with a target fuel efficiency. Those manufacturers not meeting their target have to buy permits to reflect the excess lifetime carbon emissions of the vehicles. Many participants felt that this was an interesting idea that merited more investigation. Some critiques of the idea are discussed in para 28.
12. What evidence do we have on how abatement costs in road transport compare to other sectors in the EU ETS and therefore to what extent we might expect road transport to be a net purchaser of permits?

Discussion following the presentation: “Tax vs trade – insights from economic theory”

13. The notes section of the presentation contains some explanation of the slides.
14. Slide 7. The finding that auctioned permits would encourage more innovation than grandfathered permits was questioned. In response, it was noted from a theoretical perspective that auctioned permits provide greater incentives than grandfathered permits to innovating firms, while both provide the same incentives to adopting firms. In addition, auctioned permits allow for a greater level of overall competition in the economy than grandfathered permits unless a specific reserve is set aside for new entrants. This should increase the overall level of innovation in turn.
15. Slide 6. One participant pointed to the experience of permits in California, noting that the permit price fluctuated widely and ad hoc political decisions had to be made, which reduced certainty in the market. It was therefore argued that there is value in having hybrid tax/trade schemes that provide certainty to the market on the price cap/floor.
16. Slide 8. One participant intervened to note that there was little evidence of market power in the permit market, feeling that generally the EU ETS was working well and driving abatement and investment decisions.
17. The initial phase of the EU ETS was arguably too short to encourage some firms to undertake investment in abatement technology. To encourage investment, firms need certainty on the existence of a carbon market in the long run.

Discussion following the presentation, “Discussion of impacts on competitiveness and other metrics”

18. The increase in costs arising from tax/trade could be passed on as: higher prices to consumers; lower wages; or lower profits. Some of the cost increase could be borne by the oil extractors as reduced rent.
19. If permits were to be allocated upstream, it was noted that it would be important to protect against carbon leakage from imports of fuel produced in non-EU refineries. The points noted in para 6 were reinforced.
20. A participant quoted the example of California upstream allocation of permits and techniques they used to protect against carbon leakage.
21. It was helpful to distinguish between the efficiency and equity features of grandfathering and auctioning permits. Economic theory tells us that regardless of how the permits are issued, the permit price, impact on fuel price and amount of abatement undertaken will be the same (i.e. they are equally efficient). The way in which permits are allocated determines who has initial property rights over the asset (i.e. auctioning and grandfathering have different equity/distributional outcomes). For example, if the permits are grandfathered to the fuel industry, then it receives the windfall property rights; if the permits are grandfathered to motorists, then they receive the windfall.
22. In reality, grandfathering and auctioning would not be equally efficient if refineries and fuel retailers used average cost plus mark up pricing. To the extent that they do use average cost plus mark up pricing, then the increase in fuel cost facing the motorist would be less if the permits were grandfathered than if they were auctioned.
23. It was suggested that there would be minimal abatement opportunities in refineries.
24. Slide 10. Trading is arguably not as good at reducing emissions from *road transport* than taxation; however trading does provide greater certainty for cutting *total* emissions. Some participants argued that total emissions are more important than the sector they are emitted from and we should seek to cut emissions where it can be done most cost effectively.
25. The group discussed whether it was worth including road transport in the EU ETS if it would be a net purchaser of permits. Any market has to have buyers and sellers. If road transport were included in the EU ETS and it was a net purchaser, it would be paying for abatement in other cheaper sectors.

Discussion following the presentation, "Road transport and emissions trading"

26. Policies such as road pricing would be an example of demand management measures in the UK.

27. The idea of including car manufacturers in a trading scheme was briefly discussed. A possible advantage of this idea is in stimulating innovation. The manufacturer makes decisions about how to build the cars and how fuel efficient to make them, so arguably by regulating at the point of manufacture firms will perceive a direct incentive to improve efficiency. However if the CO₂ allowance price was too low, then manufacturers might just choose to buy permits and innovation might not be improved.
28. Difficulties of regulating at the point of the car manufacturer include:
- what to do about cars produced outside the EU (potential source of carbon leakage)
 - how to allocate permits (if they were grandfathered, there could be a temptation for some member states to protect domestic car manufacturing firms by giving them more generous allocations)
 - may undermine integrity of the EU ETS cap because actual emissions are uncertain and occur in future years.
29. One advantage of instruments that raise the cost of fuel compared to instruments that improve fuel efficiency (such as vehicle regulation) is that the latter is associated with a rebound effect.
30. Some participants commented that when motorists make choices about what car to purchase, they do not fully take into account the higher fuel costs associated with less efficient cars. One participant suggested that the fuel economy labelling of vehicles could be made clearer and easier to understand to help motorists make better choices.
31. It was suggested that 2p from fuel duty could be directed to CDM projects, and that this would have a similar effect to incorporating road transport and CDM projects in the EU ETS. It was also noted that this would have a negative impact on the public finances.
32. One participant argued strongly that the elasticity figures used by DfT were robust, being the product of a credible and extensive academic review of the literature.