Centre for Transport & Society

RESEARCH BRIEFING SHEET 011

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Taxation Futures for Sustainable Mobility

The following research briefing introduces a year-long research project which ran in 2003 within the Economic and Social Research Council *Environment and Human Behaviour* Programme. The project was a synthesis study linking research at UWE with work by Dr Stephen Potter (Project Leader, Open University), Dr Marcus Enoch (Loughborough), Dr James Warren (Open), Dr Ben Lane, (Open).

Background

Personal mobility is a particularly difficult environmental policy area. Economic instruments are widely advocated to address environmental impacts, but changes to transport taxation to affect human behaviour have seemingly disappointing results and generate powerful political opposition. This was demonstrated by the fuel duty protests of September 2000. Subsequently government reduced road fuel and vehicle taxation and has moved towards tax concessions to low carbon vehicle technologies. Yet research continues to emphasise the impossibility of achieving anything approaching sustainable mobility without the use of efficient price signals.

Added to the political failure of economic instruments to influence car use, there is a second consequence. With price signals used to favour low carbon vehicles, tax revenues from cars and fuels have started to drop, and could dramatically decline.

Overall there is a growing and seemingly intractable problem of personal mobility and the environment. Because car ownership is such a central feature of our lives it is viewed as political suicide for any government to raise vehicle or fuel taxation to a level that will produce significant behavioural change. Added to this the level of tax concessions needed for the adoption of cleaner car technologies (which alone will not deliver sustainable mobility) will result in a large drop in tax revenues.

Research Justification

Economic instruments have been widely advocated to encourage more sustainable forms of transport, but the UK transport taxation regime was designed mainly to provide a reliable income stream rather than behavioural change. Increases in fuel tax have not delivered significant behavioural change and have faced severe political resistance. Yet research shows the impossibility of sustainable mobility without efficient price signals. Instead, government has introduced tax cuts to favour cleaner vehicles which have reduced tax revenues. Together, these points create a powerful case for a new motoring taxation regime.

Methodology

This project will integrate existing research that has begun to explore the restructuring of the regime, including:

- estimations of the decline in UK government revenues as a result of the adoption of more efficient and cleaner cars and fuels;
- modelling of the role of tax concessions in promoting uptake of low carbon cars in the UK;
- the application of a model of traffic and emissions reduction (originally developed for the Netherlands) which considers the fiscally-neutral replacement of existing taxes with a distance-charging system; and
- empirical studies of the impact of distance-charging systems used by car

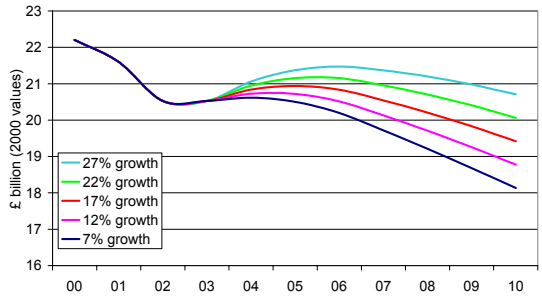
clubs in Europe on the amount of car use and emissions.

An integrative framework will involve users through seminars at the beginning and end of the project in order to consolidate established research and set an agenda for policy. The research team will develop a series of scenarios, drawing on the experience and outputs of the above studies. These will provide estimates of the transport, environmental and tax revenue effects. The user groups and an advisory panel will include representatives from government, professional organisations, special interest and representation groups and academics.

Outcomes and Benefits

The research has identified the drivers behind the rapid ascendancy of the concept of national road user charging. There are four key factors:

- The ongoing failure of transport policy to include sufficiently effective behavioural change measures to cut congestion and reduce emissions.
- The rise in the cost of transport policy interventions.
- The reduction in Treasury income of eco-reforms to the current tax regime. (See figure below for further potential for reduction under five different possible levels of traffic growth).
- The difficulties of taxing fuel in a future multi-fuel transport sector.



The research has noted that these and similar factors have been present in a number of countries considering shifting to a different road transport tax regime.

A second set of achievements relate to the design of the proposed policy measure. The project's modelling exercise highlight:

- Too much focus on designing an ideal car taxation system that cannot be realised for 10-15 years. Transitional paths and interim stages that permit learning and adaptation to occur are crucial.
- The UK emphasis on congestion reduction could have serious negative second order impacts (for example leading to traffic growth shifting to low charge areas and times and major land use effects).
- Traffic reduction as a result of a road pricing scheme will result more from changed car use behaviour (e.g. car sharing, trip chaining) rather than modal shift to public transport.

A clarity is needed of the policy goals that a national road user charge would address.

http://www.psi.org.uk/ehb/projectspotter.html

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