

THE DAVID HUME UNSTITUTE

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TRANSPORT STRATEGY –With or without road pricing

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Professor Stephen Glaister and Professor George Hazel with Mr Euan Brown in the Chair

Professor Glaister started his talk by drawing our attention to two big and interconnected issues: climate change and the pricing and capacity of transport infrastructure – and the Government is not facing up to either of them. On climate change, the Stern Report (1) says that we should be pricing carbon emissions correctly, and then making people pay this price. Stern's price is £190 per tonne of CO₂, which is already substantially higher than the Defra price of £4.80 per tonne. However this is equivalent to only 14p per litre of petrol, compared to current duty of 49p per litre. So on this analysis consumers are already paying the full carbon price for travelling by car. However this is not to ignore the carbon agenda in the remainder of the analysis, given the tough targets which have to be met across the economy as a whole.

The other piece of background is the Eddington Report (2) which is saying firstly: get the pricing right for road schemes, including the price of carbon, environmental costs etc; secondly do the economic appraisals, including reliability and agglomeration benefits; and thirdly don't ignore the economic signals but build the roads indicated by the analysis.

Having set the scene, Professor Glaister set out his own analysis, based on his two previous reports (3, 4) plus work for the RAC Foundation due for publication in December 2007. Transport by car dominates the transport market in the UK and has accounted for most of the growth over the past 50 years, most of the remainder being split approximately equally between bus and rail. So transport strategy has to address transport by car as the key component. Traffic is growing at the rate of 2% per annum, doubling every 35 years. However the rate of road construction has been falling since the 1980s and there is no long term strategy in place to guide planning for schemes which come on stream after 2015. Ranking road schemes against each other, and also against public transport schemes, there are many road schemes which offer substantial benefits versus their costs which are not being built – and the economy is missing out on the big benefits which the better schemes could bring.

Mapping the likely effects of congestion in different regions across the UK, as a function of demographics and economic growth, the greatest pressure on the roads system will be in areas such as South West England and East Anglia where the roads are already full. Real incomes are expected to double in the 35 years up to 2041, translating into 40% increase in demand for road space. Without road building his analysis forecasts that average speeds will be up to 17% lower – which translates into much greater delays at peak times.

The suggested response is two-fold : firstly to manage demand for road space by price; and secondly to expand road capacity where the price signals say that it is worthwhile.

The problem is that the issues of road pricing, capacity planning and funding are not currently linked and, importantly, are not mediated in any way through the market. Charges per vehicle kilometre should reflect both congestion and environmental factors. On cost benefit grounds there is a strong case for road building at the historic rate of 400 – 600 lane kilometres per year, with or without road pricing being introduced – and introduction of road pricing would not let the Government off the hook of providing the necessary road capacity. Resumption of the road building programme would somewhat increase carbon emissions but if this was accompanied by the introduction of road pricing the net effect would be substantially less traffic and less carbon emissions.

For the economist, therefore, the argument in favour of road pricing is clear cut. Road capacity is a costly resource but the price charged directly to users is zero – and the non-price signals to users, in terms of delays and unreliability of the road network, are insufficient to avoid over-use. This is the classic problem of the commons.

However, the politics of road pricing remain very tricky. The London congestion charging scheme from 2003 has been a success, enjoying greater popular support after introduction than before it. But

there is no clear route forward to a national road pricing system, despite the fact the technology is available to implement it. A fundamental point of principle is whether road pricing would be tax revenue neutral (ie whether fuel duty would be reduced correspondingly); or whether the revenues from road pricing would be used to fund public transport improvements or counted as general tax revenue. A revenue neutral schemes favours rural areas, since the fuel cost saving would be lower than the congestion charge (balancing increases in urban areas), while a scheme raising additional revenue would impose extra costs everywhere. Implementation needs a broad political consensus, and implementation is certainly easier if there is a majority of the electorate who benefit from the scheme, with a minority bearing the costs. This was the case in London, but the failure of the Edinburgh scheme to be approved seems to be attributable to the absence of any such constituency as most people would have ended up paying the charge, as a result of the way the boundaries were drawn around the population centres.

So, the road pricing issues can be summarised as

- confusion of objectives: clarity is needed as between the carbon agenda, relief of congestion, funding of public transport schemes, environmental benefits
- exemptions and concessions, details which are bound to impact on the electoral acceptability of the scheme but involve leakage of revenues
- the cost of implementation of the scheme

- whether the scheme is revenue neutral or revenue additional as discussed above
- whether the scheme is linked with building new road capacity
- issues of trust and governance
- who sets the charges and is accountable for the money

It is clear that road pricing can represent a meaningful source of revenue. However schemes on the scale of conurbation such as Manchester lack London's advantage of a single political authority. At the national level responsibility is fragmented across Whitehall and current government structures are not fit for the purpose of delivering this complex and controversial policy. The plea is that an explicit decision should be made one way or the other as inaction now, against a 10 year planning horizon, is effectively a decision to do nothing from 2015 onwards.

Professor George Hazel led responses to the paper. The key problem with traffic congestion is that there are no price signals to limit it, unlike other utilities. In the Edinburgh car club scheme, where users pay the full cost for each kilometre of car usage 40% fewer vehicle kilometres are driven than with people using their own cars, where the major expense is a sunk cost and the marginal cost of fuel is low. It is not satisfactory simply to leave the market to sort out congestion, for instance though delays in crossing the Forth Bridge being reflected in differential house prices.

One conclusion to be drawn from the failure of Edinburgh's congestion scheme is the importance of governance issues. The electorate has to believe that the substantial extra costs which they would incur through road pricing would translate into meaningful benefits. Even so, it is not entirely clear why schemes are not coming forward more quickly. Part of the answer may lie in the mismatch of the political and planning timetables – that introduction of such schemes offering major benefits over a long term basis would entail substantial political risks with delayed pay back.

Communication is clearly a key factor: any road pricing scheme has to be presented as a package, as was done in London, linked to public transport improvements. Extension of that scheme London-wide will be more difficult to implement as public transport improvements are harder in the lower density suburbs.

Queuing is an inefficient way of rationing the road space – road pricing monetises the costs of delay by imposing a price for using a road network which suffers from less congestion. However in considering a scheme as voters, some people may prefer congestion to paying the price. It is easier to achieve the necessary majority if there are plenty of people who would not pay the charge but would nevertheless feel from the benefits of the scheme, such as improved public transport or improvements in the economy as a whole. A scheme will also fail if there are too many people for whom the prospective road pricing does not reflect improved journey times – for whom the cost of delay is low.

It is important to consider the whole issue in the wider context of the productivity of the economy and the environment, not seeing road pricing as just the response to a

transport issue such as congestion. Road pricing should form part of an integrated transport policy, under which road and rail investment are compared on a cost benefit basis.

Would the analysis change if the Stern price for carbon is much too low? Expressed as cost per vehicle kilometre, the implication of the low price of carbon is that demand for car transport is not particularly sensitive to the carbon price and that transport is a high value emitter of CO₂ in the context of rationing of emissions.

This debate is predicated upon continuation of previous trends in demand for transport. However it seems unlikely that the relationship will be broken with general economic growth, and given the importance of transport links in sharing the benefits of economic activity out from hot spots such as London and in achieving agglomeration benefits in Central Scotland

1. *Stern Report* www.hm-treasury.gov.uk/independent_reviews/stern_review_economics_climate_change/stern_review_report.cfm
2. *The Eddington Report* www.dft.gov.uk/about/strategy/eddingonstudy
3. *Investing in Roads: Pricing, Costs and New Capacity* Christopher Archer and Stephen Glaister www.trg.soton.ac.uk/itc/reports.htm

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