



For whom the motorway tolls

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The curse of congestion

In July 2000 the Government announced its intention in the ten-year transport plan "to reduce congestion on the inter-urban network and in large urban areas in England below current levels by 2010" (DETR 2000). It aimed to cut urban and inter-urban congestion by 8 per cent and 5 per cent respectively. However, these targets were abandoned in the progress report published in December 2002, and the government now anticipates a rise of congestion on inter-urban roads of up to 15 per cent and a rise of 9 to 20 per cent in large urban areas (DfT 2002).

Transport Secretary Alistair Darling has already announced a significant programme of road widenings on sections of motorway around the country totalling £6bn. These measures, though, only represent a temporary palliative. The multi-modal transport corridor studies which the Government set up to investigate the case for road widenings warned of the short-lived benefits of widening alone. For example, the M25 multi-modal study "Orbit" considered that without active traffic management "road space will quickly fill up and the service improvements will evaporate" (GOSE 2002).

This seems to present a bleak prospect for Britain's beleaguered motorists. One means of addressing this problem, though, is to introduce road user charging: a scheme of inter-urban charging on the strategic network would have the dual benefit of reducing congestion and raising badly needed revenue.

Despite increased investment since 1997 the transport infrastructure is still suffering from a chronic funding backlog. With Government commitment to the National Health Service, education, and the elimination of child poverty, transport cannot expect to receive a larger slice of the treasury cake.

Tolling: an alternative

By tolling the improved sections of the network, Government policy would follow the precedent set by the M6 toll road and the central London congestion charge.

There are several justifications for this approach. Firstly, without charging the expanded sections roads will rapidly become as congested as they formerly were, thus representing a poor return on public investment. "Without some form of road user charging on inter-urban roads there will be no substantial reduction in congestion" (GOSE 2002). Secondly, it is fair that those who benefit from the improvements to the road network should pay for those

improvements. Thirdly, congestion contributes two-thirds of the external cost of motoring, according to the Commission for Integrated Transport (CfIT 2002). A charging scheme which targets those contributing most to congestion would fulfil the objective of "making clear to road users the real cost of their journeys" (DfT 2003).

The question of motorway tolling was specifically outlined as an area of enquiry in the multi-modal transport corridor studies commissioned by the DETR from 1998. The ten-year plan stated that "the future of inter-urban charging would take account of the conclusions of the multi-modal studies" (DETR 2000).

Table 1 gives details of all motorway improvements over 10km announced by the government, 560km of widening in total, and indicates the recommendations of the multi-modal studies on road user charging. Each study recommended some form of inter-urban charging and considered doing nothing a worst case scenario.

The RAC Foundation's independent inquiry "Motoring towards 2050" suggests that there could be widespread support for motorway tolling. A survey conducted by NOP Automotive in March 2002 for the study indicated that 71 per cent of those surveyed accepted tolls if they were "introduced as a package of better roads, public transport and traffic management" (RAC Foundation 2002).

The potential of motorway tolling

The government has launched a feasibility study into the possibility of national road user charging for cars based on Global Positioning Satellites following its introduction for HGVs planned in 2006 (DfT 2003). But this remains a long-term policy option for cars and would not be introduced this decade. As an interim measure tolls on widened sections of motorway using similar technology to the new M6 toll road north of Birmingham could help to tackle congestion and raise significant revenue. This means toll booths and, for frequent users, electronic tags.

Table 2 illustrates the annual revenue that could be raised from tolling on the widened sections of motorway. The estimates are based on a charge of 5p per km for cars and 15p per km for HGVs. It is assumed that the charge applies between 7am and 7pm and that 70 per cent of daily traffic flows during these hours, which is typical for motorways. It is also assumed that the introduction of the toll will reduce flow by about ten per cent.

The total estimated revenue on this basis from the schemes is nearly £1 billion per year. About a quarter of this might be needed to operate the schemes, leaving a surplus to pay for the road improvements. If the schemes were delivered under the Private Finance Initiative and paid for using the toll

revenues, then this would release £6bn in the ten-year plan for much needed public transport improvements.

One objection to motorway tolling is that it might displace traffic on to less suitable local roads through towns and villages. In some cases, it might therefore be more appropriate to introduce area wide schemes, like the central London congestion charge, as some of the multi-modal studies recommended.

Table 1: The Government's motorway widening plans

Road scheme	Length	Cost £m	Multi-modal study recommendations
M25 J 12-15	11km	148	<p>Orbit: "If there is a road building, road expansion, motorway widening scheme without inter-urban and area-wide charging, we believe that the service improvements will not be sustained." "The study recommends that the M25 widening be accompanied by area-wide road user charging in 2011 as part of a national scheme, if that is not possible the study recommends that tolling be introduced on the sections of the road that have been widened."</p>
M25 5-7, 16-31	21 km, 90 km	1700	
M1 J21-30	95 km	523	<p>East Midlands MMS: "On the basis of the test results it can be said that if area wide road user charges were to become a reality then there would be an overall reduction in total traffic and an increase in the use of public transport."</p>
M1 J6a-13	37 km	623	<p>London to South Midlands: "The strong recommendation of the Study Team is that comprehensive, area wide, road user charging should be implemented approximately half way through the Study period [2015]. This will follow the major highway investment designed to reduce congestion in the strategic network."</p>
M11 J8-14	45 km	397	
M6 J11a-19	88 km	TBC c. 1000 (HA est.)	<p>Mid Man: "Tolling is suggested as a fixed motorway entry charge in order to weigh more heavily against the shorter distance trips."</p>
M1 J30-42	67 km	1200	<p>South Yorkshire MMS: "Simply improving the capacity of the motorway network, whether by traffic management or by new infrastructure, will only encourage the trend [of more road use] to continue."</p>
M62 J25-32	33 km		
M18 M1 (J32)-J3	14 km		

Road scheme	Length	Cost £m	Multi-modal study recommendations
A1/A1(M) J34-M62	38 km		
M60 J12-18	12 km	479	<p>JETTS: "The greatest scope for reducing traffic demands on the M60 (J18-12), and other roads, would be some form of road user charging." "Indeed, no other measure has been identified which would manage demand sufficiently to reduce M60 congestion in the long term." "A flat rate toll is a sensible "stick" to encourage greater use of public transport, by targeting those most likely to be able to switch mode."</p>
M42 J 3-7	19 km	350	<p>West Midlands Area: "A key part of the WMAMMS strategy and plan is the introduction of road user charging to bring the perceived cost of travel by car nearer to public travel costs." "In the medium to long term the introduction of full electronic road pricing is recommended and this would need to be delivered at regional, if not national level."</p>

Note: Table includes motorway widenings of 10km or more, does not include junction improvements or climbing lanes

The following sections have not yet been commissioned, and the Secretary of State is awaiting the results of a Highways Agency report on the effects of Alternative Traffic Management before making a final decision on road improvements.

M62 J25-32
 M18 M1 (J32)-J3
 A1/A1(M) J34- M62
 M60 J12-18

Sources: Highways Agency, Department for Transport

Table 2: Potential revenue from motorway tolling

Road Improvement Scheme	Annual Average Daily Traffic 2002	HGV (vehicles over 5.2m)	Estimated revenue raised from toll per annum £m
M25 J 12-15	180,000	18,000	16
M25 5-7, 16-31	122,500, 135,000 (1998 figures)	13,500 16,200	36 176
M1 J21-30	112,000	22,400	172
M1 J6a-13	136,000	21,760	79
M11 J8-14	49,000	7,350	31
M6 J11a-19	140,000	36,400	215
M1 J30-42	102,000	13,260	60
M62 J25-32	98,000	17,640	49
M18 M1 (J32)-J3	64,000	13,440	21
A1/A1(M) J34-M62	54,000	10,800	33
M60 J12-18	165,000	33,825	32
M42 J 3-7	126,000	13,230	33
Total estimated revenue			953

Traffic figures are taken from the multi-modal studies

References

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