

Agenda

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A road to...somewhere: reforming England's road strategy

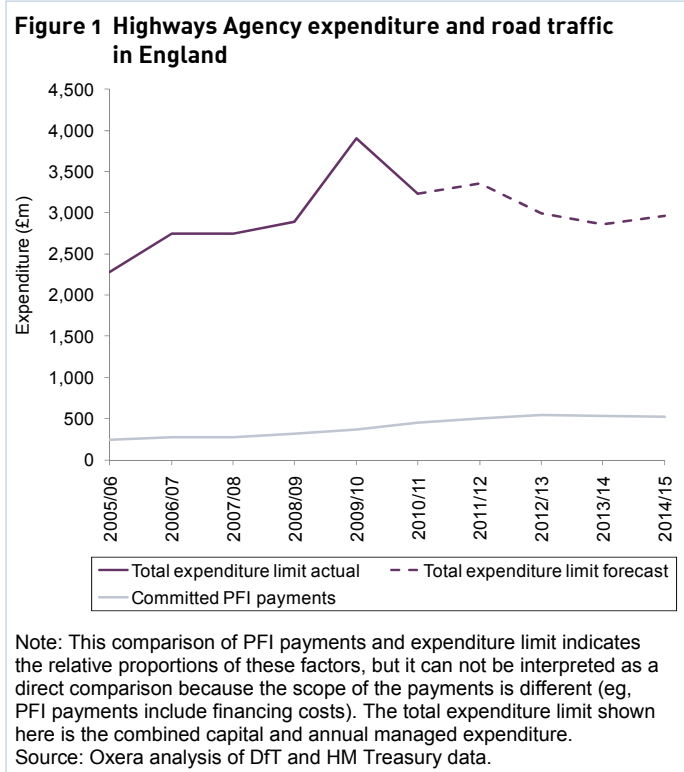
UK Prime Minister, David Cameron, has recently called for more private investment in England's strategic road network. However, private investment is just one part of an ongoing movement towards reform of the road network, which encompasses wider strategic and governance issues. What does such a reform involve, and what options are available for road funding?

In March 2012, David Cameron announced that the UK government was looking at ways to attract private investment into the strategic road network (motorways and major trunk roads) in England. He indicated that, in these times of fiscal constraint, it may be appropriate to look to sovereign wealth funds, pension funds and other private sources to fund investment in the nation's road infrastructure. This call for private involvement generated substantial media coverage, but was it really a significant shift from the current situation?

The call for private involvement may not be as radical as the media coverage suggested. There is already extensive private investment in England's roads through Private Finance Initiative (PFI) and public-private partnership (PPP) schemes (such as the improvements to the A1 Darrington to Dishforth and the M40 Denham to Warwick). Indeed, this private investment already accounts for around 14% of all annual expenditure on the strategic road network (see Figure 1).

The Prime Minister's announcement and the ensuing debate have brought the financing and funding of roads under scrutiny, but these are part of a broader set of issues incorporating strategy, governance and incentives. The precise method of financing cannot be considered until broader policy questions have been answered. Indeed, there is already a series of recent and ongoing studies looking to reshape the strategic roads sector; a body of work that will be added to by the joint Department for Transport (DfT) and HM Treasury study into innovative models of ownership and financing, which is due to report this autumn.

At the highest level, the key policy issue is to ensure that there is a coherent framework within which government determines its strategy for roads, and which then determines their maintenance, renewal



and enhancement. Such a strategy, accompanied by a funding mechanism, is required in order to enable consistent long-term decision-making, and will unavoidably rely on an analysis of the costs and benefits of various strategic options for roads in England. This article outlines some of the main factors that must be considered in assessing these options.

Roads as a public good

Why are roads traditionally provided by a public body? Aside from the essential role of the public sector in planning new routes, what economic characteristics

do roads have that mean that public sector involvement is required?

There are two main sets of externalities that could justify a role for government in the provision of roads. First, there are many positive externalities from road transport. Roads are fundamental to facilitating activity in the wider economy. The mobility of labour and goods is vital for the economy to function, and the road network provides connectivity to virtually every part of the country, unlike the majority of other modes of transport. Second, there are negative externalities associated with road transport, at both the local and national/international level. In addition to direct costs through wear and tear of the road surface, road users impose costs on other road users (congestion) and non-users (pollution, etc). These external costs are national such as carbon emissions, and more localised such as noise, local air pollution and congestion. A debate exists about whether tax revenues from fuel duty, vehicle excise duty and other motoring charges cover the full external costs of road transport (and the answer depends on the valuation of these external costs). At the EU level there is a clear move towards charges for external costs with the imposition of the revised 'Eurovignette' Directive in 2011 (as discussed below).

These two characteristics merit a certain level of government involvement in the road network, which, at a minimum, extends to the development and implementation of a clear medium- to long-term strategy. In the GB rail industry, for instance, the government outlines its desired outputs and an associated funding settlement on a five-year basis. Currently there is no published equivalent long-term strategy or multi-annual funding commitment for the Highways Agency, and this is likely to hinder its ability to make long-term planning and investment decisions. This short-term volatility in Highways Agency funding can be seen in Figure 1, particularly at the peak in 2009/10, with capital expenditure (CAPEX) particularly vulnerable to political horizons that are short relative to the lives of the assets.

When developing the strategy, it is important to recognise that most of the vital routes already exist, and that the greatest gains are to be found by improving and managing the existing network. Indeed, a general lesson from transport infrastructure experience is that large CAPEX schemes are often relatively low value for money, albeit their benefits are inherently difficult to quantify. Moreover, large CAPEX schemes are typically significantly more risky and expensive to finance than smaller-scale incremental improvements. Mr Cameron made this point in his speech when he indicated that relieving 'pinch points' must be an important part of the ongoing road policy.

Implementing the road strategy

Once a strategy has been determined, it is important to plan for its delivery, and to set clear rules around the accountability and incentives of the delivery organisation. In the current model, the Highways Agency performs this role as an executive Agency of the DfT. However, one crucial element lacking in the current model is external pressure to make efficiency gains, with this being limited to pressure from government and occasional ex post scrutiny from bodies such as the National Audit Office (NAO). For example, in 2009, the NAO highlighted that Highways Agency costs had risen by 11% above general inflation in the preceding six years.¹ This is in sharp contrast to other regulated utilities, which, in general, are monitored and subjected to explicit efficiency targets set by an independent economic regulator, and in many cases have shareholder pressure to exceed these targets. Whether more explicit efficiency targets, or incentive-based arrangements between government and its road delivery agency, will emerge is a key question in ongoing reform discussions.

Closer monitoring of the Highways Agency would be necessary to maximise efficiency gains. For instance, Figure 1 shows that total Highways Agency expenditure is set to decline in the immediate future, but the DfT's own forecasts are for traffic on the English trunk road network to increase by around 50% over the next 25 years.² While at first sight this may appear like increased efficiency in terms of maintenance/operation, it might also be that recently built capacity is expected to be filled by this predicted traffic growth.³

New roads, new models

Once the incentives and accountability of the delivery organisation are clear, the financing issue can be considered. Attracting new private financing will help the government to ensure that investment can be conducted, even when public finances are constrained. The main barrier to implementing a model involving more substantial private funding, however, is the lack of a revenue stream from which the provider could recover its costs.

A move to road pricing would be the most orthodox way in which to create a revenue stream. Economists have long argued that road pricing is a good way of both creating a revenue stream and addressing some of the externalities directly. Most recently, the Mirrlees review of optimal taxation strongly recommended the introduction of road-user charging as a matter of priority.⁴ However, such a move would inevitably take a significant time period to implement, and may currently be politically challenging. Reactions to new tolled routes have been mixed. Tolls on the bridge to

Skye in Scotland (built under a PFI arrangement) received considerable opposition, while the M6 toll road was less opposed. Mr Cameron addressed this point in his speech by indicating that government was considering tolls only for improvements and new roads, such as the work on the A14.

Although tolls in the UK are rare, they are fairly common internationally. Indeed, in Europe, 30,000km of road network is already tolled.⁵ For example, the toll on the French A4 from Paris to Strasbourg is €35 for a car. The extent of tolling has been increasing with the adoption of the revised Eurovignette Directive in 2011 (see the box below), which, although focused on goods transport, increased the types of road that fall under the Directive and brought about a framework for charging external costs.

Introducing road pricing brings a specific set of challenges. One method of gaining private sector involvement is for government to construct new roads and then award a concession for their operation and management to a private company that collects and keeps toll revenues. However, this type of concessioning has seen a systematic international trend of overbidding by concessionaires, which has recently been of particular concern in Australia.⁶ In some ways, overbidding is good news in the short term for taxpayers: the concessionaires suffer the cost of the downside while taxpayers receive greater concession payments than the government would have received if it had run the road itself. Nevertheless, overbidding can dent investor confidence and may harm the ability to attract future private investment.

Alternative models include an arrangement whereby the organisation delivering the road network maintains the road in return for payment from government—effectively, a shadow toll, which could contain both

fixed (availability-based) and variable (traffic-based) components, depending on the desired set of incentives and investor risk appetite.

A revenue stream could be generated by the hypothecation of tax revenues (ie, ring-fencing a proportion of the tax revenues for a specific use). Although this has been tried internationally, UK finance ministry policy is typically to avoid such ring-fencing. A system of hypothecation is unlikely to be successful in achieving a stable long-term funding solution that is insulated from shorter-term political considerations.

Another alternative is a volume incentive—a financial incentive for achieving growth in traffic levels on a particular piece of infrastructure. This may seem perverse in the case of roads if the intention is to reduce congestion, but it may help to reduce net congestion, for example in the case of a volume incentive on a new road that encourages traffic to shift from an old road. Such an incentive might be desirable because it ensures that the manager maintains quality on the road and does not unnecessarily cause detriment to infrastructure users, for example by poorly planned or timed maintenance works. The parallel here is to Network Rail, which does have a volume incentive (although it is currently relatively small) that incentivises it not to disrupt train operations unnecessarily. Without a volume incentive, the quality of the maintenance would need to be tightly specified through a contract, and monitoring and enforcement would need to be conducted by some government body.

Lastly, a PFI-type arrangement could be used, whereby the organisation delivering the road network maintains the road in return for payment from government—effectively, a shadow toll.

Tolls in the EU—the Eurovignette Directive

The Eurovignette Directive provides a framework for the levying of road charges on heavy goods vehicles for using all motorways in the EU (prior to 2011, it covered just the trans-European network). Member States can also introduce tolls on roads outside the scope of this Directive at their own discretion (eg, congestion charging in urban areas, as exists in London and Stockholm).

The Directive authorises either tolls or user charges (eg, time-based, per-day charges) for vehicles weighing more than 3.5 tonnes using these roads. Currently, 11 Member States have elected to apply tolls, and ten apply user charges.

Before September 2011, the charges were permitted to recover only the cost of maintaining and replacing the

road infrastructure. Since the revised Directive adopted in September 2011, however, charges are also allowed to cover the external costs of air pollution and noise. This is in line with the EU's greener transport policy, and aims to give clearer price signals to road users in order to encourage them to adapt their behaviour. This external cost charge is around €0.03–€0.04 per km, depending on the class of vehicle. This charge may be modulated by up to 175%, depending on the level of congestion.

The Council of the European Union has encouraged the revenue that is collected from these charges to be used for projects in the transport sector. In particular, it has been suggested that it is used to finance investments into making transport more sustainable, including research and development into cleaner technologies.

Source: Council of the European Union (2011), 'Eurovignette Directive Adopted', September, 13195/11.

The future of roads

Overall, the current problem is that most road funding is short-term and more influenced by the government's fiscal position than by investment requirements. This limits long-term planning in relation to whole-life asset management and cost savings. The simplest 'remedy' would be to move to a high-level output specification and medium-term funding commitment, as are used in the rail industry—with or without change at the Highways Agency.

However, if the priority for reform is saving costs and improving efficiency and quality then the experience of the regulated utilities sectors suggests that combining the multi-annual settlement with a form of incentive-based allowance (with or without formal regulation) could deliver significant benefits, and this could be an option worth exploring.

¹ National Audit Office (2009), 'Contracting for Highways Maintenance', October.

² DfT (2012), 'Road Traffic Forecasts 2011', January.

³ However, three caveats to this data are that traffic forecasts are inevitably high-level, conducted over five-year periods, and that the forecast spending does not extend far into the future.

⁴ Institute for Fiscal Studies (2011), 'Mirrlees Review Reforming the Tax System for the 21st Century', September.

⁵ European Commission (2011), 'Road Charging: Heavy Lorries to Pay for Costs of Air and Noise Pollution', MEMO/11/378, June 7th.

⁶ Australian Government Department for Transport and Infrastructure (2012), 'Addressing Issues in Patronage Forecasting for PPP/Toll Roads', February.

If you have any questions regarding the issues raised in this article, please contact the editor, Dr Leonardo Mautino: tel +44 (0) 1865 253 000 or email l_mautino@oxera.com

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