

Priorities for Reforming Taxes and Charges: Road Transport

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Australia is a geographically large country with a dispersed though highly urbanised population. This creates intrinsically difficult – ‘tyranny of distance’ – road transport issues. Australia relies heavily on trucking as a means of transporting raw materials to population centres and ports but also experiences significant congestion in capital cities. Traffic accident deaths, injuries and property damage have significant economic and social impacts.

A crucial remaining area of microeconomic reform for Australia lies in road transport. Policies that charge users for the costs they create when they use roads encourage efficiency in road use. User charges attack social ‘bads’ such as excessive congestion, road damage and traffic accident costs. There is an opportunity to levy taxes that limit these ‘bads’ and which simultaneously allow reduced taxes on the sorts of things – savings and work effort – that as a society we should value. There are potential ‘double dividends’ associated with road tax reform.

Currently a set of fixed and variable charges – a *two-part tariff* – applies to private vehicle use. Fixed charges comprise mainly registration, vehicle licensing and insurance charges. A key variable charge is the fuel excise. This two-part tariff reflects some road usage costs but only imperfectly.

For example, registration charges reflect vehicle weight and, indeed, heavy vehicles do cause most road damages. However such fixed charges do not reflect the extent of vehicle use and the types of road surfaces driven on. These factors mainly drive road damage costs. These costs are more effectively targeted by levying specific charges related to vehicle weights (‘axle loads’), distances travelled and road surface durabilities. This is now technologically feasible at reasonable economic cost by drawing on the telematic technology already utilised by trucking fleet managers for logistic reasons – for tracking freight, checking that drivers take safety breaks and so on.

Fuel excises likewise capture some congestion and pollution costs since road use is approximately proportional to fuel use. They are poor approximations however since congestion mainly arises in crowded urban environments but not on lightly used country roads. From a user charging viewpoint it does not make sense to levy the same congestion charge. Moreover, even where congestion does occur it typically depends on *when* travel occurs as well as *where*. It is better to charge congestion directly using tolls that reflect actual congestion costs. This again is feasible using transponder, GPS or other technologies.

Finally consider traffic accident costs – these are a significant component of the overall economy. Most insurance charges are fixed and depend on driver characteristics but not distances driven. Yet evidence suggests traffic accident costs are related to distance driven. Fixed insurance charges do not provide the correct signals to reduce traffic accidents. It is straightforward, however, to devise distance-related insurance policies with the desired incentive effects. These charges are typically not public sector taxes and charges but can be fostered by government-operated insurance policies.

These are not small issues. The Australian road transport sector is a significant part of the economy and, like the communications sector, the efficiency of transport conditions the efficiency of every other economic sector. Road transport generates huge costs and revenues. The 38 cent per litre fuel excise delivered \$10.3b in revenues in 2008/09,

vehicle registration fees provided \$3b and tolled roads \$2b. Road supply and maintenance costs were around \$14.1b, vehicle insurance premiums \$1.2b and the costs of road trauma and property damage in 2006 were \$17.2b. There are also huge unpaid for costs – *externalities* – associated with road use. The pure economic costs of congestion in Australia's capital cities were forecast by BTRE to average 7 cents per kilometre or, in aggregate, \$12.1b in 2008/09. There are also significant noise and pollution costs (perhaps around \$2b) and significant climate change costs caused by road transport. Road transport is a significant part of both the measured and unmeasured economy.

A key reform priority should be to establish demand-side reforms for managing road use employing user charges that reflect congestion created, road damages caused and traffic accident risks posed. This is not, as is sometimes portrayed, an 'anti-vehicle' measure but is simply a policy which ensures road users pay the costs they generate. The policy achieves 'user pays' outcomes but more importantly, provides the correct pricing signals for managing road use. Congestion charges make people think twice about joining congested traffic streams and help to reduce congestion by filtering out journeys with maximum individual value. Charges reflecting road damages encourage truckers to optimise their choice of route and permit local governments to make economically rational decisions about allowing heavy vehicle access to their roads. Distance-related insurance charges that also reflect individual driver characteristics encourage motorists to reduce economic and social costs of road accidents.

Finally, the user charges that are expected to prevail on planned roads provide a guide to the appropriate scale of road investment. Road supply decisions are often political 'ribbon-cutting' operations. Depoliticising these decisions by tying patterns of investment to the present value of forecast revenue streams from user charges assists in developing appropriate location, scale and durability characteristics of roads. It also helps to integrate the central planned strategic decisions required for network level planning with local road supply provision, decisions that are best decentralised. Local government in Australia incurs significant road maintenance costs but probably cannot be assigned local monopoly power over road pricing because of potential 'holdup' problems. Those formulating overall road network design should set such charges. But given these charges, local government can then make sensible decisions on the types of heavy vehicle traffic that can use its roads. This resolves the 'last mile problem' by confronting local governments with cost and benefit information required to make economically rational decisions. Local governments can project revenues from potentially allowing heavy vehicle traffic on roads and allow these flows to occur if forecast revenues cover costs of upgrading and maintaining roads and bridges as well as possible urban disamenity costs.

The main issue raised in relation to road sector 'user charge' policies is their political saleability and related implementation issues. Beyond a curmudgeonly few, there is little debate now on the efficiency case for levying user charges – indeed the case for congestion pricing has strengthened in recent years because of research on the costs of arrival time variability and of scheduling issues associated with congestion bottlenecks. Moreover, the technical issues of measuring loaded vehicle weight and of monitoring vehicle movement associated with pricing have been largely resolved. The key factor limiting reform is achieving a community acceptance that is a prerequisite for reform. This issue of *implementation* been a focus of recent research and we now have a better understanding of it. Without user charges, road use is inefficient on the demand side and, unless supply decisions reflect projected revenues, on the supply side as well. Thus *there are potential net economic gains to the community from implementing user charges*. This means that gainers from such reforms can compensate losers so that *all* sections of

the community can be made better off with user pricing. As an example, heavy vehicle charging that reduces road maintenance costs should provide truckers with lower overall costs of using roads than obtain with inefficient fixed registration charges. This efficiency dividend can be partly rebated to truckers in terms of reduced road use charges. Those who pay congestion charges for peak hour travel can compensate those tolled-off congested roads with public goods such as improved public transport infrastructure again leaving no-one disadvantaged. Insurance costs should fall in aggregate if insurance markets are competitive and charges reduce accident risks. These sorts of arguments need to be presented to the public in advance of seeking reform.

Even then those who may not understand the logic of user charging might want to see its benefits demonstrated first before endorsing it. Trial runs of user charging followed by a community vote are possible – as occurred with the Stockholm pricing trial – with those participating in trials being exempted from conventional charges such as registration by an amount that reflects efficiency gains. Offering motorists choice between travelling in priced uncongested lanes and congested unpriced lanes also advances acceptability of congestion pricing.

Some are cynical about the prospects for reforming taxes and charges in the road transport sector given an apparent slowdown in the pace of microeconomic reform and the cynical campaigns that delivered disinformation about mining and carbon tax reforms. However apart from road construction firms who might seek overinvestment in roads (and those who oppose user charging on the basis of an out-dated world view) there are actually fewer interest groups interested in obstructing road. It is important to persist in making the intellectual case for charging and of seeking community understanding of the difficult future Australia will soon face without it. For example it is important that members of the public know that the BTRE has estimated that congestion costs in capital cities will double to \$20.4b by 2020n without congestion charging. The situation in cities such as Sydney and Melbourne is already difficult now – an imperative for keeping on open mind on congestion pricing is to stop this currently bad situation from getting dramatically worse.

I close with remarks on the fuel excise. Moving toward user charges might suggest abandoning this excise to ‘compensate’ for the various user charges advocated but, as David Prentice and I argued in our work for the *Henry Tax Review*, the case for abolition is not clear-cut. The excise is a useful and efficient revenue gatherer that can be justified on ‘Ramsey grounds’ - demands for liquid fuels are quite inelastic so this tax yields much revenue without imposing significant deadweight losses on the economy. As it has been pegged in nominal terms over recent years its impact will decline anyway. This excise might be retained also as a hedge against unanticipated possible dramatic future price jumps as a consequence of Peak Oil. If a revenue neutral tax change is to be introduced then cutting income taxes would make more sense than cutting the fuel excise because congestion charges intensify the labour market distortions induced by the income tax.

This argument was probably the least attractive part of our report to *laissez faire* purists but, on balance, we retain the view. Australian fuel prices are low by European standards and high only by US standards. Of course if user charges are not imposed on road use then, imperfect as it is, the fuel tax works well as a proxy. Our empirical estimates suggest an appropriate fuel excise well north of its current values we are happy to stick with our preference for retaining this excise along with proposed road user charge reforms.

References

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