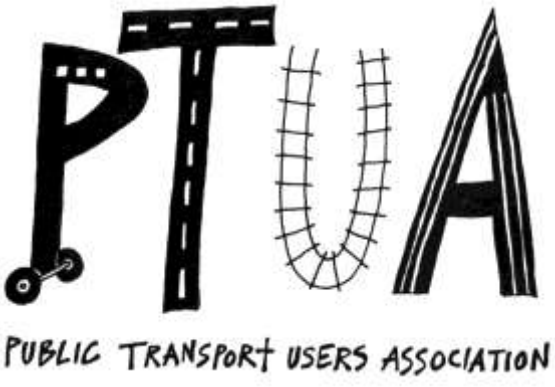
A tax system for sustainable transport

Submission to the Review of Australia's Future Tax System

October 2008



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1 Tax policy principles

1.1 Efficiency

> "…in some cases taxes and charges can increase market efficiency. A tax on a specific good may be beneficial if it reflects the external costs the use of the good imposes on others. Such a tax ensures that users or producers of the good take into account the negative effects they have on others when making production or consumption decisions."
> *Architecture of Australia's tax and transfer system, pp.278-279*

Motor vehicle use results in a range of significant external costs such as greenhouse gas emissions, air pollution, noise pollution, congestion and road trauma. We estimate that the total costs imposed by road users exceed the revenue raised from road users by around $16 billion per annum *excluding congestion* (Table 1). Quantifying the cost of congestion to the national economy remains subject to debate, however the Bureau of Transport & Regional Economics estimated that the potentially avoidable cost of congestion was about $9.4 billion in 2005 and likely to rise to $20.4 billion in 2020 (BTRE 2007). In addition to these direct costs, the travel patterns and associated sedentary lifestyles resulting from distorted transport price signals contribute to health-related costs in the order of $58 billion per annum (Access Economics 2008; Giles-Corti 2006; PTUA 2007, pp.9-12; PTUA 2008a, pp.12-14).

This under-recovery of social costs leads to inefficient travel decisions and is a major cause of congestion on the road network (VCEC 2006, pp.88-90; Booz Allen Hamilton 2006, pp.45-46). Internalising a larger proportion of external costs would not only help to reduce congestion, pollution and road trauma, it could also enable other taxes to be reduced or abolished and thereby reduce or eliminate their efficiency costs. This 'win-win' opportunity is also known as a 'double dividend'.

A sizable portion of taxes and charges on road users are fixed or periodical in nature (such as annual registration fees), meaning that road users do not benefit from reduced charges if they reduce their road use. Restructuring these charges so that they vary according to the level of motor vehicle use would more closely align private costs with social costs and encourage more efficient travel decisions. For example, existing flat registration fees could be replaced with distance-based fees that reward a reduction in vehicle use (VTPI 2008). The value of relating vehicle ownership charges such as registration fees more closely to use was recognised in the final report of the Garnaut Climate Change Review (Garnaut 2008, pp.526-527).

Some tax provisions are even more perverse than flat or periodical charges. The statutory method for valuing motor vehicle fringe benefits reduces the Fringe Benefits Tax (FBT) liability as the amount of combined business *and private* travel increases, effectively *reducing* private costs as social costs increase (Table 2). The impact of this distortion is exacerbated by the lack of comparable concessions for substitutes to motor vehicle use such as bicycles and public transport fares. Since the cost of this tax expenditure is soon to surpass $2 billion per annum (Treasury 2007), it is a prime candidate for abolition in favour of funding for public transport infrastructure.

Table 1: The Road Deficit

Annual costs imposed by road users	***$ million***
Road construction and maintenance Road-related expenditure by the Commonwealth Government, state governments and local governments exceeded $9 billion in 2004-05. More recent figures are likely to exceed this amount following costly road proposals prior to the last federal election.	9,000
Land use cost The value of land dedicated to roads is likely to be in the range of $200-300 billion. A conservative return on investment for an asset of this value would be in the region of $10 billion per annum, however this is not recovered from users of this land. Adopting a conservative valuation of $120 billion and 5% return suggests an opportunity cost of $6 billion.	6,000
Road trauma The direct costs of road trauma, such as medical costs, lost income and property damage amount to over $17 billion per annum (Connelly *et al* 2006). This exceeds the revenue from insurance premiums listed below.	17,300
Noise pollution Noise pollution has been estimated to cost in the range of $700 million to $2 billion per annum.	700
Air pollution Air pollution has been linked with respiratory disease and developmental delays in children. We have used a conservative estimate of $4.3 billion, however the costs of air pollution are likely to be significantly higher than this.	4,300
Climate change Adopting a low price for carbon of $40 per tonne, the cost of road transport emissions in 2004 was $2.9 billion. This cost rises to $6.4 billion if costs suggested by the UK Department for Transport are used (i.e. around $90 per tonne).	2,900
Tax concessions Motor vehicles represent the highest average amount under salary sacrifice arrangements (p.18 architecture paper). The cost of the statutory method available to calculate the value of car benefits is rapidly heading towards $2 billion per annum and grants a significant tax concession to private motor vehicle use. A number of commercial toll-roads also benefit from generous exemptions from land tax and other tax concessions that are not available to many other businesses.	5,800
Fuel subsidies The states spent $646 million on subsidising transport fuel in 2006-07. Although Victoria has since abolished its fuel subsidy, this was off-set by a larger reduction in motor vehicle duty.	646
Total costs	***46,646***
Annual revenue from road users	
Excise (net of rebates) Fuel excise in Australia is among the lowest in the OECD, and is declining in real terms following the removal of automatic indexation. A range of rebates, concessions and exemptions shave several billion dollars from the gross sum collected through excise.	9,900
GST on fuel and vehicles Since the GST is a broad-based consumption tax applying to a wide range of goods and services including, for example, bicycles and public transport fares, it could be argued that it does not need to be included on the revenue side of this analysis. The introduction of the GST in 2001 lowered the tax on the sales of cars (i.e. sales tax) but imposed a new tax on public transport fares.	4,000
Registration fees States charge around $3.5 billion per annum to register motor vehicles, which is less than the value of tax concessions provided to road users by the Commonwealth government each year.	3,500
Insurance premiums Road users pay around $10 billion per annum in compulsory third party personal injury premiums and optional property damage premiums. Even with the inclusion of premiums to cover property damage to the insured party's vehicle, this sum falls well short of the cost of road trauma listed above.	10,400
Tolls Road users paid about $778 million in tolls in 2004-05 which only covers the financing of toll-road construction after the extension of generous tax concessions to toll-road proponents mentioned above.	800
Other revenue A further $2.2 billion is collected in the form of motor vehicle duty, licence fees, etc.	2,300
Total revenue	***30,900***
Road deficit (excess of costs over revenue)	**15,740**

Source: http://www.ptua.org.au/myths/petroltax.shtml

Table 2: Statutory fractions to value motor vehicle benefits

Annual travel (km)	*Statutory fraction*	*Average annual GHG emissions*
< 15,000	26%	Up to 3.8 tonnes
15,000-24,999	20%	3.8 to 6.4 tonnes
25,000-40,000	11%	6.4 to 10.2 tonnes
> 40,000	7%	Over 10.2 tonnes

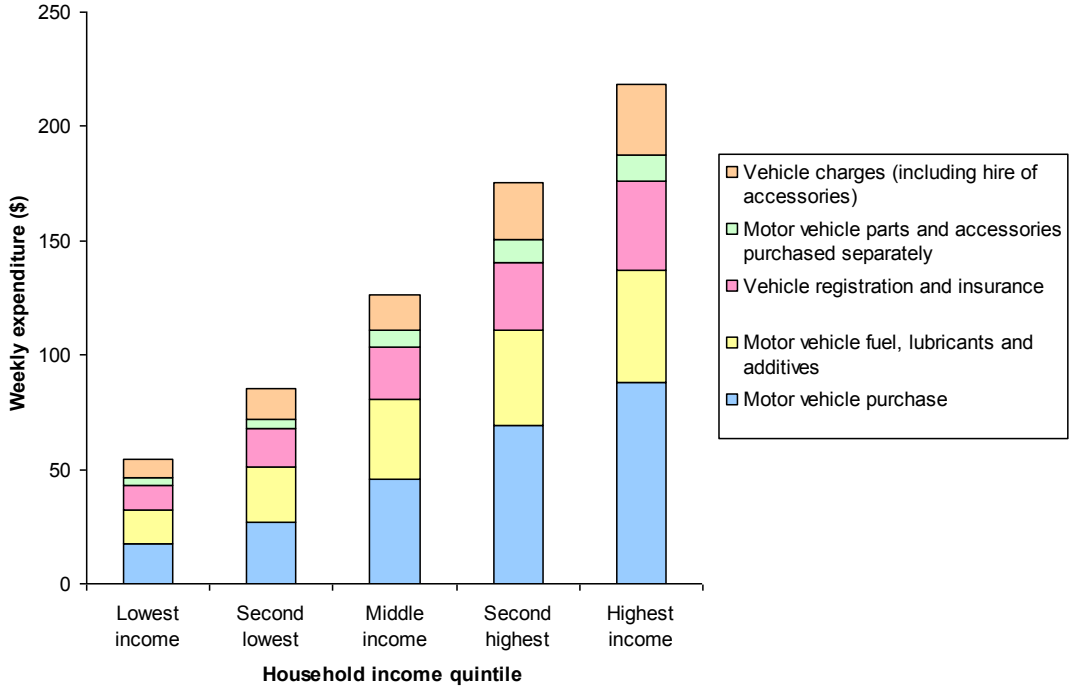
Note: emissions for each threshold based upon average passenger vehicle emissions of 255 g CO2-e/km.

1.2 Equity

1.2.1 Vertical equity

Up to a certain point, motor vehicle ownership and use tends to increase with income levels (Newman 2000; Cameron, Lyons & Kenworthy 2004; Litman 2005). High income households tend to have more motor vehicles and to use them more extensively, especially for discretionary travel. These tendencies are borne out in the larger motor vehicle-related expenditure in higher income households (Figure 1). The incidence of motor vehicle taxation is therefore skewed towards high income households, making such taxes somewhat equitable from the perspective of vertical equity.

Figure 1: Expenditure on motor vehicles by household income



Source: ABS Household Expenditure Survey 2003-04

This incidence of motor vehicle taxation also demonstrates that measures to keep petrol prices low following the introduction of carbon pricing will be poorly targeted and largely benefit upper income households. This of course does not mean that the issues of transport

disadvantage and associated financial stress can be ignored, but it does demonstrate that assistance would be better targeted through direct financial assistance to low income households and expanded provision of more affordable and sustainable transport alternatives.

1.2.2 Inter-generational equity

There are few issues more central to inter-generational equity than environmental sustainability. Seriously degrading natural systems upon which our survival depends, or triggering irreversible runaway climate change would clearly be highly inequitable to future generations.

Current transport patterns are totally unsustainable in terms of greenhouse emissions, depletion of non-renewable resources and contribution to urban sprawl (PTUA 2008b). Inter-generational equity will only be achieved by reshaping public policy to reduce car dependence and encourage greater use of walking, cycling and public transport. By influencing price signals, the tax and transfer system could play an important role in shaping a more sustainable transport system.

1.3 Revenue sustainability

Net revenue from fuel taxation has stalled in real terms due to the removal of automatic indexation in 2001 (PTUA 2006, p.5) and erosion of the base through a range of exemptions and concessions (e.g. LPG, biofuels, fuel tax credits). Proposals to offset the impact of carbon pricing by reducing fuel excise are likely to further erode fuel tax revenue.

The erosion of the fuel tax base reduces the ability of the tax system to internalise social costs outlined above (Section 1.1) and thereby achieve greater market efficiency. This erosion should be reversed by reducing or eliminating exemptions and concessions and reintroducing indexation to maintain the real value of excise over time.

The merits of some of these concessions are also debateable. For example, there is now a large volume of research demonstrating that biofuels are not inherently beneficial (PTUA 2008b, pp.18-21; Hedegaard *et al* 2008), which puts into doubt the wisdom of granting them effective excise free status. Instead of excise concessions, it is likely to be more effective to place a price on the life-cycle carbon content of transport fuels (without offsetting reductions in fuel excise) and impose strict social and environmental sustainability certification requirements on the biofuel supply chain.

A shift to untaxed fuels such as electricity may also be encouraged by peak oil and the need to reduce carbon emissions. Governments will need to respond to this to ensure there is not a further decline in the extent to which external costs are internalised through taxes and charges on road users.

1.4 Simplicity

Fuel excise is a relatively simple tax to administer and collect which makes it a good alternative to more complex forms of charging. While more sophisticated instruments may be theoretically more appropriate for addressing social costs, fuel consumption does serve as a good proxy for a range of externalities since it tends to vary in line with distance driven, vehicle weight, fuel intensity of driving conditions (i.e. level of congestion) and vehicle speed. Fuel taxation has also been shown to be one of the most effective measures to reduce carbon emissions (Timilsina & Dulal 2008, pp.11-17; Future Fuels Forum 2008, pp.22-23).

Table 3: Preferences for instruments to charge marginal social costs in traffic & transport

Cost Item	1st preference	2nd preference	3rd preference
Marginal infrastructure costs	Differentiated charge per kilometre	**Excise duty**	Ownership tax
Safety	Through insurance premiums	Differentiated charge per kilometre	**Excise duty**
Greenhouse effect	**Excise duty**	Differentiated charge per kilometre	
Atmospheric pollution	Differentiated charge per kilometre	**Excise duty**	Ownership tax
Noise	Differentiated charge per kilometre	**Excise duty**	Ownership tax
Congestion	Congestion charge	Differentiated charge per kilometre	

Source: EEA 2004, p.46

Shifting some existing periodical or fixed charges such as registration to distance-based or 'per kilometre' charges could reduce the simplicity of those taxes, however simple and low cost methodologies are available to provide an easy transition to potentially more sophisticated methodologies in future (Litman 2008).

2 Recommendations

2.1 Fuel excise

2.1.1 Excise base

To prevent further erosion of the excise base, exemptions and concessions for alternative fuels should be eliminated in favour of pricing of life-cycle carbon content of transport fuels as part of a comprehensive carbon pricing scheme.

2.1.2 Excise rate

2.1.2.1 Indexation

In order to maintain a constant real value of excise over time, the rate of excise should be automatically indexed in line with CPI.

2.1.2.2 Interaction with carbon pricing

To ensure the role of carbon pricing in reducing greenhouse gas emissions is not undermined, there should be no offsetting reductions in the rate of excise upon introduction of the CPRS.

2.1.3 Fuel subsidies

Existing state-based fuel subsidies should be abolished, and better targeted measures implemented to address transport costs in remote communities.

2.2 Fringe Benefits Tax

2.2.1 Valuing motor vehicle benefits

The current statutory method should be eliminated in favour of a simple method that encourages a reduction in motor vehicle use (e.g. PTUA 2006, pp.9-10). The existing operating cost method could remain as an alternative option.

2.2.2 Removing distortions

The current discrimination in the FBT provisions that provides concessional treatment for motor vehicles and parking but excludes public transport and cycling should be removed. If motor vehicle and parking benefits continue to be allowed, there should also be provision for the payment of tax-free allowances for periodical public transport tickets and cycling equipment in lieu of motor vehicle and parking benefits.

2.3 Land tax

2.3.1 Tollroads

Land tax exemptions for tollroads should be eliminated or no longer provided to bring their treatment into line with most other businesses.

2.4 Motor vehicle registration

2.4.1 Encouraging behaviour change

Registration fees should be shifted from existing periodical fees to distance-based methods that encourage more sustainable travel behaviour.

2.4.2 Incentivising insurers

Lower rates of insurance duty should apply to distance-based motor vehicle insurance policies relative to other motor vehicle insurance. To maintain or increase the extent to which social costs are internalised, this should be implemented in a revenue neutral or revenue positive manner.

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