2017 - 18 Pre - Budget Submission re land transport

Philip Laird, University of Wollongong, January 2017

This submission updates earlier pre-budget submissions of this writer, including for 2014-15 and 2012-13. The views are those of the writer, with some comment taken from 2016 issues of Track and Signal.

1. The need for investment in both roads and rail continues, and at a time that on the one hand, Australia has shown strong population growth, and on the other hand, the Government is under some fiscal constraint.

In May 2015, Infrastructure Australia released a National Infrastructure Audit that highlighted the need for Australia to respond to a growing population with increasing road congestion.

On medium level projections, Australia's population is projected to grow from 22.3 million in 2011 to 30.8m in 2031 - an increase of 36.5 per cent (it is now about 24.3m). Most of this population growth (72 per cent) is projected to be in the four largest cities of Sydney, Melbourne, Brisbane and Perth - to a total of 18.6m people.

The cost of road congestion in Australia's capital cities was estimated by the now Bureau of Infrastructure Transport and Regional Economics to be $9.4 billion in 2005 and to rise to $20.4b by 2020. The 2015 infrastructure audit estimated that the cost of delays on urban roads was $13.7b in 2011 and expects "in the absence of any new transport network capacity, the cost of congestion on urban roads is projected to grow to $53.3b in 2031."

2. The evidence from overseas is that road congestion cannot be eased simply by building more roads. Moreover, some road investment has to called into question, as indeed it was by the people of Victoria in November 2014 when voting for a new State Government that cancelled the proposed East West tollway for Melbourne.

It is suggested that some current high outlays in roads by government at over $23 billion per year could well be reviewed.[1] This expenditure was described by consultants

[1] Bureau of Infrastructure Transport and Regional Economics (BITRE) *Key Australian infrastructure statistics 2016* notes, inter alia, in Table 2 Total road expenditure by all level of government, for 2014–15 for all governments, an outlay of $ 23 464.8 million.

to Infrastructure Australia in a 2014 report *Spend more, waste more* as a "*road spend [that] can only be described as hideously inefficient*."

Thus, projects such as Sydney's WestConnex that has now blown out to about $17 billion and duplication by 2020 of the Pacific Highway (that was taken to task by Infrastructure NSW in its 2012 report[2]) could well be reviewed. So also could federal outlays between Brisbane and Cairns (billions to the Bruce Highway and zero to rail[3]).

The 2016 Federal budget drew a reaction from NAB Group Chief Economist Alan Oster of "*infrastructure spending that is still road heavy*. "

It is trusted that efforts will be made to have a more balanced budget in 2017 in regards to investment in rail and road.

The need for more care in selection of major projects is acknowledged. A 2016 Grattan Institute "Roads to riches Better transport investment" report, noted, inter alia, of doubtful projects including Duplication of a 38 km section of the Colac to Geelong road with a benefit cost ratio of 0.08 with federal outlays of $185m where the road to Colac lies in the now very marginal seat of Corangamite.

Any loan to support a new major coal mining venue in Queensland is dubious.

The main concern however, is the sheer amount of government money that is allocated to road projects, despite the lack of true user pays pricing for road use, and, the need to upgrade the nations rail system to meet population growth.

---

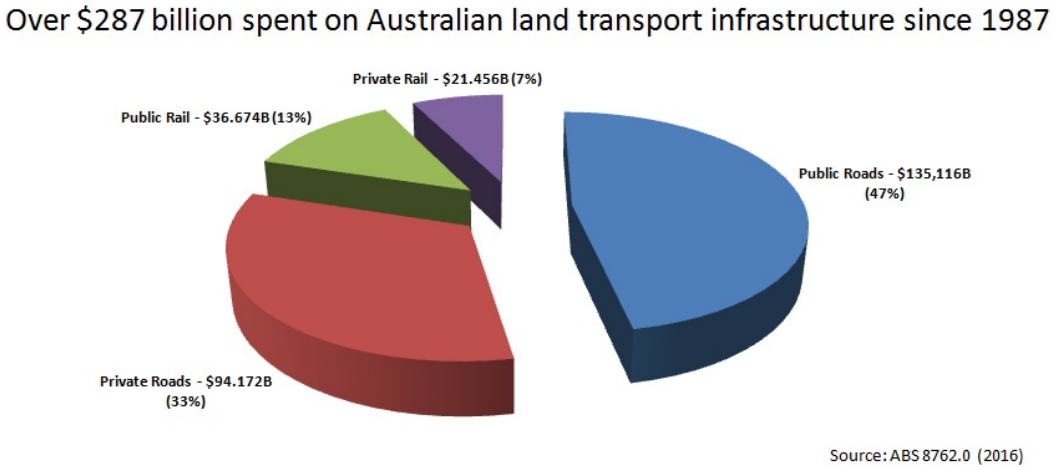
[2] In 2012, Infrastructure NSW [p143] noted that due to the relatively low traffic volumes on the remaining sections, the economic merit of their reconstruction is much lower at 0.8 (Benefit Cost Ratio) than that of the Highway as a whole; also "*…given competing priorities for NSW and Commonwealth Government funds, the high cost and relatively limited benefits of these remaining sections raises questions … appropriate scope of works and priority for those sections with relatively light traffic*."

There is a long overdue grade separation project at the foot of the Mt Ousley Highway in Wollongong which has at least three times the annual average daily traffic than does 'remaining sections' of the Pacific Highway that needs funding

[3] There is joint Cth Queensland funding for $8.5 billion Bruce Highway upgrades, with 100 m for the North Coast railway line from State funds and no federal funds north of Petrie, there is a ratio of 85 to 1 for funds for the main road and railway between Brisbane to Cairns.

In May 2016 in the Courier Mail in Brisbane, Engineers Australia Queensland infrastructure spokesman Chris Warnock noted that huge numbers of trucks would be funnelled on to the Bruce Highway unless $2.5 billion was invested in the railway.

The graph prepared by Scott Martin for a presentation of a joint paper with this writer ***Meeting Australia's 2025 land transport challenges*** at CORE in May at Melbourne shows an unbalanced road-rail situation that is in need of improving.



Road Pricing

3. There is also a need to address, congestion pricing in major cities, and implementation of mass-distance location road user charges for B-Doubles, and at the very least, any B-Triples that are approved for use on the Hume Highway.

In regards to congestion pricing, the initiative of Infrastructure Victoria in its 2016 30-year strategy in proposing electronic congestion charging system for Melbourne is to be encouraged. This was introduced in Singapore in 1998, leading to a 16 per cent drop in peak hour traffic by the year 2000, whilst in London, a 2003 congestion charge saw car decreasing by nearly 20 per from 2000 to 2009.

4. Fuel excise is now being indexed on an annual basis. However, there was a long period between 2001 and 2014 when it was not been indexed, and was stuck at 38.143 cents per litre. The loss of Commonwealth revenue from freezing fuel excise indexation was estimated in Treasury Budget Paper #2 (May 2001) at $150 million for 2001-02 increasing to $1135 million for 2004-05.

A Fuel Taxation Inquiry reported in 2002. Although its recommendations were pragmatic (with fuel indexation at a later stage) they were rejected by the Government of the day. As noted in an earlier pre-budget submission: The difference in total fuel excise collection during 2011-12 for petrol used in cars etc between the indexed and frozen rate would have been about $2.48 billion; also for 6.3 billion litres of diesel used by trucks during 2011-12, the forgone revenue from rebates was about $1.9 billion.

Accordingly, the combined forgone petrol and diesel excise during 2011-12 was estimated at about $4.4 billion.

5. Fuel excise is currently 39.6 cents per litre but this is at least 20 per cent less in real terms than what it was in the year 2000.

There is a case for fuel excise in Australia to be increased by 10 cents per litre to allow for lower annual registration fees for cars; and, to fund ongoing calls for more money to be spent on roads, and alternatives to roads including rail and public transport.

There is also a case for scrapping the diesel rebate.

6. New Zealand has increased its petrol excise more than 10 cents a litre since March 2002, and from 1 July 2016 is set at 59.524 cents per litre. Annual registration fees for cars in New Zealand are much lower than in NSW and other states. A further 10 of so cents per litre is collected to be applied to motor accident compensation. It is of note that higher fuel taxation has not stopped the New Zealand economy performing well, and its currency strengthening against the Australian dollar in recent years.

From the ABS Motor Vehicle Census, at 31 Jan 2016, Australia had some 13.8 million passenger vehicles on register. This was up some 266,000 from the year before.

7. Mass distance location charges for heavy trucks in Australia are long overdue. Incredibly, the National Transport Commission's 2015 paper on road user charges, complete with nine options looking at pay as you go (PAYGO) methodology does not even raise the option of mass distance charges. This is despite Infrastructure Australia calling for a user-pays approach to provide greater fairness in the way Australia pays for its roads to include the introduction of direct heavy vehicle charging.

Meantime, aggregate revenue from truck registration fees and road user charges set in 2016-17 at a modest 25.9 cents per litre has been frozen until 2018 by Transport Ministers. This low road user charge for trucks is less the mid 2016 (now indexed) 39.5 cents per litre on petrol and diesel for cars.

New Zealand has had since 1978 mass distance charges for heavy trucks. Currently, a heavy semitrailer with six axles pays 56 cents NZ (about 52 Aust cents) per kilometre. In Australia, the same truck hauling 100,000 km a year or more pays registration and fuel road user charges working out to less than 17 cents per kilometre.

8. It is now 11 years (yes, eleven years) since 2006 when the Productivity Commission issued a report on road and rail access pricing that found the National Transport Commission (NTC) charges to be "conservative" and made recommendations that CoAG take up road pricing. By 2009, delays were being encountered by the CoAG process and in 2010, the Henry Tax Review made several pertinent recommendations for road pricing reform.

These included one that CoAG *"should accelerate the development of mass-distance-location pricing for heavy vehicles…"*

9. It is not unknown for the Federal government to make certain payments to the States conditional on specific reforms. To be logically consistent, it should be possible for Treasury and or Finance to make payments for roads conditional on specific reforms.

10. In New Zealand, from the 2015-16 NATIONAL LAND TRANSPORT FUND ANNUAL REPORT, it is noted, inter alia, revenue in millions as follows:

Fuel excise duty $1790

Road user charges $1335

Motor vehicle registration and annual licensing fees $181

The total is $3.58 billion.

It can be seen that road user charges in New Zealand, which are mostly made up of mass distance charges levied on heavy truck operations, account for some 37 per cent of all revenue to the land transport fund.

11. By way of contrast, as noted by the NTC, in its February 2015 report *Heavy vehicle road user charge annual adjustment Consultation report 2014–15* noted, inter alia, an aggregate heavy vehicle road users charge of $1,820,198,117. (6,963,267,471 litres multiplied by a road user charge of 26.14 cents/litre) along with estimated registration revenue of $1,188,014,361 ($811,170,575 powered units only and trailers $376,843,786). Together this is $3008 million.

As noted in Footnote I, BITRE estimated the total road expenditure by all level of government, for 2014–15 for all governments, as $ 23 464.8 million.

This means, at first sight, heavy vehicle charges in 2014-15 were only contributing about 12.8 per cent of all government outlays on roads.

12. It is hard to see why Australian charges for heavy vehicles in aggregate, and annual charges for semitrailers hauling heavy loads long distances each year, should be about one third of the respective New Zealand charges.

Unless of course, it is part of a de facto policy to put more 'loads on roads' and to make rail freight, sea freight, pipelines and conveyor belts financially unattractive for moving most types of freight.

From the ABS Motor Vehicle Census, at 31 Jan 2016, Australia had some 96,185 articulated trucks on register. This was up some 1433 from the year before.

13. The BITRE *Yearbook 2016: Australian Infrastructure Statistics, Statistical Report,* notes, inter alia, Table T 5.5a Public transit patronage on heavy rail, Australian capital cities; that in 2013-14, there were 671.5 million passenger movements; also in in 2003-04, there were 492.2 million passenger movements; an increase of about 36 per cent.

During those years, Table T 4.2 from this publication notes Total vehicle kilometres travelled, by vehicle type, notes driving passenger cars increasing from 165.35 billion km to 172.5 billion km, an increase of about six (6.3) per cent.

14. The operation of road vehicles imposes appreciable external costs on the community. In a paper *Moving People: Solutions for a Livable Australia* Bus Industry Confederation (2012) estimates of "road deficits" of about $20 billion pa in 2001 and $27 billion pa in 2010 were cited. Clearly, some effort should be made to direct more of these costs onto road users as opposed to the wider community.

These estimates compare with a 2001 estimate of a road deficit[4] of $8 billion a year of hidden subsidies that do not include the cost of road congestion. Under current road pricing, road deficits are increasing.

These road deficits include an older estimate of a 'road freight deficit' of at least $3 billion per year.[5] About half of this amount is unrecovered road system costs from

---

[4] Laird P Newman P Bachels M and Kenworthy J (2001) *Back on Track: Rethinking Transport Policy in Australia and New Zealand* UNSW Press

[5] Laird P (2006) *Freight transport cost recovery in Australia*, Australasian Transport Research Forum. The Henry Tax review in 2010 had a number of recommendations that if implemented would see an improvement in road pricing for heavy trucks.

articulated trucks (which in the 12 months ended 31 October 2014 had a freight task of 160.6 billion tonne km[6]). The other half is due to the involvement of such heavy trucks in road crashes coupled with other environmental and social costs.

Oil Vulnerability

15. A major input into road vehicle use is that of liquid fuel. In the 12 months ended 31 October 2014, registered motor vehicles in Australia consumed an estimated 32,402 million litres of fuel. Of the total fuel consumed by motor vehicles in 2014, 54.0% was petrol and 40.5% was diesel. By way of contrast, rail used in 2010 less than one billion litres of diesel for a smaller passenger task but a larger freight task than road.[7] Rail also uses electricity, produced mostly from domestic coal, then with an oil equivalent of about 1.2 billion litres that year.

In 1998, the Chartered Institute of Transport issued a sternly worded warning that cheap oil would not last forever and that 'More of the same' in our current transport plans is no longer tenable. The next year, the Institution of Engineers, Australia issued a well researched call for transport reform.[8]

Urban rail

16. It has been argued above that there is a need to improve road cost recovery.

At the same time, there is a need to improve cost recovery of urban rail operations from train fares. Here, some but not all of the large subsidies to urban rail operations could be better redirected to the necessary rail infrastructure to meet the needs of a growing population.

17. Major metro rail projects are under way in Melbourne and Sydney. There is a question as to whether more federal funding would be appropriate for these projects, and if granted, could expedite their completion. In addition to $857 million from the Federal

---

[6] Australian Bureau of Statistics, Canberra (2015) *Survey of Motor Vehicle Usage for 12 months ended 31 October 2014. Cat. No. 9208.0* Earlier SMVU data notes that in 1991 Australian road vehicles used about 21 billion litres of fuel and in 2001, about 26 billion litres.

[7] Australasian Railway Association Australian Rail Industry Report 2010.

[8] Chartered Institute of Transport (1998) statement from their 1998 National Symposium and Institution of Engineers Australia (1999) *Report on Sustainable Transport*

Government in the 2016 budget, there is a question relating to Victoria gaining a fair share of the proceeds of the Asset Recycling program.

Brisbane needs a 10.2 km Cross River Rail project from Dutton Park to Bowen Hills, with 5.9 km in tunnel to include five new stations. The Queensland Government has committed $850 million to date to the $5.4 billion project and in late 2016 the Commonwealth has agreed to provide an initial $10 million.

Perth's urban rail system is now arguably the best in Australia and has attracted international attention[9]. However, ongoing improvements in Perth's public transport and road pricing are needed contain road congestion and its negative impact on productivity.[10]

Adelaide's rail electrification programme could well be revived. The work to date has helped lift patronage. The growth of light rail in Australia is also of note. This includes the Gold Coast with patronage far exceeding expectations when it was opened in July 2014.

There is an ongoing need for more separation of freight and passenger trains. In Sydney, this would be assisted by completion of the Maldon Dombarton rail link.

Intercity rail

18. The increase in federal funding since 2004 for upgrading existing interstate rail links and provision of additional funds for an Inland Railway is appreciated along with the 2016 decision not to privatize the Australian Rail Track Corporation..[11]

---

[9] BITRE 2012, Understanding Australia's urban railways. and Schwandl R Urban Rail Down Under; Metropolitan railways and trams in Australia and New Zealand, Robert Schwandl Verlag, Berlin 2011

[10] As noted by this writer, Perths Urban Rail Renaissance, AusRail 2016, some federal funding is warranted here (and more so than the Perth road port link); also, over the past 35 years, instead of being discontinued from use, Perth's urban rail network has been tripled in route length and electrified at 25,000 volts AC. The extensions include the Northern Suburbs Railway, and, the 72 kilometre Perth Mandurah line opening in 2007. Integrated with a well run bus system, along with fast and frequent train services, there has been a near ten fold growth in rail patronage since 1981 when some 6.5 million passengers used the trains to 64.2 million in 2014-15 – which is remarkable given Perth's relatively low population density and high car dependence.

[11] Track leases made by government to the private sector that were eventually reversed include those of Britain, New Zealand, Tasmania and Victoria. Further details are given in a 2013 paper, of this writer, called *Government rail asset sales, and return to the public sector, in New Zealand and Tasmania* Research in Transportation Business & Management Vol 6 2013.

However, more funding is needed to bring the interstate rail network and new construction of an inland railway towards Canadian and US Class I Railroad standards.

Some track straightening of the existing lines to allow for Fast Freight Trains and Fairly Fast Passenger trains are needed. This is pending the construction, if ever, in Australia of a High Speed Rail (HSR) network for trains running at speeds of at least 250 km/h.

19. In December 2016, the House of Representatives Standing Committee on Infrastructure, Transport and Cities released its report *Harnessing Value, Delivering Infrastructure*.

Much evidence was received and noted on the need to identify and protect corridors for future railway lines. The Committee noted, in part [p151] "Corridor preservation, especially for major projects such as HSR is very important. The ability to protect corridors ensures that transport infrastructure will follow the optimum route. Failure to protect corridors will mean compromises in planning and significant increases in cost."

Identifying and protecting corridors for upgrading existing rail track and for new track could usefully receive federal funding. This could be in a manner similar to the long standing federal funding of advanced planning of certain highway projects.

Conclusion

20. By 2020, the cost of road congestion will rise to more than one per cent of GDP. By 2031, Australia's population will reach about 31 million people.

With the result of population increase to date, Australia now has a land transport infrastructure deficit. Now, more than ever, Australia needs to change its outmoded land transport policies. This includes in the budget process a rebalancing of federal government outlays on rail and road, along with more diligence in major project selection and serious attention to land transport pricing.

Associate Professor Philip Laird, Ph D, FCILT, Comp IE Aust
Faculty of Engineering and Information Sciences
University of Wollongong NSW 2522

16 January 2017