
Submission to Select Committee into the Abbott Government's Budget Cuts

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1 Summary

This submission is made at the request of the Senate Select Committee into the Abbott Government's Budget Cuts. We understand that the submission will contribute to the Committee's deliberations on infrastructure financing and expenditure, which falls under the Committee's brief to inquire into the effect of "the reduced investment in scientific research and infrastructure and its impact on future productivity."

This submission focuses primarily on transport infrastructure. Transport is the largest infrastructure sector, with a direct economic contribution estimated at \$136 billion, well ahead of energy at \$19 billion, communications at \$21 billion and water at \$11 billion.¹ Many issues concerning transport infrastructure also apply to other sectors. This submission does not comment on funding sources or mechanisms.

Australian government investment in infrastructure is high by international standards, and has been particularly so since 2004. Growth in spending has been higher than GDP growth over the past 11 years.

But this high spending on public infrastructure has not been accompanied by a significant productivity uplift. Instead, the state of Australian infrastructure, especially transport infrastructure, continues to be criticised.

The long-term economic impact of particular kinds of infrastructure can be hard to predict. Car travel per head peaked in 2004 and is now declining. There is a general flattening of per

capita passenger travel across all modes of transport. But population growth means that aggregate passenger travel continues to rise. Freight volumes per capita are also continuing to rise. Congestion imposes significant costs in some locations, although overall road traffic is not increasing in Sydney or Melbourne.

Despite exceptionally low interest rates, governments' capacity to borrow to fund infrastructure is constrained by previous borrowings for infrastructure. Interest and depreciation costs have increased from six to nine per cent of state revenue over the seven years to 2013-14.

To get a better return from infrastructure spending, governments should focus on selecting the right projects, and on making the business cases and their underlying assumptions more transparent. Governments can also get a better return through use of new technologies to get more value out of existing infrastructure; through minor augmentation and relief of pinch points; and through more systematic maintenance.

The capacity to waste money is a serious risk for infrastructure, given the very large amounts of money involved.

¹ Infrastructure Australia (2015)

2 Current trends in the levels of public infrastructure and private capital investment

Australian infrastructure investment is high by international standards. Figure 1 illustrates that Australian transport infrastructure spending as a percentage of GDP has been higher than that of comparable countries over the past decade. Of the 48 countries included in the OECD data, the only countries spending a higher percentage of their GDP on infrastructure investment over the last five years were Albania, Azerbaijan, Georgia and Romania.

The state of Australia's infrastructure has important critics, even after the spending of the past decade. The OECD argues there is scope for significant improvement in Australia's infrastructure, and that "shortfalls in transport infrastructure are prominent".²

Figure 1: Government spending on transport infrastructure % of GDP

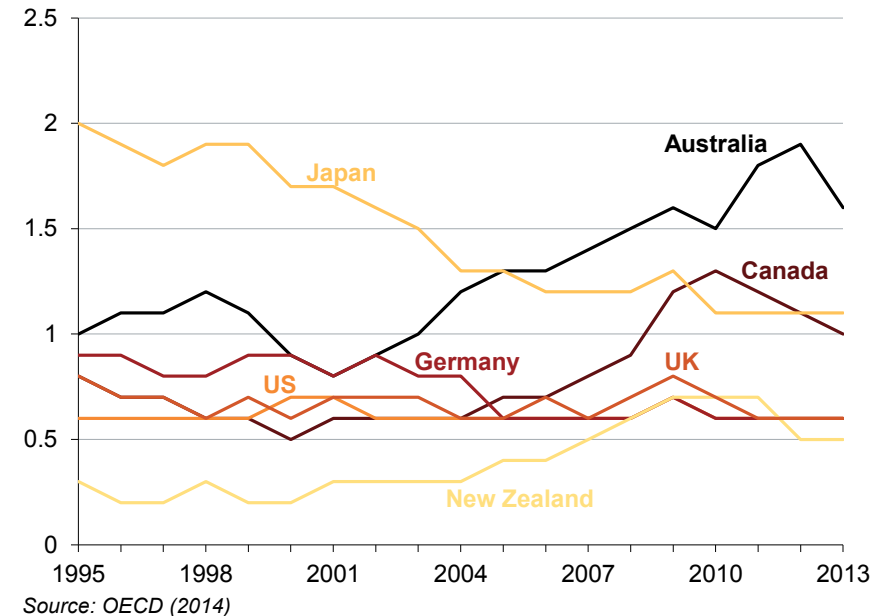
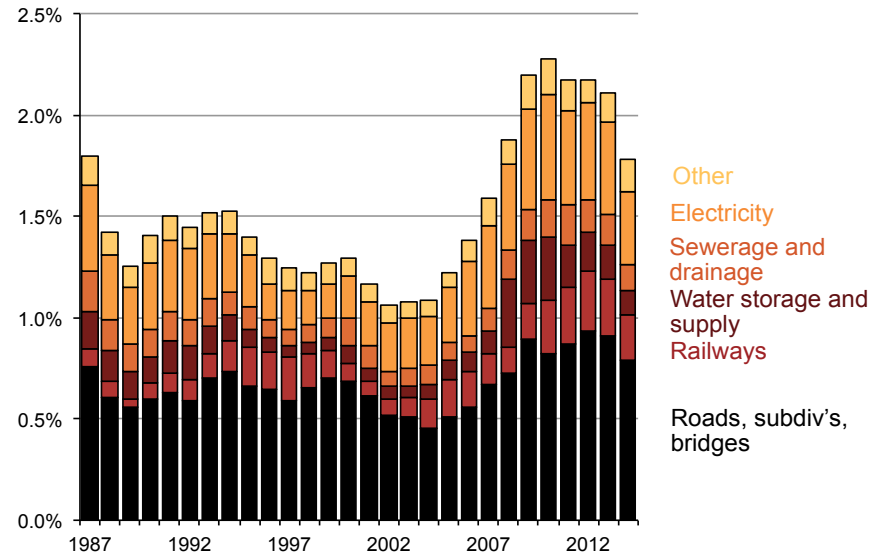


Figure 1 also shows that while Australian governments' spending has recently slowed, it still remains well above the level of 2004, when the current rapid growth began, as Figure 2 shows.

² OECD (2014)

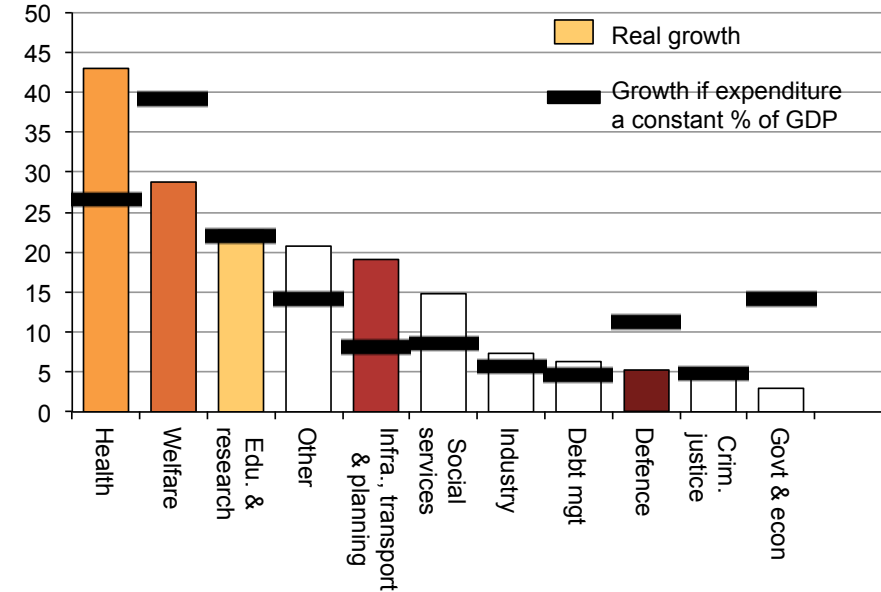
Figure 2: Government spending on infrastructure
Engineering construction work done for the public sector, % of GDP



Source: ABS (2015), published in Grattan (2015), page 17. Excludes telecommunications, which is insignificant after Telstra sale.

Over the past decade, government spending in other areas has not grown as quickly. Infrastructure, transport and planning stands out as one of the highest growth areas of the budget over the past 11 years, with spending growth well above GDP, as **Figure 3** shows.

Figure 3: Change in Australian governments' expenditure
Real change in expenditure, \$2013 billion, 2002-03 to 2013-14



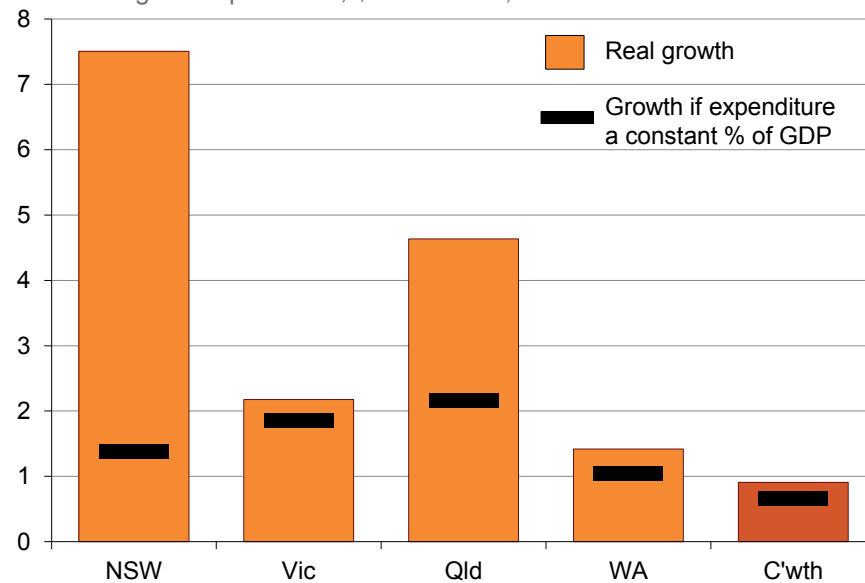
Source: Grattan analysis of Commonwealth budget papers for 2002-03 and 2013-14, published in Grattan (2014)

A more detailed look at infrastructure, transport and planning spending by states shows that growth is above GDP in all large states, but especially in New South Wales and Queensland (**Figure 4**). A significant proportion of Queensland's expenditure (\$4.1 billion) was spent by the Queensland Reconstruction Authority to repair infrastructure damaged in various natural disasters, including the 2010-11 floods and more recent tropical cyclones. This spending will fall provided that the number and severity of such disasters decline. The increase in New South Wales appears to be a more general increase across all categories of infrastructure, transport and planning expenditure,

although some may be due to the state using a different accounting approach to funding of its transport agencies.

Figure 4: Change in Australian governments' infrastructure, transport and planning expenditure

Real change in expenditure, \$2013 billion, 2002-03 to 2013-14



Source: Grattan analysis of Commonwealth and State budget papers for 2002-03 and 2013-14; ABS (2015a) PBO (n.d.), published in Grattan (2014)

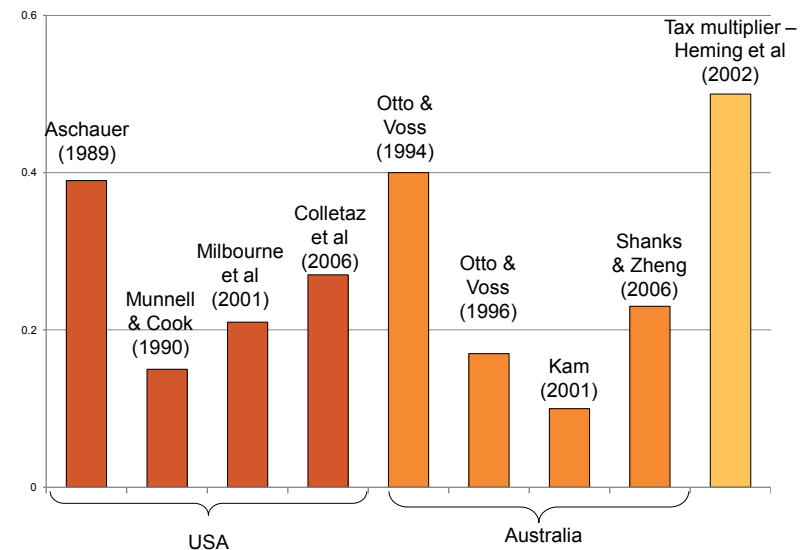
3 How infrastructure investment is projected to affect productivity and wellbeing

Public infrastructure is an important part of Australia's total capital stock, amounting to nearly a fifth of the national stock.³ If it is provided efficiently, public infrastructure supports businesses and individuals in a variety of activities, including creating and distributing goods and services and providing consumers with access to them.

The size of the payoff from infrastructure investment is difficult to judge precisely. **Figure 5** examines a range of studies that show that infrastructure is generally found to have a reasonable payoff but one significantly lower than the tax multiplier. In other words, it would often be a more productive investment of tax income to return it to taxpayers. Of course, governments may decide to spend on public infrastructure that lacks a high economic payoff for social reasons, such as connecting a remote community with a regional town where employment, education and other services are available.

Figure 5: Infrastructure has a reasonable but not overwhelming payoff

Output multiplier of infrastructure as found by various studies



Source: Shanks and Barnes (2008), published in Grattan (2012)

There is little evidence that the increase in infrastructure investment has significantly lifted productivity. Multifactor productivity has been shrinking by 0.1 per cent per annum in the current cycle since 2007-08, and was flat in the period from 2003-04 to 2007-08, when major infrastructure spending increases began, against a long-term growth rate of 0.8 per cent per annum.⁴ Infrastructure investment over the past five years has

³ Productivity Commission (2015)

⁴ Productivity Commission (2015)

been about one per cent of GDP higher than a decade earlier⁵. Such a significant increase would have been expected to have some visible effect on GDP growth. There is no evidence it has done so, with GDP growth still well below three per cent per annum and below historic growth rates.

Of course, it is possible that productivity growth would have been still lower without the major infrastructure investment of recent years. Or it may be that the infrastructure spending was poorly chosen. The wrong projects can destroy value and divert funds from projects that would be more valuable to the economy and community.

The Productivity Commission in its recent inquiry into public infrastructure found “an urgent need to comprehensively overhaul processes for assessing and developing public infrastructure projects.” It pointed to “numerous examples of poor value for money arising from inadequate project selection, potentially costing Australia billions of dollars”. It argued that further spending under the status quo will simply increase the cost to users, taxpayers and the community, and lead to more wasteful infrastructure.⁶

Australia could get better value from public infrastructure by making better project selections. Unreliable or non-existent cost-benefit analyses have been an obstacle to optimal project selection. Recent large infrastructure projects in Australia have typically suffered from cost overruns of about 15 per cent, while patronage has been 15 per cent lower than projected, on average.⁷ As a result, real cost-benefit multiples are expected to

be about 25 per cent lower than projected on average. All other things being equal, this consistent overestimation of benefit-cost ratios is making uneconomic projects look viable at the approval stage.

Selecting the right projects becomes harder as the low-hanging fruit of obviously beneficial projects is exhausted. Decision-makers can then face potential projects of questionable overall benefit, often being pushed by interest groups. Increased scrutiny of projects is essential. There should be automatic publication of business cases for major projects seeking government funding, particularly the assumptions underlying the cost benefit analysis and the evidence in support of those assumptions, so that experts and the community can scrutinise proposals.

It is increasingly recognised that small and lower cost interventions typically produce higher returns, faster implementation and better value for money than large building projects. The 2006 Eddington Transport Study in the United Kingdom found that “some of the best projects are small scale, such as walking and cycling schemes, and schemes that tackle bottlenecks” even though, on their own, such schemes may not be enough to tackle the full scale of the challenge.⁸ **Figure 6** shows an Infrastructure Australia assessment showing that smaller projects tend to have higher benefit cost ratios.

⁵ OECD (2014)

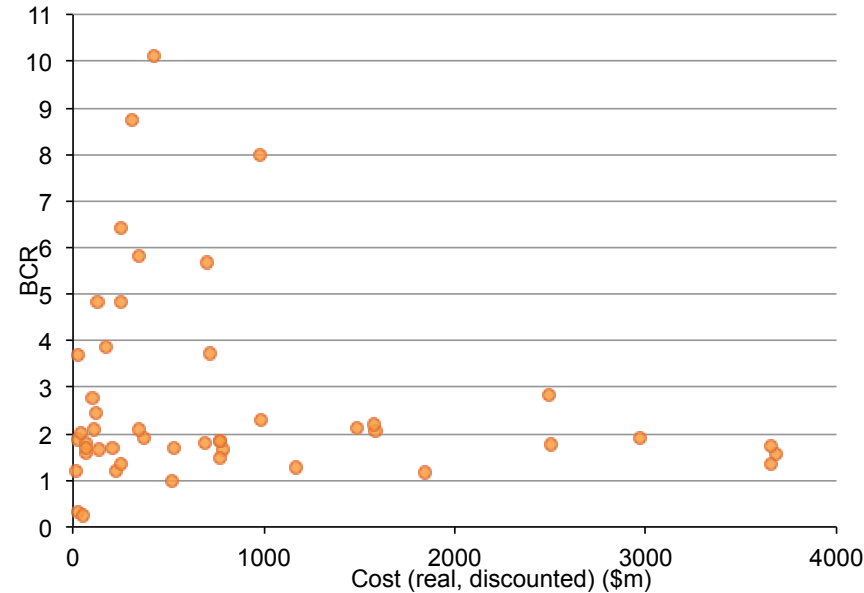
⁶ Productivity Commission (2014)

⁷ Elaurant and Louise (2015)

⁸ Eddington (2006)

Figure 6: Smaller projects have higher benefit cost ratios

Of projects submitted to Infrastructure Australia



Source: Infrastructure Australia, from speech by Paul Roe to CEDA

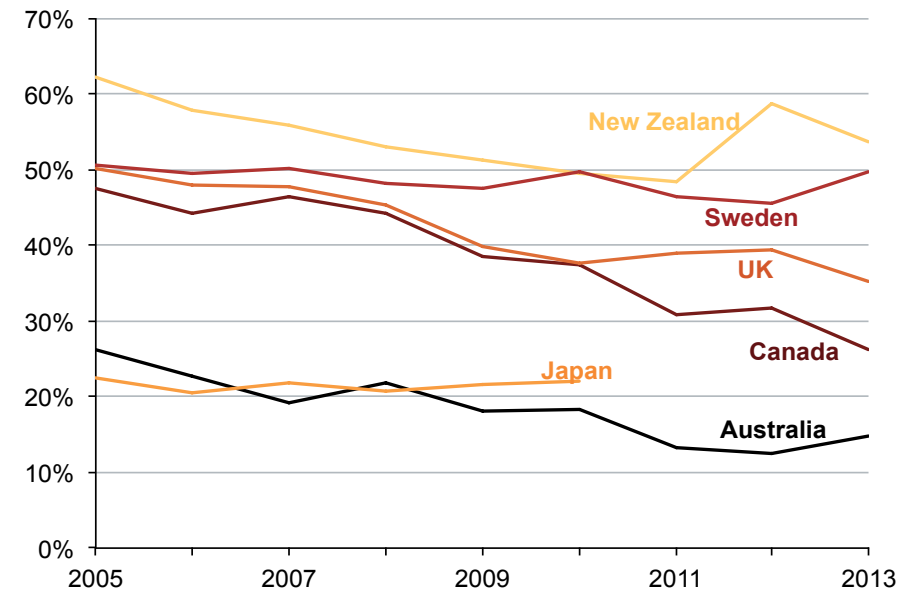
Australia could also get better value from public infrastructure by making smarter use of what already exists. Commonwealth and state governments are making more use of new technologies such as sensor data to improve real-time roads management, with variable speed limits, message signs and ramp metering.

Thirdly, Australia could get better value from public infrastructure through a more systematic approach to maintenance. Infrastructure Australia's recent Audit found under-investment in the maintenance of local roads, particularly in regional and remote areas, where there are large networks to be maintained and

councils have limited or declining income bases. There is also inadequate maintenance of regional rail infrastructure carrying low volumes of gain and/or general freight, especially those with ageing timber bridges and timber sleepers.⁹ International comparisons suggest that Australia under-spends on maintenance of transport infrastructure, as **Figure 7** shows. Australia's low ranking for maintenance spending contrasts with our very high spending on transport infrastructure, as shown in Figure 1, above.

Figure 7: Maintenance spending on transport infrastructure

% of GDP



Source: OECD (2014)

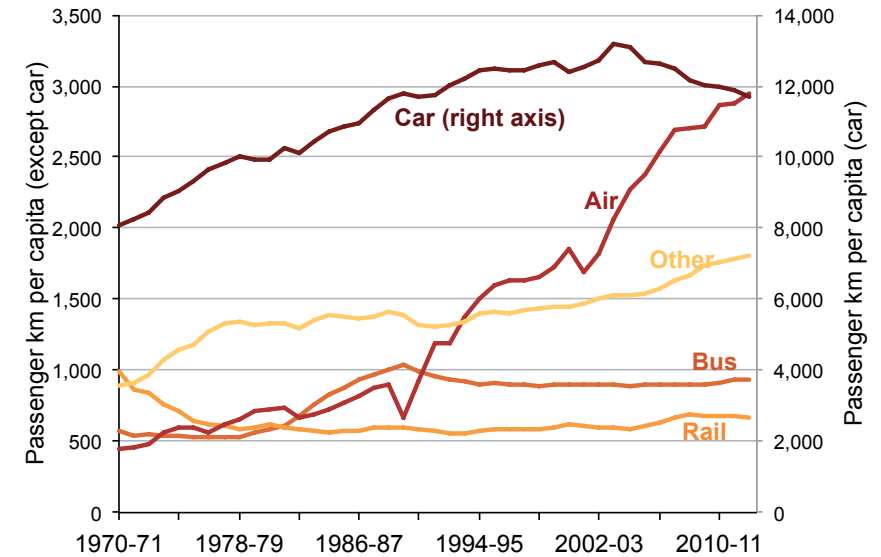
⁹ Infrastructure Australia (2015)

4 Long term economic impact of transport infrastructure investment

The long-term economic impact of transport infrastructure investment depends on the infrastructure that exists, how effectively it is managed and used, and Australians' demand for it.

Demand for transport infrastructure is changing. The distances Australians are travelling on a per capita basis have flattened and are beginning to decline slightly after years of growth. The decline is most evident in private vehicle use per head, which peaked in 2003-04 and has declined by eight per cent since. Use of other transport modes has increased (most notably a 43 per cent increase in air travel), but overall distance travelled per capita is one per cent lower than in 2003-04 (see **Figure 8**).

Figure 8: Per capita travel use in Australia
Kilometres per capita

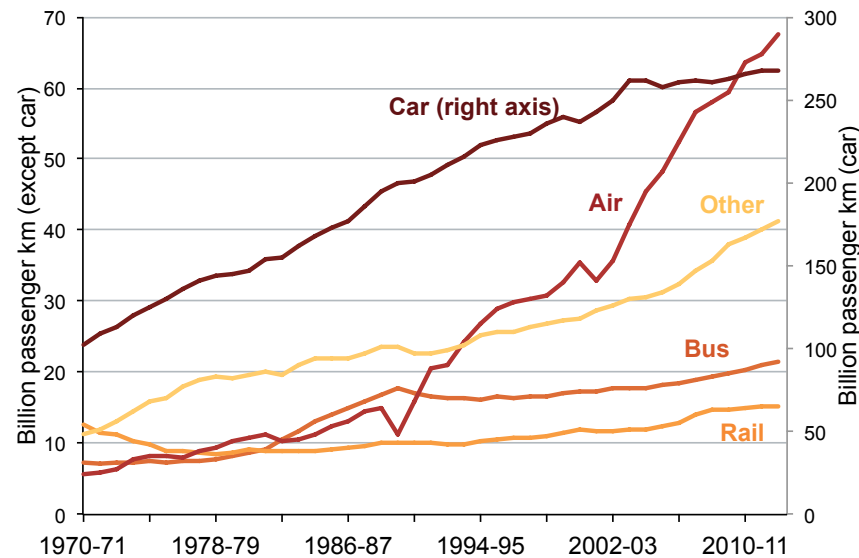


Source: BITRE (2014) ABS (2014b) ABS (2015b)

Notes: 'Other' is non-business use of light commercial vehicles, motorcycles etc.

However, aggregate travel is still increasing, since population growth is adding people to the network at a rate that is faster than the decline in kilometres each individual travels on average, as shown in **Figure 9**.

Figure 9: Total domestic passenger travel in Australia
Billion passenger kilometres



Source: BITRE (2014)

Australia's population growth slowed to 1.4 per cent in 2014 - double the average of other countries in the OECD but down from 1.7 per cent over the previous decade.¹⁰

This aggregate growth means that congestion is substantial in some areas. Infrastructure Australia estimates that the cost of delays on roads in the six biggest capital cities was \$13.7 billion in 2011, and would rise to \$53.3 billion in 2031 if governments took no action in that time.¹¹ The extent of congestion is highly variable: traffic volumes have been much lower than expected on

many tollways, for example. Yet volumes are increasing on freeways; and traffic speed is decreasing in the inner city in Sydney and Melbourne. Despite this, overall road traffic is not increasing in Sydney and Melbourne¹². Given the complexity of traffic flow, it is important that decisions on transport infrastructure projects are supported by independent rigorous analysis.

The volume of domestic freight has continued to increase, though it flattened on a per capita basis around the time of the Global Financial Crisis. The increase has mostly come from rail (see **Figure 10**) – primarily bulk rail and in Western Australia.

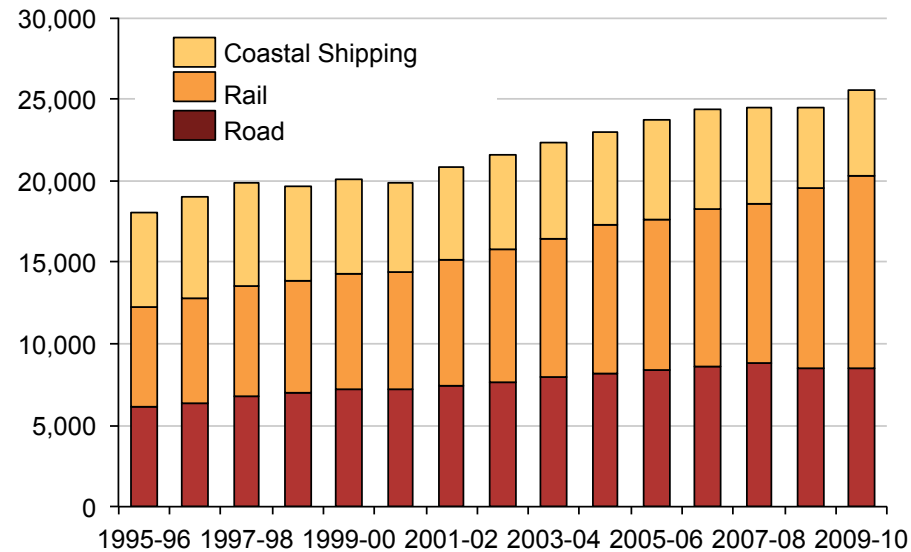
¹⁰ ABS (2015b)

¹¹ Infrastructure Australia (2015)

¹² Loader (2012)

Figure 10: Total domestic freight, all modes

Tonne kilometres per capita



Source: BITRE (2014) ABS (2014b) ABS (2015b)

The uncertain outlook for population growth coupled with decreasing per capita land travel make future demands for major new transport infrastructure hard to predict. Other important changes affecting demand are the economic shift toward the less infrastructure-intensive services sector; the fact that productivity in the construction sector has contributed to a reduction in the real cost of new infrastructure; and the greater use of pricing to guide infrastructure choices.¹³

¹³ Coombs and Roberts (2007)

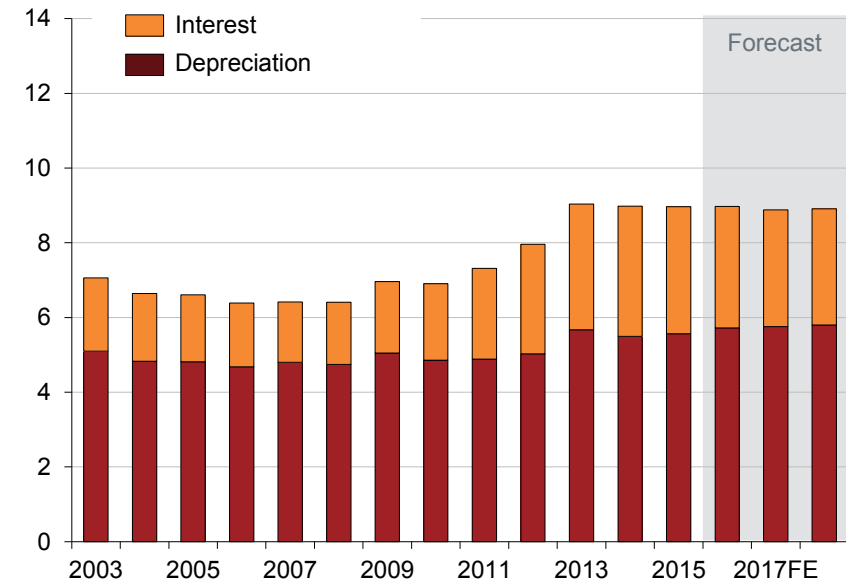
5 Capacity for the budget to absorb debt to fund infrastructure

With interest rates at all-time lows, there is an argument that if governments are ever to borrow again for productive infrastructure, then now is the time. Yet the argument in no way negates the need for infrastructure to be genuinely valuable to the economy and community, and to be more so than other ways the same money could otherwise be spent.

The need for responsible spending is acute when governments face significant repayments of money already borrowed for infrastructure. These repayments take the form of interest and depreciation expenses in recurrent budget balances. Unlike many other expenditures, depreciation charges cannot be reduced through a change in government policy or priorities. They are locked in for the life of the asset. Interest costs are locked in until debt is repaid, and may rise.

Over the last seven years, interest and depreciation costs as a percentage of state revenue increased from about six to nine per cent in 2013-14, and are estimated to remain close to nine per cent over the forward estimates period, as **Figure 11** shows. Interest expenses have increased faster than depreciation. The increase is equivalent to states spending about half a percentage point of GDP more to cover the infrastructure spending of previous years. Interest repayments have increased significantly despite extremely low interest rates.

Figure 11: State and territory depreciation and interest costs as a percentage of revenue
% of revenue

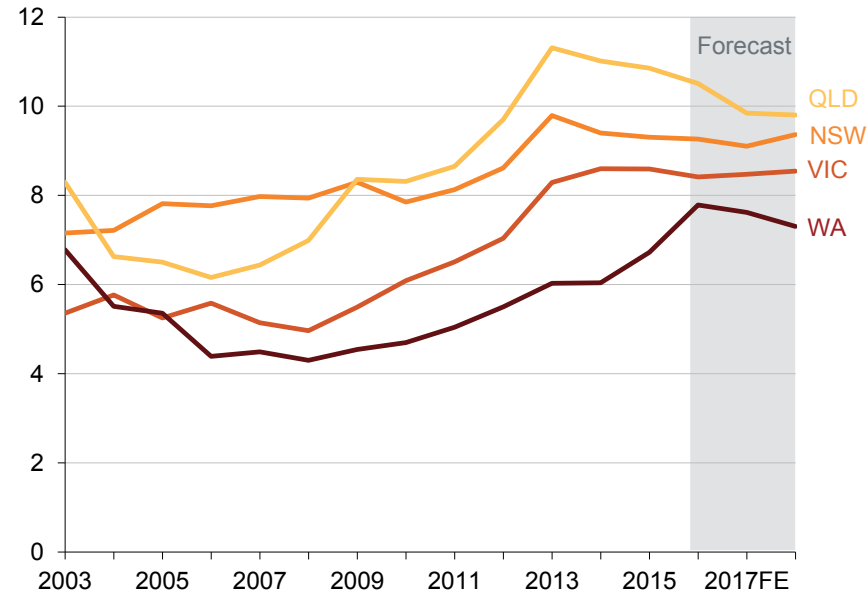


Source: ABS (2014a). State and Territory budget papers (2014-5), published in Grattan (2014)

Among the larger states, Queensland and New South Wales have higher interest and depreciation expenses as a proportion of revenue (see **Figure 12**). This is not surprising: **Figure 4** shows that these states have increased transport infrastructure spending the most.

Figure 12: Interest and depreciation costs as a percentage of revenue, by state

% of revenue



Source: ABS(2014a), State and Territory Budget Papers (2014-15)

More important than borrowing cheaply or boosting aggregate demand in the face of weak business investment, government must ensure that public money is only spent on infrastructure where it can reasonably demonstrate the value of the project to the community.

6 Conclusion

Australia's high level of investment in infrastructure over the past decade has not been accompanied by a significant productivity uplift. To get a better return from infrastructure spending, governments should focus on selecting the right projects, and on making the business cases and their underlying assumptions more transparent. Governments can also get a better return through use of new technologies to get more value out of existing infrastructure; through minor augmentation and relief of pinch points; and through more systematic maintenance.

While government budgets are constrained, in part by prior borrowings, there is a genuine opportunity for high-return infrastructure investment to be funded by borrowing at exceptionally low interest rates. The challenge is to ensure that any such borrowing is identified, selected and managed wisely and transparently, to the benefit of the economy and community.

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