THE FREE RIDE’S OVER

The urgent need to revaluate Australia’s approach to public transport infrastructure funding

SUBMISSION PAPER
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The overview

Tipping point has become a fashionable term to use in relation to just about any public policy issue. Yet in the case of public transport infrastructure, Australia has genuinely reached such a point, and our response to it will be felt for generations.

The reason we’ve arrived at a tipping point in this particular point in time, stems from a shift in policy that started in the mid-1980s.

New research commissioned by the Rail, Tram and Bus Union (RTBU) and undertaken by the National Institute of Economic and Industry Research (NIEIR) reveals how this has happened.

While a generation of Australian leaders in the post-war years invested heavily in public transport, leading to profound productivity benefits, that investment began to shrink significantly in the 80s and never rebounded. But because the benefits of transport infrastructure builds are long-lived, this pre-80s government investment provided the platform for lifting productivity growth right up until to the late 1990s. We have now seen this fall away.

As a result, today, Australia finds itself at a productivity tipping point, because we have ‘sweated’ the productivity benefits of previous government investment in public transport to the limit.

The reason the shift in government funding of public transport infrastructure occurred during the 80s is due to a change in economic perspective. Public transport infrastructure spending was now viewed as a ‘cost,’ rather than as an ‘investment.’ An emphasis on budget surpluses and lean spending with an eye to the short-term electoral cycle, overruled the need to invest for long-term returns.

This ideological view is now out of step with the times.

“A developed country is not a place where the poor have cars. It’s where the rich use public transportation.”

Enrique Peñalosa Former Mayor of Bogota
Demand for public transport is resurging in response to population growth, and the preferences of commuters who have identified the convenience and utility of public transport compared to private motor vehicles. The ability for commuters to be productive on their smartphones, tablets and laptops while travelling is accelerating this change.

Now is the point in time when Australian governments must decide. Will we allow our national productivity to slip further along its current trajectory due to substandard public transport infrastructure investment? Or will we fundamentally shift our approach to suit the new times?

‘In the immediate post-war decades, total transport investment stood at 70% of all non-primary investment. By the 1980’s this had fallen to 30%. Today it is less than 10%’

Australia’s modern history of public transport infrastructure investment

Although it’s hard to fathom today, in the 1960s, 60 per cent of people living in Australia’s capital cities used public transport – mainly rail – to get to and from work.

By the 1980s this figure had fallen to 30 per cent. Today it is less than ten per cent.

Although it is tempting to assign this alarming drop to cultural change, the data shows it is actually closely aligned with transport investment by government.

In the immediate post-war decades, total transport investment stood at 70 per cent of all non-primary investment. By the 1980s this had fallen to 30 per cent and today it is less than ten per cent. Of course, an increasing chunk of even this investment is in roads, so the decline in public transport infrastructure funding is actually much steeper.

The irony is that while Australia has never been more prosperous, our ambition for and investment in public transport infrastructure lags significantly behind where it was in the post-war era.
Why does public transport infrastructure matter?

If Australia is to succeed in the Asian century there is only one means of doing so: productivity growth. And one of the surest and most reliable drivers of productivity is public transport infrastructure.

The role that government investment in public transport has played in Australia’s modern prosperity has been underestimated and relatively unacknowledged.

Globally, transport infrastructure is recognised as a core driver of long-run productivity growth in all modern economies and NIEIR research shows Australia’s post-war prosperity has been based on significant past government investment in public transport.

The NIEIR research indicates that the ‘transport infrastructure multiplier’ is key to this. Because of its elaborately transformed nature, public transport investment is more effective than other forms of government investment in its initial stimulatory effects. Investing in public transport is very effective in generating economic growth in two important respects discussed further below.

Value-creating strategies, such as investing in public transport, are far more effective in lifting labour productivity (output per hour worked) and national income than the alternative that is often proposed: cutting workers’ entitlements in a race to the bottom of the global labour market.

Australia will never be able to compete on labour costs alone but, because of a stronger productivity performance based on an educated labour force, capital investment and technical progress is much more competitive in achieving higher standards of living.

Public transport is an essential input to a vast range of activities throughout the economy. Passengers utilising public transport are able to participate in the economy more effectively, while reducing social, environmental and economic costs associated with overreliance on the private motor vehicle.

Labour productivity for these passengers/workers increases accordingly. Other industries are able to benefit from this enhanced productivity, generating higher profits and providing scope for investing in additional workers and capital.

Therefore, improving linkages between people and their workplaces through enhanced public transport facilitates economic activity and higher productivity growth.

At the same time, road-related costs are reduced. These costs include social and health related costs linked to road accident trauma, environmental costs linked to rising carbon emissions and economic costs associated with travel delays and congestion.
Shifting gears: from ‘cost’ to ‘investment’

Much like Bob Hawke and Paul Keating read the historic winds and responded proactively by reorienting Australia’s economy, this generation of leaders has a responsibility to change our current conventional approach to ensure that the productivity – and therefore prosperity – of future generations is not compromised.

Australia has coasted on past public transport investment and this approach has served us well until the turn of the millennium. We have now reached a point, however, where we cannot continue to cruise.

In NSW, the recent long-term transport “master plan”, by Infrastructure NSW, is a good example of an attempt to solve our modern problem with the old way of thinking. By viewing transport infrastructure as a ‘cost’ rather than as an investment, it limits itself to a tiny and inadequate number of projects spread out over a huge timespan. Because of this, the headline item, a widening of Parramatta Road, will simply buy a little extra time for a transport infrastructure approach that is in need of fundamental reform.

Further “sweating” of our existing infrastructure has reached the end of the line. Fiddling at the edges will not keep pace with our productivity challenges, let alone deliver meaningful improvement.

As identified by Infrastructure Partnerships Australia in their 2007-08 Pre-Budget Submission:

*Infrastructure, by its nature, is bulky with long lead times for planning and construction, meaning timely investment is critical. Transport corridors, water systems, ports and energy networks demand a strategic and forward looking approach. Infrastructure bottlenecks indicate excessive demands. By the time a bottleneck forms, it can be too late to respond effectively to recapture lost opportunities.*

*To avoid this, Australia must address future infrastructure requirements now. Australian governments must seize the opportunity and invest in infrastructure with confidence and foresight, to equip Australia with the infrastructure it needs to underpin our economic growth and high living standards.*

The RTBU has no doubt that the case for significant reform can be made successfully to the public. Indeed, the government that seizes the prerogative first is likely to be richly rewarded by the electorate and history. Mobile digital technology has changed the game for public transport making it a more appealing proposition than private cars for most young people – provided it is efficient, comfortable and affordable.
Just as companies and individuals are not scared to enter into debt in order to fund sound investments, nor should governments be so long as the investment decision is a sound one and the debt servicing is sustainable. This is a significant policy and cultural shift from the 1980s, but it is one Australia needs to make to prepare for the rest of the 21st century.

An historic opportunity as a consequence of rising national income flowing from the commodities boom is to enable nation building investment including in public transport. This type of investment “locks-in” the one-off gains from the exploitation of non-renewable resources in the national interest.

Strategic investment in public transport should be one of the highest priorities for government because it has a powerful knock-on benefit to the rest of the economy.

Productivity growth in the public transport sector can be improved by investing in labour and capital and driven by technical progress, including organisational arrangements and service delivery. This investment in turn, contributes to an enhanced national productivity performance discussed below.

We have therefore been asking the wrong question when it comes to investment in public transport infrastructure. It should not be how can we afford it, but is there any way we can afford not to?

This report aims to draw on NIEIR’s research to outline:

- the clear economic benefits of strategic public transport investment;
- the extent to which Australia has underinvested in public transport infrastructure since the 1980s, how this hurts us today and what we could miss out on tomorrow; and
- the new approach that is necessary to take up the opportunities and to take on the challenge today.

“On an investment of $100 million in transport infrastructure, it is estimated that the impact of significant multiplier benefits would be equivalent to around a $400-$700 million increase in GDP”.
The clear benefits of bold public transport investment

The research undertaken by NIEIR – as well as the broader body of economic literature – shows transport infrastructure is a core driver of long-run productivity growth in all economies.

Spending directed at enhancing the provision and delivery of public transport directly raises the productivity of public transport, in turn making it more accessible to users. This has important implications for longer term economic growth throughout the economy because more people are being transported more efficiently enabling greater output and profits, while social, environmental and congestion costs are reduced.

Transport – including public transport – infrastructure is therefore a key enabler of economic growth throughout the economy.

The ‘transport infrastructure multiplier’

The NIEIR report supports a significant boost in transport infrastructure investment, because it can be more than offset by the ‘transport infrastructure multiplier.’

The transport infrastructure multiplier calculates the contribution of job-related transport infrastructure spending generated in the construction, transport equipment and retail sectors.

The construction and transport equipment sectors benefit directly from the investment, while the retail sector benefits indirectly as newly employed workers start to spend more through the retail system.

How public transport infrastructure is effectively self-financing

In order to more clearly identify the benefits of investing in public transport, it is useful to consider the impacts of the transport infrastructure multiplier.

The transport infrastructure multiplier tries to capture the economy benefits of an investment in public transport. For example, on an investment of $100 million in transport infrastructure, it is estimated that the impact of significant multiplier benefits would be equivalent to around a $400-$700 million increase in GDP.

That is, once all the direct and related benefits of more productive public transport to the economy are taken into account, there is a return of around four to seven times per annum, on the initial investment in public transport.

To explain how this works, it is important to recognise that the investment immediately improves the productivity of public transport with knock-on benefits for a range of other industries, in turn, generating additional jobs. These industries either serve or are serviced by the public transport sector.

The benefits of investment in public transport are maximised when local procurement opportunities and capabilities are fully utilised.
For example, increased investment in public transport can assist many domestic industries supplying goods and services, which form part of the manufacturing supply chain. These include steel, aluminium, cement, plastics and glass and a range of related services such as design, engineering and project management. And by generating higher incomes it also boosts economic activity throughout the economy and lifts revenues to government.

In addition to the immediate benefits, there is positive long-term benefit as well. It serves to raise output in the economy as cheaper, sustainable and more efficient travel is made available, in turn serving to lift productivity across the economy as increased patronage and reduced travel time and cost result in stronger economic growth.
New transport infrastructure allows more efficient access to the logistic supply chain and makes previously unavailable modes of transport available – reducing direct costs and increasing the quality of transport services. This not only provides direct benefits to consumers, but increases the competitiveness of businesses, enabling them to secure new markets and further increase production, employment, exports and real incomes.

Over the longer term, changes to transport infrastructure will enable businesses to change the scale and scope of their production facilities which will further lower the unit costs of production.

In terms of the labour market, new transport infrastructure enables employees to reach a wider range of employment opportunities while giving employers greater scope to select optimum labour inputs – such as the right combination of skills, experience and training to maximise productivity.

Enhanced public transport serves to improve the productivity of professional occupations in particular. This is important because recent changes in labour force composition show professional occupations is where higher relative wage rates are being set – indicative of higher productivity.

Investment in public transport is therefore a key contributor to achieving stronger national productivity growth, which is essential to achieving higher future economic growth. Costs associated with addressing an increased reliance on motor vehicles are minimised and additional revenues accrue to government as a consequence of the lift in economic activity and income, and reduction in welfare payments.

Indeed, it can be demonstrated that for every $100 million governments invest in public transport assets (rail, tram and bus), the return on the investment from increased revenues and reduced expenditure - as well as other direct and indirect benefits - exceeds the cost of the investment by almost $1 billion.

Therefore, the transport infrastructure multiplier means that the expenditure is self-financing in that the initial debt incurred to finance the expenditure is more than serviced and paid off by the positive stimulus transport infrastructure expenditure gives to productivity.

Around half of the value of the investment from the initial construction stage is returned to government in the first year from higher tax receipts and lower welfare payments. That is a significant return within the first year of the original investment, which can be used to fund other projects in addition to paying down debt.

According to the NIEIR report:

**Even on the most conservative of assumptions regarding the size of the multiplier and the productivity-enhancing impact of transport infrastructure investment, the long-run change in the net debt to GDP ratio of loan-financed government investment in transport infrastructure would, at worst, be zero and would not require flow-on contraction in fiscal policy to service and amortise the debt. Transport infrastructure investment is therefore self-financing.**

**In all probability, however, transport infrastructure investment would lead to a reduction in the public sector debt to GDP ratio and would strengthen the fiscal position of the Australian economy. These benefits are most likely to accrue if the investment is re-balanced from the present emphasis on roads towards public transport.**
In short, public transport infrastructure expenditure is both a strong fiscal stabilisation instrument and a strong driver of Australian growth via productivity enhancement. The latter point means that the initial debt incurred to finance the expenditure is more than serviced by the positive stimulus transport infrastructure expenditure gives to productivity.

Factoring in the cost of carbon

The case for significantly boosted public transport infrastructure investment is overwhelming, even without taking the environment into consideration. However with carbon reduction likely to be priority indefinitely into the future, the case becomes undeniable.

Introducing carbon pricing into the benefit calculations alters the equation significantly, because of the much higher per capita greenhouse gas emissions of private vehicle use against public transport.

The NIEIR report suggests that this factor alone increases the benefits of non-road investments by at least 20 per cent compared to the average for all transport investments. Accordingly, non-road projects are likely to have a higher average benefit than road projects.

Australia’s tumble in public transport infrastructure funding: how it hurts us today and could cripple us tomorrow

“For long periods of time, small differences in rates of productivity growth compound, like interest in a bank account, and can make an enormous difference to a society's prosperity. Nothing contributes more to reduction of poverty, to increases in leisure, and to the country's ability to finance education, public health, environment and the arts.”


The trend rate of labour productivity growth in Australia has been falling in recent decades. The NIEIR research indicates that a significant part of this decline is the culmination of the dramatic fall in government spending on transport infrastructure since 1984.

Drawing on the available data, the NIEIR research finds that the under-provision of transport infrastructure in Australia from 1984 to 2011 has reduced Australian labour productivity growth by between 0.2 and 0.5 percentage points per annum.

Since the mid-1960s labour productivity has grown at an annual average rate of 2.2 per cent, but has slowed in recent years from the 1990s when average productivity growth recorded 3.3 per cent per annum.
Reflecting the apparent weakness in labour productivity growth in recent years, Australia’s future long term average productivity growth rate was revised down in the 2010 Intergenerational Report to 1.6 per cent from 1.75 per cent estimated in the 2007 Report.

It has been estimated by NIEIR that between 1984 and 2011 there was under investment valued at $250 billion in transport infrastructure based on 1984 spending levels as a proportion of total government infrastructure spending. The lack of capital investment in addition to insufficient technical progress has reduced the growth rate of labour productivity overall.

In other words, had transport investment in recent years been maintained at 1984 levels, Australia would have added to its productivity growth performance on average by up to 0.5 percentage points per annum. Therefore, labour productivity growth would have been closer to 1 per cent per annum in recent years and long run average productivity growth would be pushing above 2 per cent per annum.

Overall, this has resulted in the loss of short term stimulatory benefits and longer term productivity growth and lost national income as noted above.
Because the productivity benefits of transport infrastructure investment have such longevity, past investment by government has provided the platform for lifting incomes as measured by productivity, but the drop off since the 1980s has been at a substantial cost to the nation.

Governments have been too prepared to “sweat” past investment in transport infrastructure assets – including their privatisation – without using these revenues to fund further expansion in transport infrastructure to cater for growing demand in the economy for these services.

This trend unfortunately continues today.

For example, the former chairman of Infrastructure NSW, Nick Greiner, has said government should focus on eking even more out of the existing network. “The general focus of the NSW transport bureaucracy over a very long time has been about building stuff. No matter where you come out you cannot believe that the existing thing is run anywhere near capacity.”

One of the effects of this post-80s approach, which views public transport as a cost rather than as a productive investment, is that Australia is now the most intensive user of road freight in the world.

Deloitte Access Economics in its ‘The True Value of Rail’ report found: “Australia... has the least energy efficient road passenger transport among members of the International Energy Association... These trends cannot continue if our freight systems are to be managed efficiently and our passenger networks are not to be over-burdened by congestion as populations grow.”

The cost of not funding public transport infrastructure

In 2011, NIEIR estimates that NSW “lost” around $18 billion in additional income, Victoria almost $20 billion and Australia around $48 billion as a result of lost productivity stemming from a failure to maintain the 1984 relativities on investment in public transport infrastructure.

The declines in investment in transport infrastructure as a proportion of investment in non-primary business capital are significant as can be seen from the table below between 1984 and 2011:

**Figure 3: Australia’s underinvestment in transport infrastructure**

Source: NIER data, 2010 prices
How Australia’s debt has shifted

Australian governments today are incurring far less public transport infrastructure investment debt than Australian governments of previous decades.

The NIEIR report finds, however, that this debt does not seem to have disappeared – but appears rather to have shifted.

Where once the government bore debt in order to fund productivity-enhancing public transport infrastructure builds – that same quantum of debt seems to have been shifted to the individual consumer.

In fact, had half the $500-$700 billion in debt racked up by households over the period been devoted to investment in transport infrastructure, the NIEIR report calculates the Australian economy today would be half a trillion dollars bigger.

This is not to say that debt at an individual consumption level is a bad thing – but if we want that consumption to remain strong, we actually need to invest in productive public infrastructure.

However the private finance sector today (with the notable exception of the superannuation sector) sees very little reason to invest in infrastructure. That is because these investments yield lower returns than consumer debt.

Most of the returns from public transport investment come in terms of improved productivity to other businesses and increased real income for households – returns which can be harvested by governments through taxation, but which are not available to financiers.

That is not to say that government cannot be innovative in the way it funds new transport infrastructure projects. We need to both acknowledge the value of further investment in transport infrastructure by government through new borrowings and at the same time also recognise a range of ways of facilitating greater levels of investment by the private sector, including the superannuation industry in partnership with government.
Taking a new approach: the potential for changing the script today

Great Australian governments have one thing in common: they anticipated the future and shifted traditional, entrenched approaches in order to prepare for that future.

The Hawke/Keating Government is today rightly lauded for successfully reforming the nation’s economy in the 1980s and early 90s and thereby lifting productivity. Yet the platform for this success had been laid in the far-sighted infrastructure builds of previous generations.

Australian governments today have a responsibility to build a new generation of transport infrastructure for the future.

A business-as-usual approach will simply not suffice in this decade, because household debt has maxed out and will not offer good economic return. The tide has turned.

The potential for popular support

The good news is that unlike the unpopular, yet vital, economic reforms of the 1980s – significantly increased government investment in public transport infrastructure would likely be a popular win for government even in the short-term.

Widespread support for increased transport investment already exists, even without having been loudly championed.

For each of the following issues, do you think the Government does too much, too little or just about the right amount:

<table>
<thead>
<tr>
<th>Issue</th>
<th>Too much</th>
<th>Too little</th>
<th>About right</th>
<th>Don’t know</th>
</tr>
</thead>
<tbody>
<tr>
<td>Providing quality health care services</td>
<td>2%</td>
<td>74%</td>
<td>19%</td>
<td>5%</td>
</tr>
<tr>
<td>Protecting citizens from industrial and other kinds of pollution.</td>
<td>10%</td>
<td>43%</td>
<td>36%</td>
<td>11%</td>
</tr>
<tr>
<td>Making sure the banks and other large financial institutions operate honestly and treat their clients fairly</td>
<td>3%</td>
<td>62%</td>
<td>28%</td>
<td>6%</td>
</tr>
<tr>
<td>Making sure that the roads, bridges and other public transportation facilities are in good repair and safe.</td>
<td>1%</td>
<td>63%</td>
<td>30%</td>
<td>5%</td>
</tr>
<tr>
<td>Ensuring that there is adequate, affordable and accessible public transport.</td>
<td>2%</td>
<td>67%</td>
<td>25%</td>
<td>6%</td>
</tr>
<tr>
<td>Ensuring that our population is protected from crime, terrorism and other threats.</td>
<td>5%</td>
<td>47%</td>
<td>41%</td>
<td>7%</td>
</tr>
<tr>
<td>Providing a quality education system</td>
<td>2%</td>
<td>54%</td>
<td>37%</td>
<td>7%</td>
</tr>
</tbody>
</table>

Popular support: the international example

The example from overseas is powerful. While the USA is generally considered to be a polity that loves private vehicles and hates taxes, recent history indicates that even in America, popular support for increased public transport investment is huge.

In 2008, L.A. voters were asked for their verdict on Measure R – a proposition to raise a half per cent sales tax with proceeds to go directly to a dedicated funding stream for public transport infrastructure. The stream was projected to be worth $US40 billion over 30 years. Although it required a two-thirds ‘super majority’ to become law, Measure R passed comfortably.

Today a new rail line connecting L.A.’s downtown to the Westside has already opened. Light rail is being expanded and bus fares are being held down. And work is beginning on a “subway to the sea” beneath Beverly Hills. In the short time since its introduction, L.A.’s metro area population has recorded a 10.7 per cent increase in those relying on public transport to get to work. That’s before most of the key Metro projects have even been completed.

In fact, all over the US, Americans are making the call that they are happy to raise revenue for better transport. Over a dozen transport-related initiatives will go before voters this month, including a half cent to the sales tax in Orange County and a tax to increase petrol by one cent in Memphis.

The need for change

Australians want better public transport infrastructure. The economic case to build it is strong – and undeniable when environmental factors are taken into account.

The Infrastructure NSW long-term transport master plan is a good example of what is possible for Australian public transport infrastructure if we continue to use the old, post-1980s model, which views investment in public transport infrastructure as a ‘cost’ – and it is inadequate.

If we hope to genuinely boost the productivity of our cities and create a better lifestyle for future generations we need, therefore, to change the model.