

Getting the Balance Right. Balancing the Competing Needs for Funding for Roads and Public Transport Infrastructure in Australia

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1 Introduction

The history of urban development in Australia over the past 60 years since 1945 has seen a continuous and progressive increase in the amount of car travel, twenty-fold from a level of 10 billion passenger kilometres per annum in 1945 to approximately 200 billion passenger kilometres now (BTE, 1998)

In contrast the growth in passenger kilometres of travel by urban public transport has been virtually static over the same period, remaining close to 10 billion passenger kilometres per annum throughout the period from 1945-2000.

During this period, all levels of government and urban populations have been content to develop vast tracts of our cities with car based land use patterns and little or no access to convenient, fast or reliable public transport services.

The private motor vehicle has been seen as bringing the major benefit of personal freedom to the great majority of the population, and despite the environmental sustainability concerns raised throughout the 1980's and 1990's, it is only now with increasing global fuel prices that car dependence is being seen as a potential concern for the future in terms of the high personal costs for car travel that result from dispersed low density urban land use settlement patterns.

1.1 The State and Territory Budgets

The State Government and Territory Budgets are still the major guiding source in Australia for the funding of transport infrastructure for roads, public transport systems, rail freight, ports and airports.

The State Budgets also normally include a proportion Federal funding e.g. Auslink which can represent the major source of funding for projects in the major road and rail corridors.

Private sector funding for major road infrastructure projects e.g. Tollways has also been a significant contributor towards transport infrastructure funding in certain states although this source of funding is not uniformly treated in the States' Budgets.

1.2 The State and Territory Populations

The States' and their Capital Cities' Populations are listed in Table 1 and illustrated in relative terms by the charts in Figures 1A, 1B and 1C.

The degree of urbanisation of each state is an important indication of the types of transport infrastructure that are required. On average in each state, 64% of the population lives in the capital cities where the provision of urban public transport infrastructure is an important transport need.

In the states and territories with the lowest proportion of the population living in the capital cities, i.e. Queensland, Tasmania and The Northern Territory, the need for urban public transport infrastructure is lowest, but the overall need for transport infrastructure is

potentially the highest to serve the greater travel needs of a more dispersed population. The individual states have different population growth rates but the average annual population growth rate of 0.6 – 0.7% has now increased the total population of Australia from 20,091,500 in June 2004 to 20,566,900 in June 2006. (ABS Population Clock, 2006)

Table 1 Population – and Degree of Urbanisation (as of 30 June 2004)

State	Population	Capital City	% in Capital City
NSW	6,720,800	4,225,100	62.9
VIC	4,963,000	3,593,000	72.4
QLD	3,888,100	1,777,700	45.7
WA	1,978,100	1,454,600	73.5
SA	1,532,700	1,123,200	73.3
TAS	482,200	202,200	41.9
ACT	324,100	324,100	100.0
NT	199,800	109,400	54.8
Total	20,091.500*	12,809.300	63.8

* NB the Total is now 20,566,900 as of 24 June 2006 (ABS Population Clock, 2006)

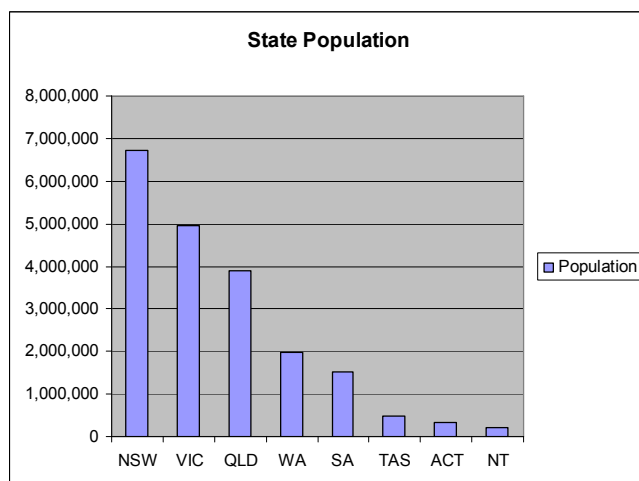


Figure 1A State Population, 2004

2 NSW past 7 years budgets since 2000/1

The Transport Infrastructure components of the annual NSW budgets are summarised in Table 2. There have been significant increases in all categories since 2001, as follows.

- 88% increase in Total Cap Ex (from \$5.284 billion to \$9.946 billion)
- 93% increase in Transport Cap Ex (from \$1.677 billion to \$3.241 billion)
- 66% increase in Roads Cap Ex (from \$0.883 billion to \$1.470 billion)
- 167% increase in PT Infrastructure Funding (from \$0.606 billion to \$1.619 billion)

These increases are well above CPI increases which have been 20% in total over the past 6 years. (ABS, 2006)

The significant new expenditures in NSW in recent years have been:

- Integrated Ticketing, \$86 million in 2006/7

- Rail Corridor Acquisition, \$129 million in 2006/7

In NSW the Public Transport Infrastructure budget is now equal to 110% of the roads infrastructure budget.

- Also growing strongly in NSW since 2000/1 is the ports/rail freight budget (up from \$49 million to \$140 million per annum)
- The NSW roads infrastructure budget is also still growing, however the growth is now primarily occurring in the Pacific Highway, outer metropolitan and rural area budgets. The private financing of Tollways has effectively kept the major road infrastructure construction program going in Sydney since 2000/1, namely.

M7 Westlink = over \$1.5 billion
 Lane Cove Tunnel = over \$1.1 billion
 Cross City Tunnel = over \$800 million

These three projects total over \$3.4 billion in 6 years (approximately \$560 million per year on average).

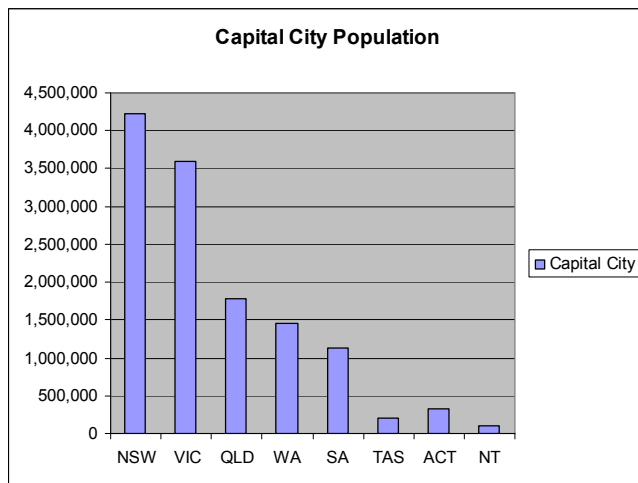


Figure 1B Capital City Population, 2004

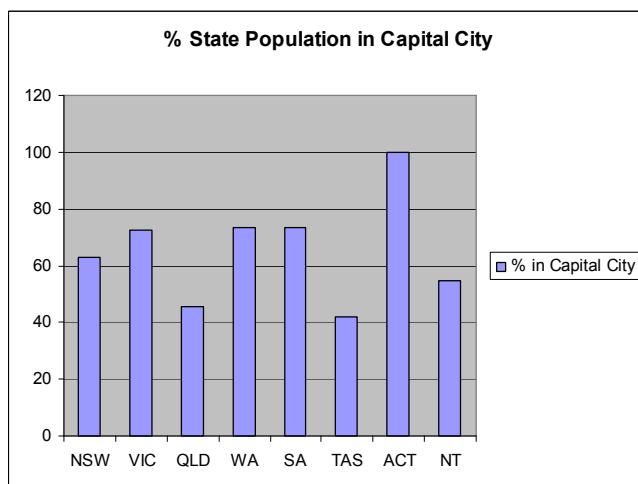


Figure 1C % State Population in Capital City, 2004

Table 2 Summary of NSW Transport Capital Works Budgets (Past 7 Years)

NSW Budget	2006/7	2005/6	2004/5	2003/4	2002/3	2001/2	2000/1
Total Cap Ex \$billion	9.946	8.248	7.463	7.138	6.350	5.581	5.284
Total Transport Cap Ex \$billion*	3.241	2.488	2.475	2.397	2.136	1.895*	1.677*
Transport (%)	(32.6%)	(30.2%)	(33.2%)	(33.6%)	(33.6%)	(34%)	(31.8%)
Total Main Roads	1.470	1.061	1.132	1.077	1.101	.908	.883
Pacific Highway	(.356)	(.221)	(.197)	(.121)	(.142)	(.196)	(.179)
Sydney Metro Area	(.256)	(.334)	(.310)	(.359)	(.368)	(.307)	(.356)
Outer Metro Areas	(.179)	(.134)	(.138)	(.069)	(.076)	(.072)	(.045)
Rural Areas	(.268)	(.164)	(.188)	(.106)	(.084)	(.048)	(.075)
Minor Works/Safety Projects	(.411)	(.208)	(.299)	(.419)	(.432)	(.284)	(.227)
Total Public Transport	1.619	1.332	1.229	1.212	.970	.756	.606
RTA Transitways	.125	.130	.080	.132	.101	.057	.033
Planning/MOT/DOT	.129	.026	-	.025	.030	.032	.049
RailCorp/SRA	.830	.587	.554	.337	.377	.336	.215
STA (Buses)	.089	.084	.090	.064	.042	.054	.066
Integrated Ticketing	.086	.065	.005	.001	.002	-	-
RIC	.033	-	-	.227	.183	.144	.154
TIDC/PRL*	.327	.434	.495*	.420*	.222*	.119*	.075*
Sydney Ferries	.011	.006	.005	.006	.013	.014	.014
Total Ports/Freight	.140	.096	.106	.107	.071	.072	.049
Maritime Authorities (Waterways)	.017	.016	.016	.015	.026	.011	.024
Ministry of Transport (Rail/Freight)	.011	.011	.011	.015	.013	.019	.018
Ports	.112	.069	.079	.077	.032	.042	.031
Sydney/Newcastle/Port Kembla							
Total Agencies*	3.240	2.489	2.467	2.396	2.142	1.736*	1.562*

Note* Prior to 2002/3 Additional Expenditure from the Competitive Government Sector Agencies e.g. Freight Corp and Rail Services Australia was included in the overall Transport total but was not included in the Published Agency totals

3 Victoria

The Victoria total capital works budget of \$2.366 billion and \$806 million for transport works for 2005/6 which is summarised in Table 3 (VIC Govt, 2005) is comparatively much smaller than that of NSW or QLD in relation to the size of the state's population.

However some transport infrastructure and other infrastructure items with a total value of \$566 million are excluded e.g. The Port of Melbourne Corporation (\$45 million) Victoria Rail Track (\$88 million) and the V/Line Passenger Corporation (\$20 million) on the basis that these are "Public Non-Financial Corporations". Also, under the Partnerships Victoria program, fourteen major capital investment projects that have commenced since June 2000, are ongoing with a combined total value of \$4 billion. These projects are not included in the State Budget and include two major transport infrastructure projects, the Spencer Street Station redevelopment and the Eastlink Project (formerly the Mitcham to Frankston Freeway).

However, even after including these projects the total Victoria Infrastructure Capital Works Budget for 2005/6 would still probably be significantly lower than other comparable states in both actual and per capital terms. Nevertheless the balance between the state's Main Roads

and Public Transport Infrastructure budgets is relatively even with the Public Transport Infrastructure budget being equal to 68% of the state's roads infrastructure budget.

Table 3 Summary of Victoria Transport Capital Works Budget

VIC Budget	2005/6*
Total Cap Ex	2.366 billion
Total Transport Cap Ex	.806 billion
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Main Roads	.455
Metropolitan Area	.050
Outer Metro Area	.075
Rural Areas	.112
Road Safety Projects	.063
Auslink Funded	.154
Public Transport	.312
(Passenger Rail)	(.239)
(Busways)	(.009)
(Corridors)	(.031)
(Other Public Facilities)	(.033)
Ports/Freight Rail	.039
(Station Pier)	(.015)
(Freight Rail Projects)	(.024)

Note* 2006/7 Budget, not yet available
Source (VIC Govt, 2005)

4 Queensland

The Queensland Transport Infrastructure Budget is summarised in Table 4 (QLD Govt, 2006). The budget is the largest of any Australian State both in Actual Terms and in per Capita Terms. The Queensland budget allocates a significant expenditure to ports and rail freight projects (\$1.368 billion) which is far higher than the expenditure of any other state. NSW at \$1.4 billion has the next highest ports and rail freight budget. This differential more than accounts for the difference between the Queensland and NSW Transport Infrastructure budgets which was approximately \$800 million in the year 2006/7.

The Queensland main roads infrastructure budget also includes works on the Gateway Motorway and Logan Motorway projects which probably should not be included in the State Capital Works Budget when comparisons are being made with the other states.

The Queensland Rail infrastructure budget is over \$800 million and is a reflection of the position of Queensland Rail as the last major rail freight operator in Australia that is still in government ownership. Similarly some of the major port authority investments by the Queensland Government are investments that in other states would not generally be included in the State Budget.

The overall urban Public Transport Infrastructure investment by both Queensland Transport and Queensland Rail includes significant Busway Corridor investment, more than any other state in Australia, but also significant investment in urban passenger rail as part of the City Train and Met Trip Projects. The Queensland Government, through Queensland Transport is

investing significantly in its integrated ticketing project although the level of investment is lower than in NSW with a total combined expenditure of \$20 million in both software development and ticketing machines.

Table 4 Summary of Queensland Transport Capital Works Budget

QLD Budget	2006/7
Total Cap Ex	10.136 billion
Total Transport Cap Ex	4.044 billion
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Main Roads	1.979
(Highways)	(.660)
(State Roads)	(.782)
(Motorways/Roadtek)	(.451)
(Local Roads)	(.070)
(Others/works)	(.016)
Queensland Transport	0.286
(Busways/Bus Priority)	(.197)
(Corridor Acquisition)	(.010)
(Rail Works)	(.015)
(Other Works)	(.031)
(Integrated Ticketing)	(.020)
(Cycleways)	(.013)
Passenger Rail	0.341
(QR Network Access Metro)	(.178)
(QR City Train/Met Trip)	(.163)
Ports/Rail Freight	1.368
(QT Maritime Works)	(.015)
(QR Network Access General)	(.167)
(QR National Trains)	(.281)
(QR General Acquisitions)	(.049)
(Brisbane Port)	(.193)
(Cairns Port and Airport)	(.130)
(Central Queensland Ports)	(.396)
(Ports Corporation of QLD)	(.113)
(Townsville/Mackay/Bundaberg)	(.024)
(Other/Not identified)	(.070)

Source (QLD Govt, 2006)

5 Western Australia

The WA Transport Infrastructure Capital Works Budget is summarised in Table 5 (WA Govt, 2006). The respective expenditures on roads and Public Transport Infrastructure are finely balanced with Public Transport Infrastructure marginally ahead.

The WA Government is also investing significantly in debt retirement this year (not included in the Capital Works Budget) with a total of \$1.3 billion being used to repay previous borrowings and the funding of the final stage of the Metro Rail Project which includes the new Southern Suburbs Railway and the connecting north-south City Rail Tunnel which crosses underneath the city centre.

The roads budget includes a high proportion of funding for major highway works and freeway extensions, primarily in the Outer Metro and Rural Areas. There is also significant capital expenditure proposed for new buses for the City of Perth and the City of

Rockingham, primarily new CNG buses. Proposed expenditure on integrated ticketing of \$7 million is also included in the 2006/7 budget.

Table 5 Summary of WA Transport Capital Works Budget

WA Budget	2006/7
Total Cap Ex	5.200 billion
Total Transport Cap Ex	1.054 billion
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Main Roads	0.475
(Major Highways)	0.205
(Other Roads)	0.160
(Minor Works/Road Safety)	0.110
Public Transport	0.491
Metro Rail Lines	(.385)
New Rail Cars	(.006)
Station Upgrades	(.025)
Integrated Ticketing	(.007)
New Buses	(.039)
Bus Stations/Bus Priority	(.006)
Other Works	(.023)
Ports	0.088
Fremantle	(.037)
Geraldton	(.025)
Dampier	(.008)
Other Ports	(.018)

Source (WA Govt, 2006)

6 South Australia

The South Australia State Capital Works Budget is summarised in Table 6 (SA Govt, 2005). Like New South Wales, Western Australia and Victoria, the public transport infrastructure budget is significant and is almost equivalent in size to the roads budget.

However the overall size of both the State Total Capital Works Budget and the State Transport Capital Works Budget in South Australia is significantly lower than all of the other major states except Victoria.

The major public transport infrastructure expenditure in South Australia is related to the extensions and renewal of the Adelaide to Glenelg Light Rail line (Tram System) which was the oldest in Australia still operating in largely its original form.

Table 6 Summary of SA Total Transport Capital Works

SA Budget	2005/6
Total Cap Ex	1.040 billion
Total Transport Cap Ex	0.252 billion
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Main Roads	.095
(Roads, Bridges & Tunnels)	(.064)
(Road Safety Works)	(.015)
(Other Works)	(.016)
Public Transport	.081
(Light Rail)	(.035)
(Buses)	(.021)
(Interchanges)	(.006)
(Trains Adelaide)	(.019)
Ports/Rail Freight	.076
(Eyre Peninsula)	.003
(Port River Expressway)	.070
Outer Harbour	.003

Source (SA Govt, 2005)

7 Tasmania, ACT and Northern Territory

The Transport Infrastructure Budgets for the three smaller states and territories are summarised in Table 7, Table 8 and Table 9. These budgets are all considerably lower than those of the other five states as a result of the significantly lower residential populations.

These budgets are also heavily dominated by roads infrastructure funding with the only exception being relative small amounts of Public Transport Infrastructure funding (bus replacement) in the ACT and Ports Infrastructure funding in the Northern Territory (Darwin).

On a per capita basis the roads infrastructure expenditures are broadly in line with the other states but the overall transport infrastructure spending is significantly lower as a result of the absence of any major public transport infrastructure and port infrastructure spending.

Table 7 Summary of Tasmania Transport Capital Works Budget

Tas Budget	2006/7
Total Cap Ex	0.298 billion
Total Transport Cap Ex	0.122 billion
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Main Roads	0.122
Major Highways	.044
Other Roads	.078
Public Transport	.000
(No Passenger Rail Network)	
Ports/Rail Freight	.000
(Not in State Budget)	

Source (TAS Govt, 2006)

Table 8 Summary of ACT Transport Capital Works Budget

ACT Budget	2006/7
Total Cap Ex	.337 billion
Total Transport Cap Ex	.063 billion
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Roads	.059
(Gungahlin Drive)	(.052)
(Other Roads/Bridges)	(.007)
Public Transport	.004
(Bus Replacement)	(.003)
(Sustainable Transport Infrastructure)	(.001)
Ports/Airports	.000

Source (ACT Govt, 2006)

Table 9 Summary of Northern Territory Transport Capital Works Budget

NT Budget	2006/7
Total Cap Ex	.303 billion
Total Transport Cap Ex	.085 billion
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Roads	.078
Public Transport	.000
Ports/Airports	.007

Source (NT Govt, 2006)

In Tasmania, the freight rail network is leased to Pacific National with an annual lease payment of \$2 million. The Port of Hobart Corporation and the other Port Corporation expenditures are not included in the published state budget details. A major issue facing the State Government is the need to continue making an annual subsidy of approximately \$20 million (\$10 million for operating losses and \$10 million for capital repayment) to keep the Sydney-Devonport Ferry Service operational.

In Canberra, the ACT Government has recently been developing proposals to construct a dedicated off road busway network connecting the major employment centres, commencing with the Belconnen to Civic Busway as the first stage. The ACT Government 2006/7 budget indicates no commitment is being made yet to this project.

In accordance with the benchmarks now being set by the other major states, as discussed in Section 8 below, a significant program of public transport infrastructure investment is arguably warranted in the ACT of a similar order of magnitude to the roads budget, i.e. \$60 million per annum.

8 Summary and Comparisons between the States

The Total Infrastructure and Transport Infrastructure budget comparisons between the states and territories of Australia are presented in Table 10 and Figures 2A, 2B and 2C.

In Total Infrastructure Budget Terms (Figure 2A) Queensland's spending is marginally ahead of NSW but both states are fairly close (within 2%) in real terms at \$9.9 billion and \$10.1 billion.

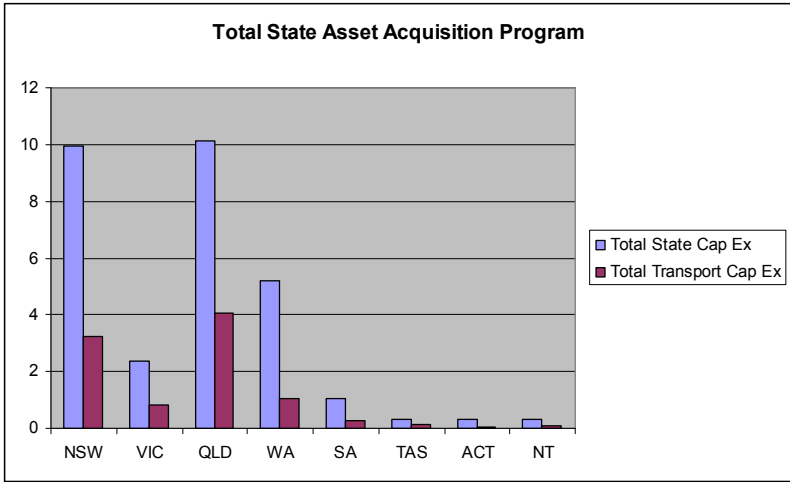


Figure 2A Total State Asset Acquisition Program \$ billion

In per capita spending terms (Figure 2B) Queensland and WA are ranked virtually equal first with total per capita spending on all infrastructure of \$2,500 to \$2,600 each year per resident. These high totals are clearly a reflection of both the high economic growth and the high population growth in these two states, in comparison to the other states in Australia.

NSW and the Northern Territory are at a second but comparatively much lower level of total infrastructure spending of \$1,400 to \$1,500 each year per resident, which is close to the national average benchmark level of \$1,440 for all the states and territories.

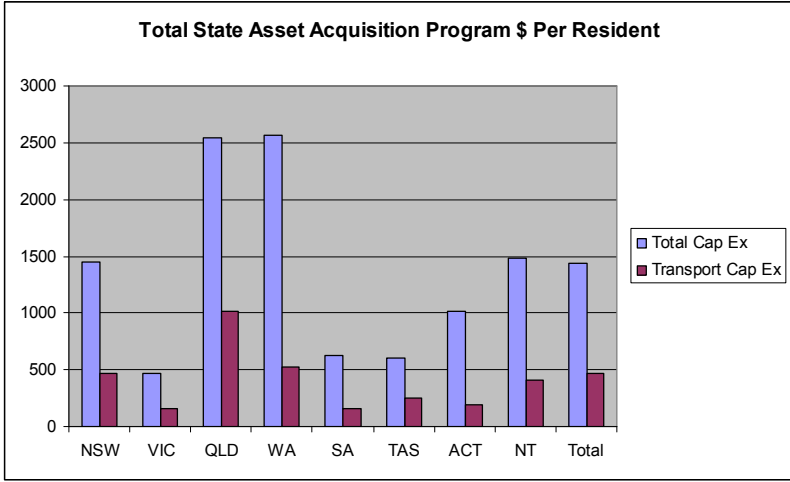


Figure 2B Total State Asset Acquisition Program \$ Per Resident

In terms of the proportion of the Total Infrastructure Budget which is allocated to Transport Projects (Figure 2C) Queensland and Tasmania are the highest spenders with 40% to 41% of the total State Capital Works budget allocated to transport projects. However, these are the two states with the lowest proportions of the population resident in the Capital Cities (45.7% and 41.9%) and are thus the most dependent on private car travel and its associated road based transport infrastructure.

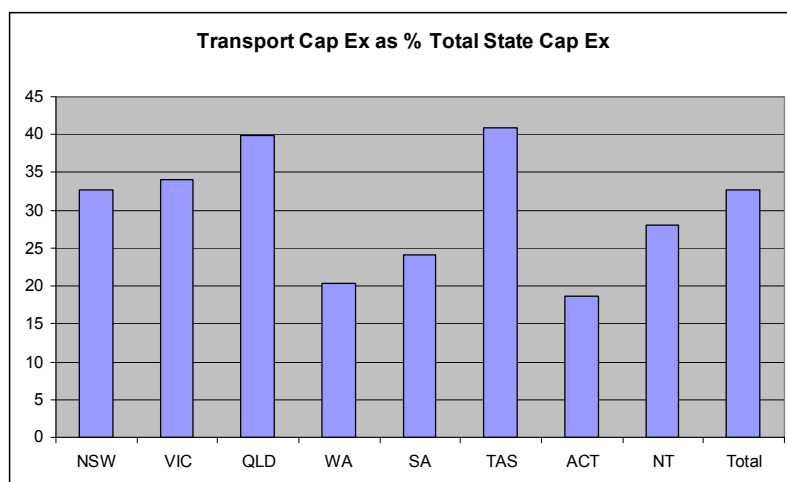


Figure 2C Transport Cap Ex as % Total State Cap Ex

The average benchmark proportion of Transport spending in the Capital works Budgets for all the states and territories is 32.6% which is exactly equal to the year 2006/7 NSW figure of 32.6%. NSW has maintained the percentage of its capital works spending which is allocated to transport projects at between 30.2% and 34.0%, over the seven budget years since 2000/1.

Transport is effectively the largest component of the Capital Works Budgets of all the states in Australia. In NSW the order of the level of investment in the different policy spending areas by in the 2006/7 State Budget is as follows:

1	Transport	32.6%
2	Electricity	23.5%
3	Housing and water	10.3%
4	Environmental Protection	7.2%
5	Health	5.8%
6	Education	5.8%
7	Public Order and Safety	4.6%
8	Recreation and Culture	2.5%
9	Others (Total)	(7.7%)

Western Australia has a relatively low proportion of Transport works in its total infrastructure budget (20.3%) but this is more the result of a comparatively high total infrastructure budget than a low transport infrastructure budget as the per capita funding level of \$520 for Transport Infrastructure is still higher than the benchmark level of \$470 and is second highest only to Queensland.

Table 10 Summary of State Total and Transport Capital Works Budgets Year 2005/6 or 2006/7

	NSW	VIC*	QLD	WA	SA*	TAS	ACT	NT	TOTAL
Total State Cap Ex \$ billion	9.946	2.366	10.136	5.200	1.040	0.298	0.337	0.303	29.626
(Per Resident)	1445	466	2546	2567	663	603	1015	1478	1440
Total Transport Cap Ex \$billion	3.241	0.806	4.044	1.054	0.252	0.122	0.063	0.085	9.667
(Per Resident)	471	159	1016	520	161	247	190	415	470
% Transport / Total State Cap Ex	32.6	34.1	39.9	20.3	24.2	40.9	18.6	28.1	32.6
Total Roads Cap Ex \$Bn	1.470	0.455	1.979	0.475	0.095	0.122	0.059	0.078	4.733
(Per Resident)	214	90	497	234	61	247	178	380	230
Total Public Transport Cap Ex	1.619	0.312	0.627	0.491	0.081	0.000	0.004	0.000	3.134
(Per Resident)	235	61	157	242	52	0	12	0	152
% Public Transport / Roads Cap Ex	110%	68%	32%	103%	85%	0%	7%	0%	66%

Source (State Budget Papers 2005/6 and 2006/7, Note* 2005/6 Budget Forecasts)

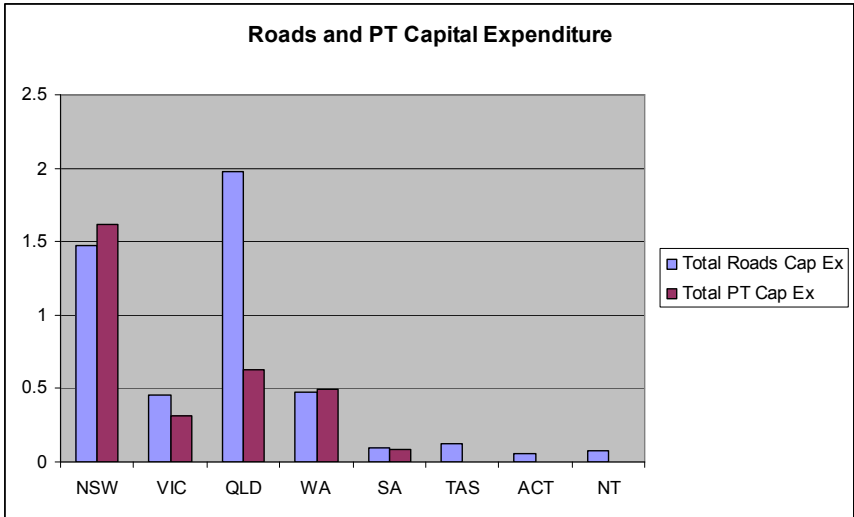


Figure 3A Capital Expenditure \$ billion

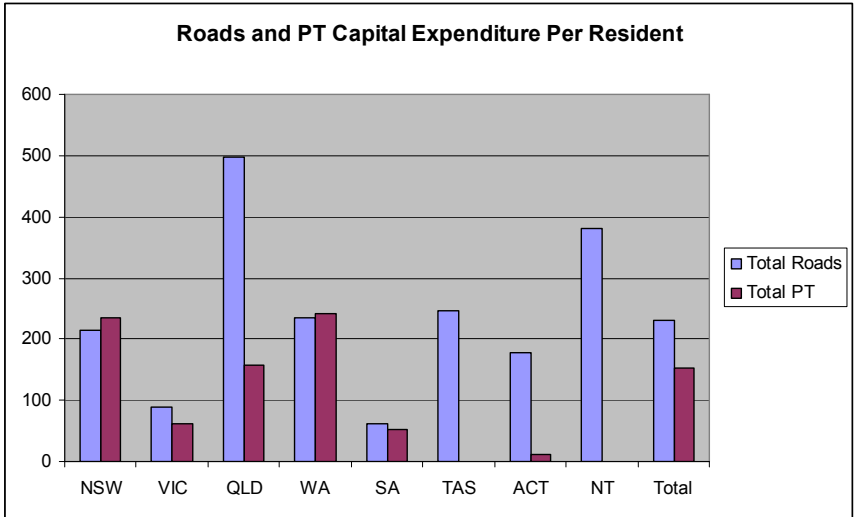


Figure 3B Capital Expenditure Per Resident

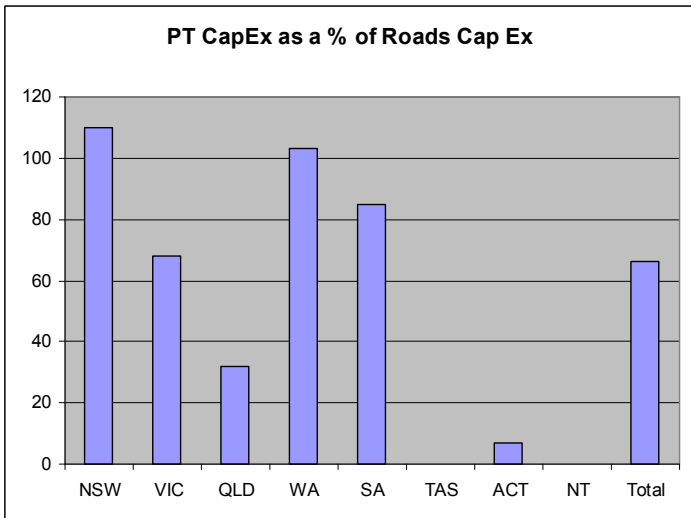


Figure 3C PT Cap Ex as a % of Roads Cap Ex

9 Conclusions

9.1 The State Government Budgets

The Australia State and Territory budgets represent a combination of recurrent funding and capital works spending for new facilities. The recurrent funding is the major proportion (80% approximately) of the overall state governments' budgets and is necessary to maintain existing facilities and services.

However, in terms of future planning, the capital works funding is the critical component as this is what determines the future nature of the government facilities and services that will be provided in each state and ultimately the future types of communities we will all be living in.

9.2 The Degree of Urbanisation

The proportion of the State Government Capital Works Budget which should be allocated to Transport Infrastructure is influenced by the degree of urbanisation of the individual States and Territories which is as follows:

ACT	=	100%, Highest degree of urbanisation
WA, SA, VIC	=	72-74%, Above Average
NSW	=	63%, Close to Average
NT	=	55%, Below Average
QLD, TAS	=	42-46%, Lowest degree of urbanisation

A high degree of urbanisation requires a comparatively high Public Transport Infrastructure Budget while a lower degree of urbanisation requires a lower Public Transport Infrastructure Budget but a higher overall transport budget as a result of the higher travel distances needed by the population to access employment, services and recreation facilities.

9.3 Total State Government Infrastructure Budgets

The per capita benchmark for the total state or territory government Capital Works spending is \$1440 per resident. In comparison to this benchmark figure the states are currently ranked as follows:

QLD, WA	=	\$2500-2600, Highest
NSW, NT	=	\$1400-1500, Close to Average
ACT	=	\$1000, Below Average
SA, TAS	=	\$600-700, Well Below Average
VIC	=	\$400-500, Lowest

This ranking is heavily influenced by the current economic conditions i.e. Queensland and Western Australia are the boom economies of Australia.

9.4 Total State Government Transport Capital Works Budgets

The per capital benchmark for the states and territories is \$470 per resident, The ranking of the States and Territories Transport Capital Works Spending per resident is as follows:

QLD	=	\$1000, Much Higher than Average
NSW, WA and NT	=	\$410-\$520, Close to Average
TAS	=	\$250, Below Average
VIC, SA and ACT	=	\$150-\$200, Well Below than Average

9.5 Comparison between Public Transport and Roads Infrastructure Funding

The relative levels of state and territory funding for urban public transport compared to roads infrastructure funding, vary significantly with the states and territories grouped as follows:

NSW,* WA*	=	100%-110%, Highest Public Transport Spending
SA	=	85%, Above Average
VIC	=	68%, Close to benchmark
QLD	=	32%, Relatively low
ACT, TAS, NT	=	0-10%, Very low

Note* These high rankings are significantly influenced by the high capital costs of retrospective transport corridor works and new underground rail.

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