

ROADS — ASSESSMENT RESULTS

- 1 This working paper describes the expenses assessment for roads and provides information on its impact on GST revenue distribution for the 2008 Update. The assessment method is discussed in detail in Volume 5 of the 2004 Review Working Papers.

DESCRIPTION OF THE CATEGORY

- 2 The Roads category comprised expenses associated with the maintenance and rehabilitation of roads and bridges that were the responsibility of the States. The category also covered State expenses on road safety, traffic management, and other transport activities (such as driver licensing, motor vehicle registration, heavy vehicle regulation and transport planning administration).
- 3 Specific Purpose Payments (SPPs) for Road Safety Black Spots (State roads component) were included in category expenses. Grants to States for national highways were also included in the category because States depreciated these assets in their financial accounts. The Commission changed the treatment of these grants for the 2008 Update, to reflect the discontinuation of separate funding of national highways with implementation of AusLink. For the assessment years prior to 2005-06, national highways expenses were assessed actual per capita. From 2005-06, these expenses were assessed together with arterial roads expenses.¹
- 4 Expenses on local roads that were the responsibility of local authorities were not included². Depreciation expenses on roads were included.
- 5 Road user charges comprised transport charges and road toll charges.

¹ Prior to the implementation of AusLink, the Commission decided that States' national highways expenses were equal to their National Highways SPP grants. The grants thus had a zero effect on the assessment. The Commission decided that the implementation of AusLink broke the link between Australian Government funding and State expenses on national highways. State expenses for national highways were combined with State arterial roads expenses and assessed using road length and road use factors. These changes were made from 2005-06, the year in which the AusLink program became fully operational.

² Specifically excluded were SPPs for: Federation Fund Projects, Financial Assistance Grants for Local Government (Local roads grants), Roads to Recovery (in unincorporated areas) and Road Safety Black Spots (local roads component).

- 6 Table 1 shows the average expenses and user charges for the last six financial years. In 2006-07, the category average expenses of \$350.47 per capita represented 5.45 per cent of the total State average expenses. In 2006-07, average user charges of \$52.06 per capita accounted for 14.85 per cent of average expenses associated with this category.

Table 1 Roads, average expenses and user charges, 2001-02 to 2006-07

| | 2001-02 | 2002-03 | 2003-04 | 2004-05 | 2005-06 | 2006-07 |
|--|---------|---------|---------|---------|---------|---------|
| Average expenses (\$pc) | 267.84 | 282.52 | 292.28 | 300.35 | 312.00 | 350.47 |
| National hwys SPP (\$pc) | 55.84 | 49.40 | 46.37 | 48.12 | 0.00 | 0.00 |
| Average expenses net of National hwys SPP (\$pc) | 212.01 | 233.12 | 245.91 | 252.23 | 312.00 | 350.47 |
| % of total State average expenses | 4.11 | 4.36 | 4.52 | 4.44 | 5.20 | 5.45 |
| Average user charges (\$pc) | 46.65 | 56.37 | 53.26 | 52.10 | 50.96 | 52.06 |
| % of average category expenses | 22.01 | 24.18 | 21.66 | 20.66 | 16.33 | 14.85 |

DEVELOPMENTS WHICH AFFECTED THE 2008 UPDATE

National highway expenses and Auslink

- 7 The introduction of the AusLink program changed the way National Highways are financed. The Australian Government's assistance for National Highways was subsumed into the AusLink program. National Highways are now jointly financed by Australian and State governments.
- 8 The Commission decided that the AusLink program broke the link between Australian Government funding and State expenses on National Highways. As a consequence, State expenses for National Highways were combined with State arterial roads and assessed using road length and road use factors based on the length and use of National Highways and State arterial roads. These changes were made from 2005-06, the year in which the AusLink program became fully operational.

Data on road length

- 9 The Commission had previously frozen rural and urban road lengths at their 2004 levels, because it was concerned about the reliability and interstate comparability of the State provided data. It established a Roads Working Party (RWP) to advise on the matter and engaged a consultant to measure the road lengths using a mapping approach. The Commission accepted the advice of the majority of the RWP members that the measured *rural* road lengths are a more reliable and comparable measure than State provided data, but that the *urban* road lengths are not. After seeking updated urban arterial road length data from States, the Commission was not convinced these data were provided on a comparable basis. The Commission adopted the measured rural road lengths, while the urban lengths remained frozen at their 2004 Review levels.

Road Use

10 Data supporting the assessment of the road use disability were updated to the latest available.

ASSESSMENT METHOD

Description of the assessment

- 11 The roads assessment for the 2008 Update was carried out using 13 components:
- the expenses for fixed costs, land rights, native title and isolation were assessed using the general method;
 - the expenses for the national highways component were assessed on an actual per capita basis for the years 2001-02 to 2004-05 and then combined with other road expenses for subsequent years (their length and use were then incorporated into the arterial roads component);
 - the arterial roads component comprised five factors which influenced State expenses on the maintenance of arterial roads:
 - dispersion and input costs — assessed using the general method;
 - road use — the impact of differences in road use (particularly by heavier vehicles) on expenses;
 - physical environment — the impact of the environment on the maintenance of roads;
 - road length — different costs associated with different lengths of roads; and
 - urban influences — the impact of road use levels on the expense of carrying out repairs to arterial roads not captured by the road use or physical environment factors (such as the extra expense involved in conducting repairs at night to avoid congestion).
 - the local roads component, covering State expenditure on local roads in unincorporated areas, as measured by differences in dispersion, input costs and local road length;
 - a bridges component, reflecting the costs of maintaining bridges and tunnels. The component was measured by differences in dispersion, input costs, physical environment factor, and bridge and tunnel area;
 - a road safety component, for assessing differences in costs of providing road safety, using differences in dispersion, input costs, road length and urban influences;
 - an other transport component that contained State roads expenditure on things other than the specific components separately identified, as measured by differences in dispersion and input costs;
 - a salinity component measuring differences in the impacts of salinity on State roads;

- an urban traffic management component reflecting differences in the provision of traffic management centres; and
- a national capital component that measured the additional expenses of the ACT as a result of its inheritance of roads from the Australian Government.

Assessment structure

12 Table 2 summarises the assessment structure for the 2008 Update.

Table 2 Roads, assessment structure for the 2008 Update, 2006-07

| Component | Component weight | | Basis of calculation |
|-------------------|------------------|------------------------|--|
| | % | | |
| Fixed costs | 0.37 | Input costs | General method with weights of 80% for wages, 2% for accommodation and 0.5% for electricity. |
| | | Administrative scale | General method. |
| National highways | 0.00 | National highways | Actual per capita (APC) assessment for years prior to 2005-06 |
| Arterial roads | 49.31 | Dispersion | General method. |
| | | Input costs | General method with weights of 60% for wages, 2% for accommodation and 0.5% for electricity. |
| | | Road Use | Based on average vehicle kilometres travelled with weights for heavy vehicles – incorporates length. |
| | | Physical environment | Based on the average temperatures, rainfall, soil and relief for regions within a State. |
| | | Road length | Based on each State’s per capita arterial road lengths. |
| | | Urban influences | Calculated by weighting urban arterial road length in each State by 2.2 (for AADT > 40 000) and 1.7 (for AADT < 40 000) and rural road lengths by 1.0. |
| Local roads | 1.47 | Dispersion | General method. |
| | | Input costs | General method with weights of 60% for wages, 2% for accommodation and 0.5% for electricity. |
| | | Local road maintenance | Based on the length of remote local roads assumed to be State funded, 1.5% of expenses net of national highways. |

Table 2 Roads, assessment structure for the 2008 Update, 2006-07, continued

| Component | Component weight % | Basis of calculation |
|--------------------------|--|--|
| Bridges | 8.74 | Dispersion General method. |
| | | Input costs General method with weights of 60% for wages, 2% for accommodation and 0.5% for electricity. |
| | | Bridge operations Based on deck area of bridges, culverts and tunnels and standard cost per square metre. |
| | Physical environment Based on the average temperatures, rainfall, soil and relief for regions within a State. | |
| Road safety | 10.59 | Dispersion General method. |
| | | Input costs General method with weights of 60% for wages, 2% for accommodation and 0.5% for electricity. |
| | | Urban influences Calculated by weighting urban arterial road length in each State by 2.2 (for AADT > 40 000) and 1.7 (for AADT < 40 000) and rural road lengths by 1.0. |
| | Road length Based on arterial road length in lane kilometres. | |
| Other transport | 27.83 | Dispersion General method. |
| | | Input costs General method with weights of 60% for wages, 2% for accommodation and 0.5% for electricity. |
| Salinity | 0.35 | Salinity Based on identified high risk road lengths and an estimated kilometre cost. |
| Urban traffic management | 1.20 | Urban traffic management Actual per capita (APC) assessment. |
| Land rights | 0.01 | Land rights General method. |
| Native title | 0.02 | Native title General method. |
| Isolation | 0.08 | Isolation General method. |
| National capital | 0.04 | National capital Estimate of additional expenses incurred by the ACT as a result of the wider roads it inherited from the Commonwealth at self-government. |

13 To determine component weights, the proportions of expenses affected by fixed costs, land rights, native title and isolation were estimated using the general method. The national capital component was based on the assessed national capital allowance of \$2.895 million for 2006-07 for the ACT.

14 Component weights for the national highways, arterial roads, local roads, bridges, road safety, other transport, salinity and urban traffic management components reflected the contribution of the relevant expenses to the category. Information used to calculate these weights was derived from National Transport Commission (NTC) data published in their annual report.

15 Road user charges were assessed equal per capita.

Calculating the category factor

16 Table 3 summarises the components, component weights and factors assessed for this category for the last year of the 2008 Update. It shows the calculation of the category factor for 2006-07.

Table 3 Roads, derivation of category factor, 2008 Update, 2006-07

| Factors | NSW | Vic | Qld | WA | SA | Tas | ACT | NT |
|--|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Fixed costs (component weight = 0.37 %) | | | | | | | | |
| Administrative scale | 0.38031 | 0.50456 | 0.63046 | 1.25230 | 1.65373 | 5.30328 | 7.74403 | 12.25245 |
| Input costs | 1.02528 | 0.99212 | 0.98387 | 0.99199 | 0.97579 | 0.95664 | 1.01939 | 1.01769 |
| Component factor | 0.38993 | 0.50059 | 0.62029 | 1.24227 | 1.61369 | 5.07334 | 7.89420 | 12.46916 |
| A Wgted comp factor | 0.00147 | 0.00188 | 0.00233 | 0.00467 | 0.00607 | 0.01908 | 0.02968 | 0.04688 |
| National highway (component weight = 0 %) | | | | | | | | |
| National highway | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 |
| Component factor | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 |
| B Wgted comp factor | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 |
| Arterial roads (component weight = 49.31 %) | | | | | | | | |
| Road use | 0.98474 | 0.99255 | 1.04113 | 1.03414 | 1.03787 | 1.13349 | 0.29642 | 1.06332 |
| Road length | 0.76233 | 0.66614 | 1.12557 | 1.75093 | 1.17148 | 1.23455 | 0.39933 | 6.11477 |
| Physical environment | 0.98965 | 0.99756 | 1.02120 | 0.98832 | 0.99856 | 1.04974 | 0.96547 | 1.04539 |
| Urban influences | 1.01295 | 1.03321 | 0.95824 | 0.94291 | 0.95961 | 0.94762 | 1.42667 | 0.89168 |
| Dispersion | 0.99803 | 0.99404 | 1.00566 | 1.00785 | 0.99606 | 0.99533 | 0.98530 | 1.08466 |
| Input costs | 1.01919 | 0.99309 | 0.98935 | 0.99482 | 0.98016 | 0.96490 | 1.01447 | 1.01260 |
| Component factor | 0.86784 | 0.80113 | 1.07301 | 1.40593 | 1.06403 | 1.14487 | 0.43936 | 4.37126 |
| C Wgted comp factor | 0.42971 | 0.39668 | 0.53130 | 0.69614 | 0.52685 | 0.56688 | 0.21755 | 2.16442 |
| Local roads (component weight = 1.47 %) | | | | | | | | |
| Local roads | 0.23123 | 0.08198 | 1.41201 | 3.19279 | 2.09821 | 0.57275 | 0.13870 | 12.81190 |
| Dispersion | 0.99803 | 0.99404 | 1.00566 | 1.00785 | 0.99606 | 0.99533 | 0.98530 | 1.08466 |
| Input costs | 1.01919 | 0.99309 | 0.98935 | 0.99482 | 0.98016 | 0.96490 | 1.01447 | 1.01260 |
| Component factor | 0.23521 | 0.08093 | 1.40495 | 3.20129 | 2.04832 | 0.54997 | 0.13866 | 14.05799 |
| D Wgted comp factor | 0.00342 | 0.00118 | 0.02046 | 0.04662 | 0.02983 | 0.00801 | 0.00202 | 0.20471 |
| Bridges (component weight = 8.74 %) | | | | | | | | |
| Operations | 1.49742 | 0.44845 | 0.67498 | 1.59924 | 0.37154 | 1.01454 | 1.74388 | 2.26738 |
| Physical environment | 0.98965 | 0.99756 | 1.02120 | 0.98832 | 0.99856 | 1.04974 | 0.96547 | 1.04539 |
| Dispersion | 0.99803 | 0.99404 | 1.00566 | 1.00785 | 0.99606 | 0.99533 | 0.98530 | 1.08466 |
| Input costs | 1.01919 | 0.99309 | 0.98935 | 0.99482 | 0.98016 | 0.96490 | 1.01447 | 1.01260 |
| Component factor | 1.50745 | 0.44159 | 0.68585 | 1.58476 | 0.36218 | 1.02265 | 1.68327 | 2.60082 |
| E Wgted comp factor | 0.13120 | 0.03843 | 0.05969 | 0.13793 | 0.03152 | 0.08901 | 0.14651 | 0.22636 |
| Road safety (component weight = 10.59 %) | | | | | | | | |
| Road length | 0.76233 | 0.66614 | 1.12557 | 1.75093 | 1.17148 | 1.23455 | 0.39933 | 6.11477 |
| Urban influences | 1.01295 | 1.03321 | 0.95824 | 0.94291 | 0.95961 | 0.94762 | 1.42667 | 0.89168 |
| Dispersion | 0.99803 | 0.99404 | 1.00566 | 1.00785 | 0.99606 | 0.99533 | 0.98530 | 1.08466 |
| Input costs | 1.01919 | 0.99309 | 0.98935 | 0.99482 | 0.98016 | 0.96490 | 1.01447 | 1.01260 |
| Component factor | 0.92843 | 0.87497 | 1.02005 | 1.26949 | 1.01952 | 1.02014 | 1.01550 | 3.27084 |
| F Wgted comp factor | 0.09814 | 0.09249 | 0.10783 | 0.13420 | 0.10777 | 0.10784 | 0.10735 | 0.34576 |

Table 3 Roads, derivation of category factor, 2008 Update, 2006-07 (cont.)

| Factors | NSW | Vic | Qld | WA | SA | Tas | ACT | NT |
|--|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Other transport (component weight = 27.83 %) | | | | | | | | |
| Dispersion | 0.99803 | 0.99404 | 1.00566 | 1.00785 | 0.99606 | 0.99533 | 0.98530 | 1.08466 |
| Input costs | 1.01919 | 0.99309 | 0.98935 | 0.99482 | 0.98016 | 0.96490 | 1.01447 | 1.01260 |
| Component factor | 1.01722 | 0.98713 | 0.99500 | 1.00266 | 0.97622 | 0.96023 | 0.99977 | 1.09726 |
| G Wgtd comp factor | 0.28310 | 0.27473 | 0.27692 | 0.27905 | 0.27169 | 0.26724 | 0.27824 | 0.30538 |
| Salinity (component weight = 0.35 %) | | | | | | | | |
| Salinity | 0.10595 | 1.03248 | 0.37362 | 5.94971 | 0.54824 | 0.00000 | 0.00000 | 0.00000 |
| Component factor | 0.10595 | 1.03248 | 0.37362 | 5.94971 | 0.54824 | 0.00000 | 0.00000 | 0.00000 |
| H Wgtd comp factor | 0.00037 | 0.00357 | 0.00129 | 0.02057 | 0.00190 | 0.00000 | 0.00000 | 0.00000 |
| Urban traffic management (component weight = 1.2 %) | | | | | | | | |
| Urban traffic managem | 1.28738 | 1.00020 | 0.86519 | 0.83556 | 0.83516 | 0.05687 | 0.56679 | 0.05111 |
| Component factor | 1.28738 | 1.00020 | 0.86519 | 0.83556 | 0.83516 | 0.05687 | 0.56679 | 0.05111 |
| I Wgtd comp factor | 0.01540 | 0.01196 | 0.01035 | 0.00999 | 0.00999 | 0.00068 | 0.00678 | 0.00061 |
| Land rights (component weight = 0.01 %) | | | | | | | | |
| Land rights | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 98.01962 |
| Component factor | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 98.01962 |
| J Wgtd comp factor | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00923 |
| Native title (component weight = 0.02 %) | | | | | | | | |
| Native title | 0.00000 | 0.00000 | 4.97340 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 1.36599 |
| Component factor | 0.00000 | 0.00000 | 4.97340 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 1.36599 |
| K Wgtd comp factor | 0.00000 | 0.00000 | 0.00084 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00023 |
| Isolation (component weight = 0.08 %) | | | | | | | | |
| Isolation | 0.04081 | 0.06917 | 0.11309 | 1.80761 | 1.09363 | 2.75060 | 1.22840 | 58.74083 |
| Component factor | 0.04081 | 0.06917 | 0.11309 | 1.80761 | 1.09363 | 2.75060 | 1.22840 | 58.74083 |
| L Wgtd comp factor | 0.00003 | 0.00005 | 0.00009 | 0.00140 | 0.00084 | 0.00213 | 0.00095 | 0.04538 |
| National capital (component weight = 0.04 %) | | | | | | | | |
| National capital | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 61.95227 | 0.00000 |
| Component factor | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 61.95227 | 0.00000 |
| M Wgtd comp factor | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.02453 | 0.00000 |
| Category factor | 0.96284 | 0.82098 | 1.01110 | 1.33057 | 0.98646 | 1.06085 | 0.81361 | 3.34897 |

(a) Component factor scaled so that the sum of assessed expenses equals average expenses.

(b) Category factor is the sum of the weighted component factors. It equals A + B+ C+ D+ E+ F+ G + H + I + J + K + L + M.

17 The category factor was calculated for 2006-07 as follows:

| | | |
|--------------------|---|---|
| Fixed costs | = | 0.0037 [administrative scale * fixed costs input costs] |
| National highways | = | 0.0000 [national highways] |
| Arterial roads | = | 0.4931 [(input costs + dispersion - 1) * ((road use * 0.4) + (phys environ * 0.6 * road length)) * ((urban influences-1)*0.6+1)] |
| Local roads | = | 0.0147 [local roads * (input costs + dispersion - 1)] |
| Bridge operations | = | 0.0874 [bridges * phys environ * (input costs + dispersion - 1)] |
| Road safety | = | 0.1059 [((urban infl * 0.6) + (road length * 0.4)) * (input costs + dispersion - 1)] |
| Other transport | = | 0.2783 [input costs + dispersion - 1] |
| Salinity | = | 0.0035 [salinity] |
| Urban traffic mgmt | = | 0.0119 [urban traffic management] |
| Land rights | = | 0.0001 [land rights] |
| Native title | = | 0.0002 [native title] |
| Isolation | = | 0.0008 [isolation] |
| National capital | = | 0.0004 [national capital] |
| Category factor | = | fixed costs + national highways + arterial roads + local roads + bridge operations + road safety + other transport + salinity + urban traffic management + land rights + native title + isolation + national capital. |

18 In each case, the contributions were calculated as the expense component weight (the leading constant in the table above) multiplied by the component factors (the bracketed terms in the formulas). Each contribution to the category factor was then re-scaled to ensure that the sum of assessed expenses equalled the sum of actual expenses.

RESULTS FOR 2006-07

19 Table 4 shows actual, assessed and average expenses per capita and the cost of service provision ratio for the assessment in 2006-07. The cost of service provision ratio is equivalent to the category factor shown in Table 3.

20 Table 13 at the end of this working paper summarises the results of the assessment for all five years of the assessment period. It shows the actual, assessed and average expenses for each State for all years of the 2008 Update.

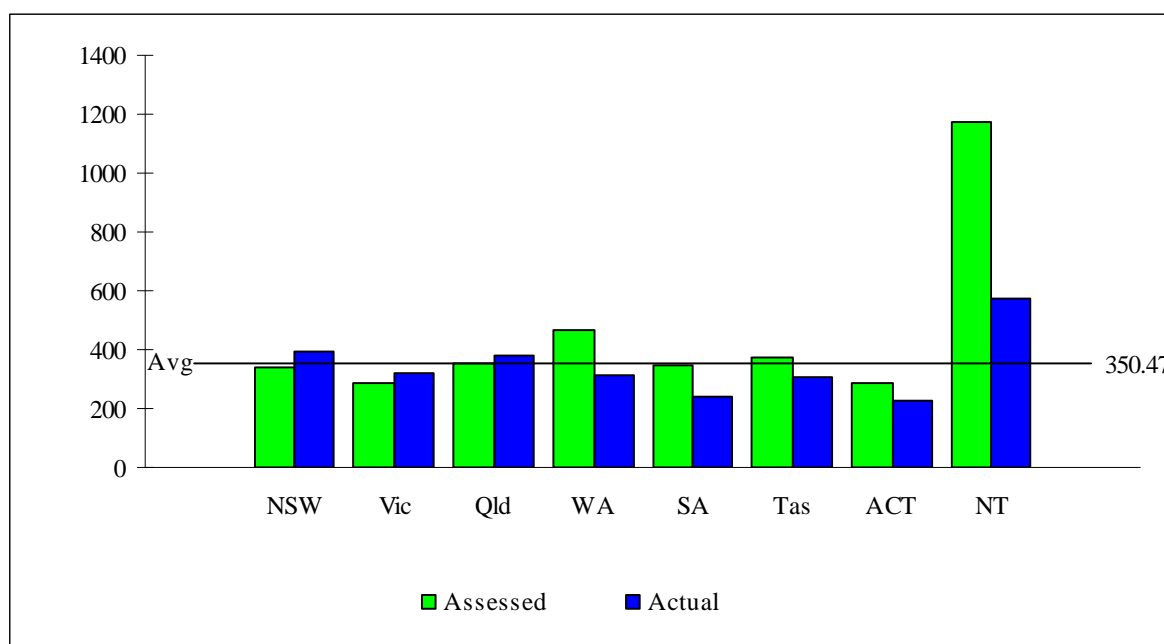
Table 4 Roads, assessment results, 2006-07

| | NSW | Vic | Qld | WA | SA | Tas | ACT | NT | Avg |
|--|--------|--------|--------|--------|--------|--------|--------|----------|--------|
| | \$pc | \$pc | \$pc | \$pc | \$pc | \$pc | \$pc | \$pc | \$pc |
| Actual expenses | 396.43 | 319.18 | 379.51 | 311.35 | 237.44 | 308.13 | 228.71 | 575.26 | 350.47 |
| Assessed expenses | 337.44 | 287.73 | 354.36 | 466.32 | 345.72 | 371.79 | 285.14 | 1 173.70 | 350.47 |
| Assessed cost of providing services ratio ^(a) | % | % | % | % | % | % | % | % | % |
| | 96.28 | 82.10 | 101.11 | 133.06 | 98.65 | 106.09 | 81.36 | 334.90 | 100.00 |

(a) The cost of service provision ratio is the ratio of assessed to average expenses per capita.

21 Figure 1 illustrates the per capita assessed, actual and average expenses for roads for 2006-07.

Figure 1 Roads, expenses per capita, assessed, actual and average, 2006-07



CONTRIBUTION TO GST REVENUE DISTRIBUTIONS

22 Table 5 shows the category's contribution to the distribution of GST revenue and health care grants (hereafter GST revenue). It also shows the contribution of each factor and component to the GST revenue distribution.

Table 5 Roads, contribution of assessment to GST revenue distribution, 2008 Update

| Factor | NSW | Vic | Qld | WA | SA | Tas | ACT | NT | Total redist'd |
|------------------------|--------|--------|-------|-------|-------|------|-------|------|-------------------|
| | \$m | \$m | \$m | \$m | \$m | \$m | \$m | \$m | \$m |
| Fixed costs | | | | | | | | | |
| Administrative scale | -6.1 | -3.7 | -2.1 | 0.8 | 1.4 | 3.0 | 3.2 | 3.5 | 12.0 |
| Input costs | 0.3 | 0.0 | -0.2 | 0.0 | -0.1 | 0.0 | 0.0 | 0.0 | 0.3 |
| Component factor | -6.0 | -3.7 | -2.2 | 0.8 | 1.4 | 2.9 | 3.3 | 3.6 | 11.9 |
| Arterial roads | | | | | | | | | |
| Road use | -9.7 | 15.6 | -4.5 | 10.7 | -0.5 | 4.3 | -14.1 | -1.7 | 30.6 |
| Road length | -146.0 | -148.5 | 57.3 | 141.4 | 12.9 | 11.4 | -18.9 | 90.3 | 313.4 |
| Physical environment | -10.9 | -1.9 | 13.7 | -3.8 | -0.4 | 3.8 | -1.8 | 1.2 | 18.7 |
| Urban influences | 13.0 | 29.7 | -31.6 | -16.8 | -9.3 | -4.9 | 23.3 | -3.6 | 66.1 |
| Dispersion | -2.4 | -5.4 | 4.1 | 2.8 | -1.1 | -0.4 | -0.9 | 3.1 | 10.1 |
| Input costs | 25.0 | -2.8 | -12.6 | -3.7 | -4.9 | -2.5 | 0.9 | 0.6 | 26.5 |
| Component factor | -130.4 | -122.5 | 35.5 | 134.4 | 1.3 | 11.8 | -28.3 | 98.3 | 281.2 |
| Other transport | | | | | | | | | |
| Dispersion | -1.4 | -3.2 | 2.4 | 1.7 | -0.6 | -0.2 | -0.5 | 1.8 | 5.9 |
| Input costs | 14.8 | -1.6 | -7.5 | -2.2 | -2.9 | -1.5 | 0.5 | 0.3 | 15.6 |
| Component factor | 13.4 | -4.8 | -5.1 | -0.5 | -3.5 | -1.7 | 0.0 | 2.2 | 15.6 |
| Bridges | | | | | | | | | |
| Bridges operations | 92.9 | -77.8 | -36.9 | 34.3 | -26.9 | 0.2 | 6.8 | 7.4 | 141.6 |
| Physical environment | -1.9 | -0.3 | 2.4 | -0.7 | -0.1 | 0.7 | -0.3 | 0.2 | 3.3 |
| Dispersion | -0.4 | -0.9 | 0.7 | 0.5 | -0.2 | -0.1 | -0.2 | 0.6 | 1.8 |
| Input costs | 4.4 | -0.5 | -2.2 | -0.7 | -0.9 | -0.4 | 0.2 | 0.1 | 4.7 |
| Component factor | 94.6 | -78.9 | -36.7 | 32.5 | -27.4 | 0.3 | 6.2 | 9.3 | 143.0 |
| Road safety | | | | | | | | | |
| Road length | -20.0 | -20.4 | 7.8 | 19.4 | 1.9 | 1.5 | -2.6 | 12.4 | 43.0 |
| Urban influences | 1.6 | 3.6 | -3.8 | -2.1 | -1.1 | -0.6 | 2.9 | -0.4 | 8.1 |
| Dispersion | -0.5 | -1.1 | 0.8 | 0.6 | -0.2 | -0.1 | -0.2 | 0.6 | 2.0 |
| Input costs | 5.1 | -0.6 | -2.5 | -0.7 | -1.0 | -0.5 | 0.2 | 0.1 | 5.4 |
| Component factor | -14.5 | -18.5 | 2.0 | 17.0 | -0.6 | 0.3 | 0.3 | 14.0 | 33.5 |

Table 5 Roads, contribution of assessment to GST revenue distribution, 2008 Update (continued)

| Factor | NSW | Vic | Qld | WA | SA | Tas | ACT | NT | Total redist'd |
|--|-------|--------|------|-------|-------|------|-------|-------|-------------------|
| | \$m | \$m | \$m | \$m | \$m | \$m | \$m | \$m | \$m |
| Urban traffic management | | | | | | | | | |
| Urban traffic management | 9.4 | 0.1 | -2.4 | -1.6 | -1.4 | -2.3 | -0.7 | -1.0 | 9.4 |
| Component factor | 9.4 | 0.1 | -2.4 | -1.6 | -1.4 | -2.3 | -0.7 | -1.0 | 9.4 |
| Local roads | | | | | | | | | |
| Local roads | -24.8 | -22.4 | 8.0 | 21.6 | 8.1 | -1.0 | -1.4 | 11.8 | 49.5 |
| Dispersion | -0.1 | -0.2 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.1 | 0.3 |
| Input costs | 0.8 | -0.1 | -0.4 | -0.1 | -0.1 | -0.1 | 0.0 | 0.0 | 0.8 |
| Component factor | -24.7 | -22.4 | 7.5 | 21.3 | 7.6 | -1.0 | -1.4 | 13.2 | 49.5 |
| Salinity | | | | | | | | | |
| Salinity | -8.9 | 0.2 | -3.8 | 15.1 | -1.1 | -0.7 | -0.5 | -0.3 | 15.3 |
| Component factor | -8.9 | 0.2 | -3.8 | 15.1 | -1.1 | -0.7 | -0.5 | -0.3 | 15.3 |
| National highways | | | | | | | | | |
| National highways | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Component factor | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| National capital | | | | | | | | | |
| National capital | -1.1 | -0.8 | -0.6 | -0.3 | -0.2 | -0.1 | 3.2 | 0.0 | 3.2 |
| Component factor | -1.1 | -0.8 | -0.6 | -0.3 | -0.2 | -0.1 | 3.2 | 0.0 | 3.2 |
| Land rights | | | | | | | | | |
| Land rights | -0.2 | -0.2 | -0.1 | -0.1 | 0.0 | 0.0 | 0.0 | 0.6 | 0.6 |
| Component factor | -0.2 | -0.2 | -0.1 | -0.1 | 0.0 | 0.0 | 0.0 | 0.6 | 0.6 |
| Native title | | | | | | | | | |
| Native title | -0.5 | -0.4 | 1.3 | -0.2 | -0.1 | 0.0 | 0.0 | 0.0 | 1.3 |
| Component factor | -0.5 | -0.4 | 1.3 | -0.2 | -0.1 | 0.0 | 0.0 | 0.0 | 1.3 |
| Isolation | | | | | | | | | |
| Isolation | -2.0 | -1.5 | -1.1 | 0.5 | 0.1 | 0.3 | 0.0 | 3.7 | 4.6 |
| Component factor | -2.0 | -1.5 | -1.1 | 0.5 | 0.1 | 0.3 | 0.0 | 3.7 | 4.6 |
| Redistribution from EPC resulting from the 2008 Update assessment | | | | | | | | | |
| | -70.9 | -253.4 | -5.9 | 218.9 | -24.0 | 9.6 | -17.9 | 143.7 | 372.1 |

Note: The redistribution due to the component factors includes the effect of interactions between factors. Therefore, the component factor figure may not equal the sum of its factors' redistribution.

Differences from an equal per capita assessment

23 Table 5 indicates that the main drivers of this assessment were:

- the road length factor, which recognises the extra costs of providing roads and road safety services because of differences in the lengths of roads³;
- the bridges operations factor, which recognises differences in the costs of maintaining bridges and tunnels because of different bridge and tunnel areas;
- the urban influences factor, which recognises the impact of highly trafficked urban arterial roads on State expenses;
- the local roads factor, which recognises the additional costs incurred by some States in maintaining local roads; and
- the road use factor, which recognises differences in the amount of traffic and heavy vehicle impact on road expenses⁴.

24 The category factors reflected the following on a State by State basis.

- *New South Wales* — New South Wales had a negative distribution primarily because its per capita road length was below average. This was partly offset by its greater than average per capita area of bridges and tunnels.
- *Victoria* — Victoria had a large negative GST revenue redistribution, also reflecting a per capita road length which was below average. Its per capita area of bridges and tunnels was also below average, as well as its per capita length of local roads. These effects were partly offset by above average per capita road use and urban influences.
- *Queensland* — Queensland had a negative GST revenue redistribution, reflecting its lower than average per capita urban influences and road use, as well as less bridge and tunnel areas. This was partly offset by its higher than average per capita road length.
- *Western Australia* — Western Australia had a large positive GST revenue distribution, mainly due to its higher than average road length per capita. Its distribution was also increased by higher than average per capita bridges and tunnels, local road length and salinity.
- *South Australia* — South Australia had lower than average per capita bridge areas and no tunnels, which contributed to its negative GST distribution.
- *Tasmania* — Tasmania's positive distribution was caused primarily by its higher than average per capita road length. It also had higher than average road use.
- *Australian Capital Territory* — The Australian Capital Territory's small area is reflected in its lower than average road length per capita and minor heavy vehicle traffic. It does, however, have greater than average concrete bridges and tunnels per capita and has expense needs related to its inheritance of wider roads from the Australian Government which were built before self-government.

³ After being frozen since the 2004 Review, rural arterial road lengths were updated in the 2008 Update – the effect of this change is discussed in the section 'Changes since 2007 Update' below.

⁴ Road use data had not been updated since the 2004 Review. Because more recent data became available for the 2008 Update, this data was updated – see the section 'Changes since 2007 Update' below.

- *Northern Territory* — The Northern Territory had a positive GST revenue distribution, which reflects the fact that it has over six times the average per capita road length and has the largest per capita length of roads in unincorporated areas.

CHANGES SINCE THE 2007 UPDATE

Major changes in this update

Main reason for change

- 25 The Roads category redistributed \$372.1 million in the 2008 Update, compared to \$360.6 million in 2007. However, the total effect of the revisions and updating was to redistribute \$161.9 million between the updates. The main reasons for change in the redistribution are described at paragraphs 7 to 10 above. They arose from Commission decisions to:
- adopt rural arterial road lengths which were measured using a mapping technique carried out by a consultant;
 - combine National Highways expenses with State arterial road expenses and assess highway disabilities together with arterial roads, commencing from the 2005-06 year; and
 - update vehicle travel data to the latest available.
- 26 Table 6 shows State shares of arterial road lengths for the 2007 Update and the 2008 Update. It shows that the shares of the total length fell for New South Wales, Victoria, Western Australia, South Australia and the Australian Capital Territory between the updates.

Table 6 State shares of arterial road length, 2007 and 2008 Update

| | NSW | Vic | Qld | WA | SA | Tas | ACT | NT |
|-------------|------|------|------|------|------|-----|------|-----|
| | % | % | % | % | % | % | % | % |
| 2007 Update | 30.2 | 19.8 | 17.2 | 18.3 | 8.4 | 2.3 | 0.8 | 3.0 |
| 2008 Update | 26.3 | 17.8 | 22.5 | 16.7 | 7.9 | 3.0 | 0.7 | 5.1 |
| Change | -3.9 | -2.0 | 5.3 | -1.5 | -0.6 | 0.7 | -0.2 | 2.1 |

Note: includes lengths of urban and rural arterials

Sources: Urban - 2004 Special State data request; Rural - MapInfo consultancy, 2007

- 27 Table 7 shows State shares of weighted road use, for the 2007 Update and 2008 Update. It shows that State shares of weighted total road use fell for New South Wales, Queensland, Tasmania and the Northern Territory.

Table 7 State shares of road use, 2007 and 2008 Update

| | NSW | Vic | Qld | WA | SA | Tas | ACT | NT |
|-------------|------|------|------|------|-----|------|-----|------|
| | % | % | % | % | % | % | % | % |
| 2007 Update | 36.7 | 22.7 | 19.3 | 9.9 | 6.6 | 3.4 | 0.4 | 1.1 |
| 2008 Update | 32.7 | 27.1 | 17.6 | 10.9 | 7.5 | 2.8 | 0.6 | 0.7 |
| Change | -3.9 | 4.5 | -1.8 | 1.0 | 0.9 | -0.6 | 0.2 | -0.4 |

Note: shares of annual vehicle kilometres travelled on urban and rural arterials, weighted by vehicle type

Source: *RoadFacts 2005*, Table 2.3

28 The changes to road length and use had a major effect on the assessment.

Explanation of large State specific changes

29 The major changes in this update are:

- **New South Wales** — Because its shares of total road length and use for New South Wales fell compared to the 2007 Update, the GST distribution for New South Wales changed from \$54.4 million to -\$70.9 million (a change of -\$125.4 million).
- **Victoria** — Victoria's share of total road length fell, but its share of total road use rose. Consequently, its GST distribution was less affected by the changes in data and method. The amount of GST distributed away from it increased by \$28.7 million (from -\$224.7 million to -\$253.4 million).
- **Queensland** — Queensland's share of total road length rose significantly, leading to it receiving \$76.4 million more of GST compared with the 2007 Update (from -\$82.3 million to -\$5.9 million).
- **Western Australia** — Western Australia's share of total road length fell and was only partly offset by a rise in its share of total road use. It therefore had a small decrease in its distribution (\$5.5 million).
- **South Australia** — The amount of GST distributed to South Australia increased as a result of the rise in its share of total road use, partly offset by the fall in its share of road length (from -\$38.1 million to -\$24.0 million).
- **Tasmania** — Tasmania received an increase in its distribution, from \$1.1 million to \$9.6 million. The rise in its share of total road length outweighed the fall in its share of total road use.
- **The Australian Capital Territory** — The fall in the Australian Capital Territory's share of total road length outweighed the rise in its share of total road use⁵, so that the amount of GST distributed away from it increased by \$2.4 million (from -\$15.5 million to -\$17.9 million).
- **The Northern Territory** — The rise in the Northern Territory's share of total road length caused a \$63 million increase in its GST distribution.

⁵ Road use has a 40% weight in the arterial roads component, while road length has a 60% weight. Road length is also included in the road safety component.

Effect of assessment on the distribution of GST revenue

30 Table 8 shows the distribution of GST revenue resulting from the assessments in the 2007 Update and the 2008 Update. It also shows the sources of the changes.

Table 8 Roads, effect of assessment on GST revenue distribution, 2007 Update to 2008 Update

| | NSW | Vic | Qld | WA | SA | Tas | ACT | NT | Total redist'd |
|---|--------|--------|-------|-------|-------|-----|-------|-------|-------------------|
| | \$m | \$m | \$m | \$m | \$m | \$m | \$m | \$m | \$m |
| Redistribution from EPC resulting from the 2007 Update assessment (a) | 54.4 | -224.7 | -82.3 | 224.4 | -38.1 | 1.1 | -15.5 | 80.7 | 360.6 |
| Effect of revising category averages and factors for 2001- 02 to 2005-06 | | | | | | | | | |
| Category average | 1.2 | -5.6 | -2.0 | 5.6 | -0.9 | 0.1 | -0.4 | 2.0 | 8.9 |
| Category factors | -115.4 | 3.9 | 70.4 | -21.0 | 8.0 | 7.5 | 0.0 | 46.5 | 136.4 |
| Interactions | -2.9 | -0.2 | 1.8 | -0.5 | 0.3 | 0.2 | 0.0 | 1.3 | 3.7 |
| Total | -117.1 | -1.9 | 70.2 | -15.9 | 7.5 | 7.8 | -0.4 | 49.8 | 135.2 |
| Effect of replacing 2001-02 category averages and factors with those for 2006-07 | | | | | | | | | |
| Category average | -2.4 | -9.5 | -0.6 | 9.3 | -1.9 | 0.3 | -0.6 | 5.4 | 15.0 |
| Category factors | -4.8 | -14.1 | 5.6 | 0.9 | 6.9 | 0.3 | -1.1 | 6.3 | 20.0 |
| Interactions | -1.1 | -3.2 | 1.3 | 0.2 | 1.6 | 0.1 | -0.3 | 1.4 | 4.5 |
| Total | -8.3 | -26.8 | 6.2 | 10.4 | 6.7 | 0.7 | -2.0 | 13.1 | 37.1 |
| Redistribution from EPC resulting from the 2008 Update assessment (a) | -70.9 | -253.4 | -5.9 | 218.9 | -24.0 | 9.6 | -17.9 | 143.7 | 372.1 |
| Total effect of revisions and updating (b) | -125.4 | -28.7 | 76.4 | -5.5 | 14.1 | 8.4 | -2.4 | 63.0 | 161.9 |

(a) Using the same pool and populations that were used to calculate the 2007 Update redistribution.

(b) This figure shows the change in the amount redistributed among the States between the 2007 Update and the 2008 Update. It does not necessarily equal the difference in the total redistribution from EPC between the two inquiries.

31 Changes in the distribution of GST revenue between the 2007 Update and the 2008 Update were brought about because the Commission:

- used revised financial data in the average expenses and other revised data in factor calculations for the years 2001-02 to 2005-06; and
- replaced 2001-02 average expenses and factors with those of 2006-07 to move forward the five-year period on which GST revenue distribution was based. Moving the five-year period forward in this way ensures the assessments reflect recent trends in State priorities

on the services provided and recent trends in State demographic and economic circumstances on the relative costs of those services.

- 32 Compared with an equal per capita (EPC) assessment, the 2008 Update redistributed \$372.1 million away from New South Wales, Victoria, Queensland, South Australia and the Australian Capital Territory to the other States. The biggest differences from an EPC assessment were:
- \$253.4 million moved away from Victoria, \$28.7 million more than in the 2007 Update;
 - \$218.9 million moved to Western Australia, \$5.5 million less than in the 2007 Update; and
 - \$143.7 million moved to the Northern Territory, \$63 million more than in the 2007 Update.
- 33 These movements mainly reflected the combined effect of changes in State shares of road length and road use.
- 34 Table 9 shows the changes in GST revenue attributable to changes in each factor arising from both revisions over the period 2001-02 to 2005-06 and replacing 2001-02 data with 2006-07 data.

**Table 9 Roads, effect of assessment on GST revenue distribution by factor, 2007
Update to 2008 Update**

| | NSW | Vic | Qld | WA | SA | Tas | ACT | NT | Total redist'd |
|---------------------------------|-------|-------|-------|-------|------|------|------|------|-------------------|
| | \$m | \$m | \$m | \$m | \$m | \$m | \$m | \$m | \$m |
| Fixed costs | | | | | | | | | |
| Administrative scale | 0.4 | 0.1 | 0.0 | -0.1 | 0.0 | -0.1 | -0.1 | -0.1 | 0.5 |
| Input costs | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Arterial roads | | | | | | | | | |
| Road use | -45.8 | 41.7 | -10.5 | 8.6 | 13.2 | -5.7 | 1.4 | -2.9 | 64.9 |
| Road length | -84.3 | -59.7 | 84.4 | -10.8 | 2.2 | 13.4 | -4.7 | 59.4 | 159.5 |
| Physical environment | -1.4 | -1.4 | 1.6 | -1.1 | -0.6 | 0.7 | 0.1 | 2.2 | 4.5 |
| Urban influences | 5.7 | -3.3 | -7.0 | 6.0 | 1.9 | 0.2 | -1.2 | -2.3 | 13.8 |
| Dispersion | -1.0 | -1.0 | -0.7 | -0.8 | -0.5 | -0.2 | 0.0 | 4.2 | 4.3 |
| Input costs | -2.1 | -0.1 | 0.6 | 1.2 | -0.1 | -0.4 | 0.0 | 0.9 | 2.7 |
| Other transport | | | | | | | | | |
| Dispersion | 0.0 | 0.1 | -0.1 | -0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 |
| Input costs | -0.8 | -0.6 | 1.0 | 0.3 | 0.1 | -0.1 | 0.0 | 0.0 | 1.4 |
| Bridges | | | | | | | | | |
| Bridge operations | 5.7 | -5.1 | -2.8 | 2.7 | -1.7 | 0.0 | 0.5 | 0.7 | 9.6 |
| Physical environment | -0.1 | 0.0 | 0.2 | -0.1 | 0.0 | 0.1 | 0.0 | 0.1 | 0.3 |
| Dispersion | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Input costs | -0.2 | -0.1 | 0.2 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.3 |
| Road safety | | | | | | | | | |
| Road length | -11.5 | -8.3 | 11.5 | -1.6 | 0.4 | 1.8 | -0.7 | 8.3 | 22.0 |
| Urban influences | 1.5 | 0.9 | -2.3 | -0.4 | -0.2 | -0.2 | 0.9 | -0.2 | 3.3 |
| Dispersion | -0.2 | -0.1 | -0.1 | -0.1 | -0.1 | 0.0 | 0.0 | 0.6 | 0.6 |
| Input costs | -0.2 | -0.1 | 0.1 | 0.2 | 0.0 | -0.1 | 0.0 | 0.1 | 0.4 |
| Urban traffic management | | | | | | | | | |
| Urban traffic management | -0.4 | 0.0 | -0.1 | 0.1 | 0.1 | 0.2 | 0.0 | 0.1 | 0.5 |
| Local roads | | | | | | | | | |
| Local roads | -1.5 | -1.7 | 0.5 | 1.5 | 0.5 | -0.1 | -0.1 | 0.9 | 3.4 |
| Dispersion | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Input costs | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 |
| Salinity | | | | | | | | | |
| Salinity | 0.8 | 0.0 | 0.2 | -1.1 | 0.1 | 0.1 | 0.0 | 0.0 | 1.2 |

Table 9 Roads, effect of assessment on GST revenue distribution by factor, 2007 Update to 2008 Update (continued)

| | NSW | Vic | Qld | WA | SA | Tas | ACT | NT | Total redist'd |
|--------------------------|-----|-----|------|------|-----|-----|------|------|-------------------|
| | \$m | \$m | \$m | \$m | \$m | \$m | \$m | \$m | \$m |
| National highways | | | | | | | | | |
| National highways | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| National capital | | | | | | | | | |
| National capital | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | -0.1 | 0.0 | 0.1 |
| Land rights | | | | | | | | | |
| Land rights | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 |
| Native title | | | | | | | | | |
| Native title | 0.1 | 0.1 | -0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 |
| Isolation | | | | | | | | | |
| Isolation | 0.1 | 0.1 | 0.0 | -0.1 | 0.0 | 0.0 | 0.0 | -0.1 | 0.3 |

Note: No redistribution occurs for national highways because prior to 2005-06, expenses exactly offset payments for this purpose from the Australian Government and after 2005-06, there were no expenses assessed separately for this component.

35 The main reasons for the changes in GST revenue distribution between the two updates are explained in more detail in the following sections.

Changes due to revising average expenses and factors for years 2001-02 to 2005-06

Revising average expenses.

36 Table 10 shows the average expenses for the six financial years of this update and those of the previous update.

37 As shown in the table, net upward revisions were made to average expenses in this category for 2001-02 to 2005-06. This increased the amount of GST revenue redistributed for that period (\$8.9 million). It increased the GST revenue shares for those States with above average cost of service provision in the 2007 Update. Specifically it increased the GST shares of New South Wales, Western Australia, Tasmania and the Northern Territory. Conversely, revenue shares were reduced for Victoria, Queensland, South Australia and the Australian Capital Territory.

Table 10 Roads, Average expenses used in the 2007 and 2008 Updates

| | 2000-01 | 2001-02 | 2002-03 | 2003-04 | 2004-05 | 2005-06 | 2006-07 |
|-------------|---------|---------|---------|---------|---------|---------|---------|
| | \$pc | \$pc | \$pc | \$pc | \$pc | \$pc | \$pc |
| 2008 Update | | 212.01 | 233.12 | 245.91 | 252.23 | 312.00 | 350.47 |
| 2007 Update | 204.81 | 213.36 | 230.80 | 239.31 | 242.61 | 299.32 | |
| Difference | - | -1.35 | 2.32 | 6.60 | 9.62 | 12.68 | - |

Revising category factors.

- 38 Rural arterial road length data were revised for all years, to adopt the lengths measured using a mapping approach. Road use data were also updated for all years, to the latest available. The national highways disability assessment method was revised from 2005-06. In the years prior to 2005-06, the national highways disability was calculated by equating it to each State's National highways SPP revenue. As a result of changes to the nature of Australian Government road funding with the introduction of AusLink, the Commission decided that the method for determining the national highways disability should be the same as the arterial roads method, from 2005-06. The national highways disability was therefore revised by calculating it using length and use, from 2005-06. This change in highways treatment made a relatively small contribution to the total effect of roads data revision, because it was present in only one year.
- 39 The combined effect of these changes was to redistribute \$136.4 million away from New South Wales and Western Australia to the other States. For New South Wales, this was mainly because its share of total road length and road use both declined during the common years. For Western Australia, the decline in its share of total road length outweighed the increase in its share of total road use. For the other States, the changes in road length and use offset each other to varying degrees, but overall that resulted in distributions to them.

Changes in State circumstances — replacing 2001-02 with 2006-07 data

- 40 Table 11 shows the actual expenses and implied costs of service provision for 2001-02, the year that drops out of the assessment period, and 2006-07, the year that comes in, for the 2008 Update assessment.

Replacing average expenses.

- 41 State spending on roads has increased since 2001-02 (76.5 per cent), well in excess of the growth in the GST pool (43.9 per cent). So, replacing the 2001-02 average expenses with 2006-07 average expenses increased the amount of GST redistributed (\$15 million). It increased the GST distribution to States assessed to have an above average cost of providing services (Western Australia, Tasmania and the Northern Territory). The GST distribution to the other States decreased, because their assessed cost of providing services was below average.

Table 11 Roads, actual expenses and assessed cost of providing services, 2001-02 and 2006-07

| | NSW | Vic | Qld | WA | SA | Tas | ACT | NT | Avg |
|---|--------|--------|--------|--------|--------|--------|--------|---------|--------|
| | \$pc | \$pc | \$pc | \$pc | \$pc | \$pc | \$pc | \$pc | \$pc |
| Actual expenses | | | | | | | | | |
| 2001-02 | 202.15 | 176.90 | 278.63 | 228.88 | 183.48 | 199.17 | 98.55 | 431.96 | 212.01 |
| 2006-07 | 396.43 | 319.18 | 379.51 | 311.35 | 237.44 | 308.13 | 228.71 | 575.26 | 350.47 |
| | % | % | % | % | % | % | % | % | % |
| Change between 2001-02 and 2006-07 | 96.11 | 80.43 | 36.20 | 36.03 | 29.41 | 54.71 | 132.08 | 33.18 | 65.31 |
| | \$pc | \$pc | \$pc | \$pc | \$pc | \$pc | \$pc | \$pc | \$pc |
| Assessed expenses | | | | | | | | | |
| 2001-02 | 206.78 | 183.83 | 209.84 | 280.75 | 193.79 | 223.17 | 184.33 | 606.58 | 212.01 |
| 2006-07 | 337.44 | 287.73 | 354.36 | 466.32 | 345.72 | 371.79 | 285.14 | 1173.70 | 350.47 |
| | % | % | % | % | % | % | % | % | % |
| Assessed cost of providing services ratio | | | | | | | | | |
| 2001-02 | 97.54 | 86.71 | 98.98 | 132.43 | 91.41 | 105.27 | 86.95 | 286.12 | 100.00 |
| 2006-07 | 96.28 | 82.10 | 101.11 | 133.06 | 98.65 | 106.09 | 81.36 | 334.90 | 100.00 |

Replacing category factors.

- 42 Replacing the 2001-02 factors with 2006-07 factors introduced a second year of the method change for national highways, since in 2001-02 the previous method was used. This was the main reason for a change in redistribution due to replacing category factors⁶. The previous method had no effect on the assessment, because each State's assessed expense was equal to its national highways SPP grant. The replacement method did have an effect on the assessment, because each State's assessed expense was related to its share of road length and use for national highways. Road length was the predominant influence.
- 43 Table 12 shows highway road lengths, which were included in the arterial road lengths for two years instead of one. It shows that Queensland, Western Australia, South Australia and the Northern Territory all had per capita highway lengths which were above average and Tasmania was close to average. New South Wales, Victoria and the Australian Capital Territory had per capita highway lengths which were well below average. As a result, replacing the 2001-02 highway factors with the 2006-07 factors increased the GST distributions of those States with a higher than average per capita highway length. The shares of Queensland, Western Australia, South Australia, Tasmania and the Northern Territory increased by \$20 million in total and those of New South Wales, Victoria and the Australian Capital Territory declined. Tasmania's share increased even though it had below average highway length per capita because it had above average road use.

⁶ The analysis of change in this instance uses the new road length and use data for both 2001-02 and 2006-07 and only picks up the change in method for treatment of national highways that occurs in 2005-06.

Table 12 Length of highways

| | NSW | Vic | Qld | WA | SA | Tas | ACT | NT | Aust |
|--------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Length (lane km) | 8 087 | 4 091 | 9 270 | 9 398 | 6 114 | 961 | 254 | 5 409 | 43 584 |
| Per capita length | 0.00118 | 0.00079 | 0.00224 | 0.00451 | 0.00388 | 0.00195 | 0.00075 | 0.02542 | 0.00209 |
| Ratio (State/Aust) | 0.56 | 0.38 | 1.07 | 2.16 | 1.86 | 0.94 | 0.36 | 12.16 | 1.00 |

Source: 2008 State data request

This working paper was prepared by the Transport and Other Services section of the Commonwealth Grants Commission. If you have any questions about its content please contact Glenn Pure on (02) 6229 8816 or glenn.pure@cgc.gov.au



Date: 29 February 2008

Table 13 Assessment of expenses, Roads

| | 2002-03 | | 2003-04 | | 2004-05 | | 2005-06 | | 2006-07 | |
|------------------------------|-----------|------------|-----------|------------|-----------|------------|-----------|------------|-----------|------------|
| | Amount | Per Capita | Amount | Per Capita | Amount | Per Capita | Amount | Per Capita | Amount | Per Capita |
| | \$m | \$ | \$m | \$ | \$m | \$ | \$m | \$ | \$m | \$ |
| Average Expenses | | 233.12 | | 245.91 | | 252.23 | | 312.00 | | 350.47 |
| New South Wales | | | | | | | | | | |
| Assessed difference | - 35.976 | - 5.41 | - 49.698 | - 7.43 | - 45.037 | - 6.69 | - 81.887 | - 12.06 | - 89.277 | - 13.02 |
| Expenses - Assessed | 1 514.942 | 227.71 | 1 596.041 | 238.48 | 1 653.145 | 245.54 | 2 036.255 | 299.94 | 2 313.454 | 337.44 |
| Actual | 1 471.637 | 221.20 | 1 651.886 | 246.82 | 1 922.149 | 285.49 | 2 395.616 | 352.87 | 2 717.880 | 396.43 |
| Victoria | | | | | | | | | | |
| Assessed difference | - 152.469 | - 31.15 | - 158.862 | - 32.05 | - 169.630 | - 33.79 | - 277.219 | - 54.45 | - 324.216 | - 62.74 |
| Expenses - Assessed | 988.731 | 201.97 | 1 059.873 | 213.85 | 1 096.412 | 218.43 | 1 311.153 | 257.54 | 1 486.825 | 287.73 |
| Actual | 1 086.011 | 221.84 | 1 261.356 | 254.51 | 1 184.346 | 235.95 | 1 437.242 | 282.31 | 1 649.384 | 319.18 |
| Queensland | | | | | | | | | | |
| Assessed difference | - 12.126 | - 3.22 | - 11.613 | - 3.01 | - 15.575 | - 3.94 | 8.694 | 2.15 | 16.085 | 3.89 |
| Expenses - Assessed | 866.133 | 229.90 | 938.250 | 242.90 | 982.345 | 248.29 | 1 271.924 | 314.14 | 1 465.481 | 354.36 |
| Actual | 990.265 | 262.85 | 1 052.471 | 272.47 | 996.804 | 251.95 | 1 339.294 | 330.78 | 1 569.524 | 379.51 |
| Western Australia | | | | | | | | | | |
| Assessed difference | 147.031 | 75.85 | 158.597 | 80.58 | 164.244 | 82.12 | 208.764 | 102.41 | 241.210 | 115.85 |
| Expenses - Assessed | 598.932 | 308.97 | 642.594 | 326.49 | 668.699 | 334.35 | 844.803 | 414.40 | 970.896 | 466.32 |
| Actual | 478.886 | 247.04 | 443.586 | 225.37 | 466.022 | 233.01 | 589.952 | 289.39 | 648.233 | 311.35 |
| South Australia | | | | | | | | | | |
| Assessed difference | - 29.237 | - 19.15 | - 27.393 | - 17.83 | - 28.134 | - 18.19 | - 4.481 | - 2.87 | - 7.481 | - 4.74 |
| Expenses - Assessed | 326.580 | 213.96 | 350.389 | 228.08 | 361.973 | 234.04 | 482.383 | 309.13 | 545.080 | 345.72 |
| Actual | 324.474 | 212.58 | 210.086 | 136.75 | 218.926 | 141.55 | 261.428 | 167.53 | 374.363 | 237.44 |
| Tasmania | | | | | | | | | | |
| Assessed difference | 6.388 | 13.45 | 7.689 | 16.00 | 7.978 | 16.46 | 9.310 | 19.06 | 10.485 | 21.33 |
| Expenses - Assessed | 117.130 | 246.56 | 125.893 | 261.90 | 130.261 | 268.68 | 161.711 | 331.06 | 182.792 | 371.79 |
| Actual | 113.056 | 237.99 | 128.309 | 266.93 | 152.317 | 314.18 | 191.674 | 392.40 | 151.492 | 308.13 |
| Australian Capital Territory | | | | | | | | | | |
| Assessed difference | - 10.354 | - 31.94 | - 13.023 | - 39.92 | - 12.342 | - 37.57 | - 19.112 | - 57.52 | - 21.994 | - 65.32 |
| Expenses - Assessed | 65.211 | 201.18 | 67.194 | 205.98 | 70.524 | 214.66 | 84.545 | 254.47 | 96.005 | 285.14 |
| Actual | 63.108 | 194.69 | 81.100 | 248.61 | 75.015 | 228.33 | 74.734 | 224.94 | 77.006 | 228.71 |
| Northern Territory | | | | | | | | | | |
| Assessed difference | 86.742 | 434.93 | 94.303 | 469.39 | 98.495 | 482.18 | 155.931 | 747.08 | 175.186 | 823.23 |
| Expenses - Assessed | 133.235 | 668.05 | 143.707 | 715.29 | 150.018 | 734.41 | 221.052 | 1 059.08 | 249.766 | 1 173.70 |
| Actual | 83.455 | 418.45 | 95.146 | 473.58 | 97.799 | 478.77 | 123.883 | 593.53 | 122.416 | 575.26 |

Note: ACT expenses may include municipal expenses. Attachment A, 2008 Update, RFCS for how State actual figures are compiled.