

PRIMARY INDUSTRY

- 1 This working paper describes the expenses assessment for the Primary Industry category and provides information on its impact on GST revenue distribution for the 2008 Update. The Commission's assessment aims to estimate what each State would need to spend to provide the average level of services to businesses in the agriculture, forestry and fisheries sectors. The primary industry category does not include mining which is covered by a separate category. The development of the assessment method is discussed in Volume 5 of the 2004 Review Working Papers.

PRIMARY INDUSTRY SERVICES

- 2 The primary industry category comprises expenses on administration, regulation, planning, support and management of agriculture and fisheries services, and soil conservation. More specifically, the category includes expenses on:
 - (i) land settlement schemes such as grants, interest subsidies and other assistance for farm acquisition;
 - (ii) programs of rural debt reconstruction, farm rehabilitation and retraining displaced farmers;
 - (iii) provision of veterinary and pest control services;
 - (iv) services designed to stabilise or improve farm prices and farmers' incomes, such as price support and marketing schemes for unprocessed agricultural products;
 - (v) schemes to encourage or restrict output of particular primary products;
 - (vi) subsidies to induce farmers to purchase and use fertilisers, improved seeds and other farming improvements;
 - (vii) eradication or control of pests, vermin, plant diseases and other destructive agents;
 - (viii) provision of services, grants, subsidies and advances for agriculture water resources such as land irrigation, rural drainage and flood mitigation systems;
 - (ix) freshwater, ocean and coastal fishing and fish farming;

- (x) fish hatcheries, stocking or culling activities, licensing of fishing and extension services;
 - (xi) research into fish management related problems;
 - (xii) compensation for slaughtered beasts;
 - (xiii) restocking and freight rebates, and additional holding costs;
 - (xiv) the provision of advisory, technical and research services on soil conservation, erosion control and the reclamation of areas affected by soil degradation;
 - (xv) erosion control and reclamation works;
 - (xvi) development and application of policies relating to the prevention of soil degradation; and
 - (xvii) the rehabilitation of degraded areas.
- 3 The following recurrent Special Purpose Payments (SPPs) were included in the category for some or all of the five years covered by the 2008 Update:
- (i) *Plant Disease and Eradication*;
 - (ii) *Farm Business Improvement Program (Farmbis)*;
 - (iii) *Skilling Farmers for the Future*;
 - (iv) *Regional Assistance*;
 - (v) *Agricultural Development Partnerships*;
 - (vi) *National water initiative – living Murray*; and
 - (vii) *National Action Plan on Salinity and Water Quality*.

WHY EXPENSES ON SERVICES TO PRIMARY INDUSTRY DIFFER BETWEEN STATES

- 4 The per capita amount spent by each State on services to primary industry varies considerably. The Commission seeks to understand why these figures vary. If the sole source of variation is different government policies, then the differences do not impact on State GST and HCG shares. If the variation is due to circumstances beyond a States' control, the differences will be factored into the Commission's recommendations on State GST and HCG shares. Table 1 shows primary industry expenses per capita for each State and the average overall.

Table 1 Primary industry, expenses per capita, 2008 Update

	NSW	Vic	Qld	WA	SA	Tas	ACT(a)	NT	Aust
	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc
2001-02	75.47	82.36	146.71	117.83	96.05	113.19	4.42	156.83	96.89
2002-03	80.20	61.02	135.24	115.78	72.72	125.33	0.00	168.18	89.50
2003-04	89.35	81.32	137.86	128.57	80.72	96.71	3.87	193.43	99.74
2004-05	57.40	62.43	160.73	130.15	78.90	41.58	0.00	184.77	87.60
2005-06	79.15	66.27	176.86	165.62	91.95	71.46	3.69	160.03	104.17
2006-07	116.44	83.87	240.20	159.92	97.41	110.01	1.64	152.41	134.17

(a) ACT expenses may include municipal transactions.

Source: Derived from Government Finance Statistics (GFS) data collated by the ABS using CGC coding rules (and adjustments).

Box 1: How the Commission calculates average expenses

The Australian average expense per capita is not a simple average of the experience of the eight States. It is calculated as the total expenses incurred by all States divided by total State population. This is a population weighted average. Population weighting gives equal weight to each Australian's experience. Since more Australians experience the New South Wales level of service, it carries more weight in the calculation of the average. Thirty three per cent of Australians reside in New South Wales and 1.0 per cent reside in the Northern Territory. Population weighting gives the experience of New South Wales (\$116.44 per capita in 2006-07) 33 times the weight of the experience of the Northern Territory (\$152.41 per capita). This approach means the average expense per capita is generally much closer to the New South Wales expense per capita than the Northern Territory expense per capita.

The concept of using this average also applies to the assessment of factors. If the Commission were trying to estimate the cost of providing services to Indigenous people living in remote areas, it would give most weight to the Northern Territory's experience (where 39 per cent of remote Indigenous people live) and least to Victoria (less than 0.1 per cent), Tasmania (0.6 per cent) and the ACT (0 per cent).

- 5 Differences in State expenses per capita can have many underlying causes including differences between States in:
- the size of the agricultural sector in each State, which influences the size of the administrative and regulatory effort needed from States; and
 - the types of issues that need to be addressed, for example soil salinity may be more important in one State than another.
- 6 Table 2 shows indicators of the differences between States in the size of their agricultural sectors. Victoria and the Northern Territory have close to average-sized sectors, Queensland, Western Australia, South Australia and Tasmania have above average activity, while New South Wales has below average activity. The ACT has almost no agricultural industry.

Table 2 Indicators of the amount of agricultural activity in each State, four year average 2001-02 to 2004-05

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc
Factor income	708	1 151	1 504	1 796	1 918	1 913	31	1 354	1 197
Value of production(a)	1 326	1 720	2 050	2 751	2 900	1 852	58	1 521	1 818

(a) Average 2001-02 to 2004-05 as data for 2005-06 and 2006-07 not available.
Source: ABS catalogue 5220.0 and catalogue 7503.0

- 7 The magnitude and type of environmental issues also vary between States and, in many cases, may necessitate State expenditure. One indicator of the size of environmental issues faced by different States is the funding that agricultural businesses have gained to address such issues through national competitive funding programs such as Landcare. Table 3 shows the Landcare funding for farm establishments from a survey conducted in 2004-05, expressed in terms of amount of funding per capita of State population. The indicator suggests that farm environmental issues — at least those targeted by the Landcare program — may be higher than average in New South Wales, Queensland and Tasmania and lower than average in other States.

Table 3 Landcare expenditure on farms, 2004-05

	NSW	Vic	Qld	WA	SA	Tas	NT	Aust
	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc
Landcare expenditure	27.06	11.80	19.64	12.37	9.59	42.38	5.68	18.75

Source: ABARE special data request covering results of a survey of farms on Landcare expenditure in 2004-05. The ACT does not appear in the table because it is not covered by the survey.

DEVELOPMENTS SINCE THE 2007 UPDATE

Data revisions

- 8 In 2008, South Australia re-classified the petroleum subsidy (for all years) from Primary Industry to Mining, Fuel and Energy reducing category expenses.
- 9 The ABS revised its current price estimates of gross state product (GSP) by industry. The revisions were made due to the availability of new data and affected all States, although the extent to which each State was affected varied. In the primary industries category the ABS changes resulted in upward revisions in industry factor incomes in all States except New South Wales, Tasmania and the Northern Territory for most years of the assessment. The ABS advised that the current data is the best available but that there will be further revisions to GSP estimates in the 2007-08 issue of the *Australian National Accounts, 5220.0*. These revisions are likely to partially offset the revisions published in the 2006-07 issue of *5220.0*.

ASSESSING STATES' COSTS OF PROVIDING SERVICES TO PRIMARY INDUSTRY

The equalisation task

- 10 The Commission aims to identify why some States would face a greater demand for services to primary industry and then use this information to estimate what it would cost each State to provide funding for these services based on the average policy and practice of all States. This estimate is called a State's *assessed expense*.
- 11 The process the Commission follows is twofold. First, it starts with the average expense that captures the average policies, efficiency and circumstances of all States. Second, it attempts to quantify how a State varies from the average using suitable indicators of factors that drive the level of expenses States incur (for example, the size of the agricultural sector in a State) and measures of the responsiveness of a State's total expenses to variations in the indicators.
- 12 A number of indicators may be necessary to adequately assess differences between States. These are combined to assess a State's overall disability for delivery of a particular set of services — in this case, services to primary industry. A disability can be positive or negative since a State may have an above average or below average demand for services. When a State's disability is quantified and applied to the average expense, the resultant estimate is its assessed expense. This section discusses how the Commission identifies the underlying drivers of the quantity of services provided and the subsequent sections discuss how it measures them.
- 13 The Commission identifies the major influences that may cause States to have different expenses per capita and estimates their financial impact on either:
 - assessed service use; or
 - assessed unit costs.

Assessed service use

- 14 The influences which affect assessed use of services provided for primary industries are:
 - the size of the agriculture, forestry and fisheries sector in each State; and
 - the extent to which environmental issues affect a State's primary industries.

Assessed unit costs

- 15 There are no unit cost differences specific to primary industries that are taken into account in the assessment. However, there are some general influences on unit costs that are taken into account in the calculation of assessed expenses. These influences affect many other service categories and include:
 - fixed costs associated with establishing a minimum head office and policy function to deliver services — States with smaller populations necessarily have higher fixed costs per capita;

- input costs, particularly labour costs, since delivering most services requires a labour component and variations in underlying wage levels between States will influence their unit cost of delivery; and
 - dispersion, which recognises that States with more geographically dispersed populations face higher unit costs due to the added overheads of transport and the need to service smaller, scattered populations.
- 16 Both the service use and the unit cost influences are important influences on the assessed expenses for primary industry.

OVERVIEW OF THE METHOD FOR DETERMINING ASSESSED EXPENSES

- 17 Box 2 provides a brief step by step overview of the sequence followed by the Commission to determine each States' assessed expenses for primary industry.

Box 2: Assessment framework

Step 1: Derive the average expense per capita

This is done by dividing the total expenses incurred by all States by total State population. This figure captures the average financial impact of the policies, practices and particular State circumstances that impact on the cost of delivering the service across the nation.

Step 2: Identify different types of expenses

The Commission examines the service to determine whether parts of the total expense are affected by different influences. If the differences are material, the expense is divided into component parts to ensure that the various influences are accurately matched with the expenses they affect. The different expense types identified are referred to as components. To identify components, the Commission analyses information and data on the nature of the service (that is, what States do and how they do it), States' policies concerning the service and submissions. The proportion of total expense attributable to a particular component is referred to as the component weight. The Commission uses GFS data, State public accounts, annual reports and other data to estimate these proportions.

Step 3: Identify the influences for each component

The Commission identifies the influences that affect each component and the extent to which they are beyond the control of individual State governments. It does so by analysing information and data on the nature of the service (that is, what States do and how they do it) and States' policies concerning the service, which we obtain from submissions and publications.

Step 4: Measure the size of each influence

The Commission estimates the relative financial impact of each influence on a State's cost of providing the service, but only to the extent it is beyond the control of individual State governments. The relative impact is measured by relating the State's experience to the average experience. The relative impacts are presented as factors. A factor measures the percentage increase (or decrease) that the influence has on a State's cost of providing the service. At least one factor is assessed for each component. In most cases there is more than one.

Step 5: Derive component factors

The factors calculated for each cost component are combined together to derive a component factor. If the Commission considers that one factor compounds with another, it multiplies them. If the Commission considers that two factors are independent of one another, it adds them.

Step 6: Derive category factors

The component factors are weighted to reflect the importance of the component in the category. This is done by multiplying each component factor by its component weight. The category factor is calculated by adding the weighted component factors together. The category factor represents the Commission's estimate

of the combined financial impact of all the influences on a State's cost of providing the service.

Step 7: Derive assessed expense per capita

Each State's assessed expense per capita is calculated by applying its category factor to the average expense per capita. A State's assessed expense per capita is the Commission's estimate of how much it would cost the State (per capita) to provide the average level of service.

The difference between a State's assessed expense per capita and the average expense per capita is a measure of the financial impact of circumstances beyond its control. The difference between its assessed expense per capita and its actual expense per capita is a measure of the financial impact of its policies.

DERIVING COMPONENTS AND COMPONENT WEIGHTS

- 18 The Commission examines the service to decide whether parts of the total expense are affected by different influences. If the differences are material, the category is divided into component parts to ensure that the various influences are accurately matched with the expenses they affect. The different expense types identified are referred to as *components*. The proportion of total expense attributable to a particular component is referred to as the *component weight*.
- 19 The Commission identified eight components for the primary industry category and estimated the proportion of expenses that each cost component contributed to total expenses. The components and component weights are presented in Table 4.

Table 4 Components and component weights, 2006-07

Component	\$m	%
Fixed costs	34.723	1.24
Isolation	6.309	0.23
Native title	0.176	0.01
NAPSWQ Commonwealth expenses	128.795	4.60
NAPSWQ State expenses	128.795	4.60
Economic development	951.591	34.00
Regulation	1 427.387	51.00
Soil conservation component - excluding NAPSWQ State expenses	120.932	4.32

- 20 The component weights for fixed costs¹, native title, isolation and NAPSWQ expenses were calculated directly by dividing the dollar amount for each of these components by total category expenses. The remaining component weights were calculated from the residual amount using the weights shown in Table 5, with one exception. Since the NAPSWQ program addresses soil conservation issues, the 'NAPSWQ State expense' amount was included in the residual amount before calculating the dollar amount for the soil conservation component. The NAPSWQ State expenses were then subtracted from the soil conservation dollar amount to leave a soil conservation component not related to NAPSWQ expenses (last line in Table 4).

¹ The Administrative Scale section of Volume 4 of these working papers describes how the Commission determines the fixed costs.

Table 5 Weights used to determine the amounts for the economic development, regulation and soil conservation components^(a)

Component	Weight (%)
Economic development	36.2
Regulation	54.3
Soil conservation	9.5

(a) The weights were applied to the residual amount after subtracting fixed costs, isolation, native title and NAPSWQ Commonwealth expenses from total category expenses

21 The Commission identifies the influences affecting each component. They are, in the Commission's assessment, the reasons why States spend more (or less) than the average expense per capita to provide the average level of service. The Commission presents these influences as factors. A brief explanation of factors is provided in Box 3.

22 Table 6 lists each component and associated factors for services to primary industry.

Box 3: Commission factors

A factor is the Commission's estimate of the relative financial impact a particular influence has on a State's cost of providing a service. Factors are only calculated for the part of the influence that is beyond the control of individual State governments.

A factor value of 1 means the Commission considers the State could provide the average level of service by spending the average expense per capita. A factor value of more than 1 means the Commission considers the State will have to spend more than the average expense per capita to provide the average level of service. A factor value of less than 1 means the Commission considers the State can provide the average level of service by spending less than the average expense per capita.

Table 6 Components and factors, 2008 Update

Component and component weights	Factors	Influence measured by factor
Fixed costs (1.24%)	Administrative scale	Recognises the costs each State incurred to provide the policy and administrative infrastructure necessary to provide minimum unavoidable service, regardless of the size of the task.
	Fixed costs input costs	Recognises the differences between States in the prices of head office labour, accommodation, and electricity used in providing services.
Isolation (0.23%)	Isolation factor	Recognises the additional costs some States face in interstate transportation, hiring of staff and accessing experts due to their physical distance from the major sources of supply particularly those on the eastern seaboard.
Native title (0.01%)	Native title factor	Recognises additional costs faced by some States due to the operation of the Australian Government's <i>Native Title Act 1993</i> . Expenses include the costs of administering the legislation and of compensating holders of native titles in settlement of claims.
Economic development (34%)	(none)	The assessment is equal per capita, meaning that the Commission considers there are no unavoidable differences between States that affect the costs they face for this component.
Regulation (51%)	Economic environment factor	Recognises the difference between States due to the size of their agriculture, forestry and fisheries sectors.
	Dispersion factor	Recognises the impact of the geographical dispersion of a State's population on its costs of providing services, in areas such as telecommunications, freight, travel and locality allowances for staff.
	Input cost factor	Recognises the effect on State expenses of unavoidable differences in the price of labour, office accommodation and electricity. Labour cost is the main influence.
NAPSWQ components (9.2%)	NAPSWQ factor	Measures the difference between States in cost of addressing soil salinity. Factor is based on expert assessment that was used to apportion funding to States when the NAPSWQ program was started.
Soil conservation (4.32%)	Physical environment factor	Recognises the differences between States in the environmental issues that affect soil conservation.
	Dispersion factor	Recognises the impact of the geographical dispersion of a State's population on its costs of providing services, in areas such as telecommunications, freight, travel and locality allowances for staff.
	Input cost factor	Recognises the effect on State expenses of unavoidable differences in the price of labour, office accommodation and electricity. Labour cost is the main influence.

23 An explanation of the reasoning behind each factor assessment in the primary industry category and the method of assessment is presented below.

DERIVING THE FIXED COST COMPONENT FACTOR

- 24 The Commission considers the amount of fixed costs required to be spent by each State is influenced by administrative scale and differences in the price of labour, accommodation and electricity.

Administrative scale factor

- 25 The administrative scale factor is assessed to recognise the unavoidable cost each State incurs to provide central administrative services to plan, regulate, and administer services to primary industries, regardless of the size of its population. In total, each State except the ACT was assessed to require a similar minimum amount of \$4.735 million each in 2006-07. The ACT amount was approximately one third of that for each of the other States. The Commission decided that because of the small size of the primary industry sector in the ACT, it need not establish a separate department to manage this industry and its minimum costs were therefore lower.
- 26 The disabilities for administrative scale factors are assessed by a common method. The method is discussed in Volume 7 of the 2004 Review working papers.
- 27 Table 7 summarises the amount assessed for each State and the per capita equivalent. It also shows the administrative scale factor that is calculated by dividing each States' per capita amount by the average per capita amount.

Table 7 Primary industry, calculation of administrative scale factor, 2006-07

		NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
Fixed cost amount	\$m	4.735	4.735	4.735	4.735	4.735	4.735	1.578	4.735	34.723
Population	m	6.856	5.168	4.136	2.082	1.577	0.492	0.337	0.213	20.859
Fixed costs per capita	\$pc	0.69	0.92	1.14	2.27	3.00	9.62	4.68	22.23	1.66
Factor		0.41489	0.55043	0.68778	1.36615	1.80407	5.78540	2.81601	13.36631	1.00000

- 28 The administrative scale factor is revised annually by adjusting the unavoidable fixed cost to reflect changes in the labour price index (80 per cent weight) and consumer price index (20 per cent weight).

Fixed costs input costs factor

- 29 The input costs factor is assessed to recognise interstate differences, beyond the control of States, in the price of labour, accommodation and electricity used in providing administrative services.

- 30 The disabilities for the input costs factors are assessed by a common method. The method is discussed in Volume 7 of the 2004 Review working papers under the section for common factors.
- 31 The input costs factor depends on the proportion of fixed costs expenses deemed to relate to wages, accommodation expenses and electricity expenses. For this component, these are 80% for wages, 2% for accommodation and 0.5% for electricity. Table 8 shows:
- the price differentials for labour (wages), accommodation and electricity assessed by the Commission. For example, average wages in New South Wales are, for reasons beyond its control, 3.0 per cent higher than average;
 - the proportion of fixed costs expenses that relate to wages, accommodation and electricity expenses;
 - a total price differential — obtained by weighting each price differential by the proportion of the fixed costs expenses it influences; and
 - the 2006-07 fixed costs input costs factor — which is one plus the total price differential.

Table 8 Derivation of fixed costs input costs factor, 2006-07

	Prop'n	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
	%	%	%	%	%	%	%	%	%
Wages	80.0	3.0	-0.5	-2.7	-1.4	-2.2	-4.1	2.5	2.5
Accommodation	2.0	5.0	-19.6	29.4	13.2	-34.2	-41.6	-1.1	-35.8
Electricity	0.5	-1.9	-1.9	-1.9	13.6	2.6	-40.3	-1.9	90.1
Balance of expenses	17.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total price	100.0	2.5	-0.8	-1.6	-0.8	-2.4	-4.3	1.9	1.8
Factor (average = 1.00000)	-	1.02528	0.99212	0.98387	0.99199	0.97579	0.95664	1.01939	1.01769

Box 4: Weighting factors

The Commission weights a factor when it is to be applied to all of a component expense but it only affects part of that expense.

As an example, the fixed costs input costs factor is to be applied to all of the administrative scale expenses, but it only affects the wages (80 per cent), accommodation (2 per cent) and electricity (0.5 per cent) parts of these expenses. So, the Commission weights each subfactor according to the share of expenses it affects.

The formula is:

$$\text{Weighted factor} = \sum_i \text{Weight}_i * \text{subfactor}_i + (100\% - \sum_i \text{Weight}_i) * \text{EPC factor}$$

Where: i = the number of subfactors. For example, wages, accommodation and electricity
 Weight_i = the share of expenses affected by the relevant subfactor

$(100\% - \sum_i \text{Weight}_i)$ = the share of expenses not affected by any of the subfactors (EPC factor = 1.0).

For the fixed costs input costs factor, the formula is:

$$\text{Weighted factor} = 80\% * \text{wages subfactor} + 2\% * \text{accommodation subfactor} + 0.5\% * \text{electricity subfactor} + 17.5\% * \text{EPC factor}$$

Weighting factors according to the proportion of expenses they affect is important. Weighting factors allows the Commission to combine them. After weighting, a percentage increase in one factor has the same impact on expenses as the same percentage increase in any other factor.

- 32 The input cost factor is revised annually to allow for changes in the prices of labour, accommodation and electricity.

Combining administrative scale and fixed cost input cost factors

- 33 Table 9 shows the derivation of the fixed costs component factor. The component factor is calculated by:

- estimating the impact of differences in the unit cost of inputs between States on the fixed costs assessed in Table 7;
- adding this impact to States' fixed costs;
- dividing each State's total fixed costs by its population; and
- calculating the component factor by dividing each States' per capita figure by the average per capita figure.

Table 9 Primary industry, calculation of fixed costs component factor, 2006-07

		NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
A. Fixed costs amount (from Table 7)										
Amount	\$m	4.735	4.735	4.735	4.735	4.735	4.735	1.578	4.735	34.723
B. Differences in price of inputs (from Table 8)										
Difference	%	2.5	-0.8	-1.6	-0.8	-2.4	-4.3	1.9	1.8	0.0
C. Impact of price differences (A * B)										
Amount	\$m	0.120	-0.037	-0.076	-0.038	-0.115	-0.205	0.031	0.084	0.000
D. Total fixed costs (A + C)										
Amount	\$m	4.855	4.698	4.658	4.697	4.620	4.530	1.609	4.819	34.723
Population	m	6.856	5.168	4.136	2.082	1.577	0.492	0.337	0.213	20.859
E. Total fixed costs per capita										
Expenses										
per capita	\$pc	0.71	0.91	1.13	2.26	2.93	9.21	4.78	22.64	1.66
F. Factor (E / E_{Aust})										
Factor		0.42537	0.54610	0.67668	1.35520	1.76039	5.53456	2.87062	13.60272	1.00000
G. Comparison with assessed component factor (administrative scale factor * fixed costs input costs factor)										
Assessed factor		0.42537	0.54610	0.67668	1.35520	1.76039	5.53456	2.87062	13.60272	1.00000

- 34 The calculation shows that it is mathematically equivalent to calculate the component factor by multiplying the administrative scale and fixed costs input costs factors:

$$\text{Fixed costs component factor} = \frac{\text{Administrative scale factor} *}{\text{Fixed costs input costs factor}}$$

DERIVING THE ISOLATION COMPONENT FACTOR

- 35 The isolation costs factor accounts for the additional costs incurred by some States owing to their distances from other State capitals and sources of supply. There is an emphasis on States that are distant from the major cities of Sydney, Melbourne and Brisbane. The factor is also generally confined to costs of movements between State capitals — the effects of distance and population dispersal on the costs incurred in moving people or goods within a State are reflected in the dispersion disability.
- 36 The isolation factor is calculated from the estimated amount it costs each State for isolation expenses. These costs include interstate freight, additional costs of attracting and retaining staff, additional travel for officials to attend meetings and conferences interstate and interstate transport of residents needing medical attention that can not be provided within the State.
- 37 A general method is used to calculate the factor. The method is discussed in Volume 7 of the 2004 Review working papers.
- 38 For 2006-07, the Commission assessed total isolation expenses of \$6.3 million. Table 10 shows the amount assessed for each State and the per capita equivalent. It also shows the isolation factor which is calculated by dividing each States' per capita amount by the average per capita amount.

Table 10 Isolation expenses for primary industry and isolation factor, 2006-07

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
Isolation amount (\$m)	0.085	0.108	0.141	1.138	0.522	0.409	0.125	3.781	6.309
Population (m)	6.856	5.168	4.136	2.082	1.577	0.492	0.337	0.213	20.859
Amount per capita (\$pc)	0.01	0.02	0.03	0.55	0.33	0.83	0.37	17.77	0.30
Factor	0.04081	0.06917	0.11309	1.80761	1.09363	2.75060	1.22840	58.74083	1.00000

- 39 As only one factor is assessed for this component; the isolation component factor is assessed using the formula:

$$\text{Isolation component factor} = \text{Isolation factor}$$

- 40 The isolation factor is revised annually to reflect changes in isolation expenses.

DERIVING THE NATIVE TITLE COMPONENT FACTOR

- 41 The native title factor accounted for the additional costs incurred by the States due to the operation of the Australian Government's *Native Title Act 1993*. Expenses include the costs of administering the legislation and of compensating holders of native titles in settlement of claims. The legislation was the result of a High Court decision on 3 June 1992, which recognised Indigenous people's traditional rights on their land as common law.
- 42 The factor is calculated from the actual amount it costs each State for native title expenses. A general method is used to calculate the factor. The method is discussed in Volume 7 of the 2004 Review working papers.
- 43 For 2006-07, the Commission assessed total native title expenses of \$0.176 million. Table 11 shows the amount assessed for each State and the per capita equivalent. It also shows the native title factor which is calculated by dividing each States' per capita amount by the average per capita amount.

Table 11 Native title expenses for primary industry and the native title factor, 2006-07

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
Native title amount (\$m)	0.002	0.000	0.000	0.000	0.173	0.000	0.000	0.000	0.176
Population (m)	6.856	5.168	4.136	2.082	1.577	0.492	0.337	0.213	20.859
Amount per capita (\$pc)	0.00	0.00	0.00	0.00	0.11	0.00	0.00	0.00	0.01
Factor	0.03706	0.00000	0.00000	0.00000	13.06872	0.00000	0.00000	0.00000	1.00000

- 44 As only one factor is assessed for this component; the native title component factor is assessed using the formula:

$$\text{Native title component factor} = \text{Native title factor}$$

- 45 The native title factor is revised annually to reflect changes in these expenses.

THE ECONOMIC DEVELOPMENT COMPONENT FACTOR

- 46 Some State expenses are directed to support or promote primary industries. The Commission classifies such expenses as 'economic development'. Economic development expenses are separate from regulation and administration expenses for primary industry.
- 47 The Commission considers economic development expenses to be relatively discretionary in nature, and highly policy influenced. Hence, it does not differentially assess these expenses, meaning that a factor of 1.0 applies to all States for this component.

DERIVING THE REGULATION COMPONENT FACTOR

- 48 A proportion of State expenses are directed towards regulation of primary industries. 'Regulation' covers a range of activities that residents would normally expect the State to perform to control the activities of industry, for example to address public health and safety, resource allocation, environmental protection and so on — areas where more general legislative or market signals may not always produce the desired behaviour from industry. There will be considerable commonality from State to State in the types of activities that represent 'regulation', such as business registration, licensing, health inspection and so on.
- 49 The Commission concluded that the size of the regulation task is related to the size of each State's primary industry sector. It assesses an economic environment factor to measure this.
- 50 The Commission concluded that the unit cost of delivering services also varies from State to State because of population dispersion and input costs (the latter covers costs for wages, office space and electricity).

Economic environment factor

- 51 The economic environment factor is influenced by both the number of agricultural establishments and the overall level of economic activity attributable to agriculture, forestry and fisheries. The Commission uses ABS data to measure these influences. Factor income for agriculture, forestry and fisheries is used as a measure of economic activity along with the number of agricultural establishments as published in the ABS's *Agricultural commodities* publication (catalogue 7121.0).
- 52 The economic environment factor for 2006-07 was calculated as follows:
- The number of agricultural establishments per capita in each State was calculated, then divided by the Australian per capita number. This produced the number of agricultural establishments sub-factor;
 - Factor income for agriculture, forestry and fisheries per capita was calculated for each State, then divided by the Australian per capita number. This produced the agriculture factor income sub-factor;
 - The agricultural establishments sub-factor was multiplied by 0.5 to correctly weight it. The factor income sub-factor was similarly multiplied by 0.5 and the two weighted sub-factors were added to produce the economic environment factor.

Table 12 Derivation of economic environment factor for 2006-07

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
Number of agricultural establishments									
Total ('000)	40.1	32.4	27.1	11.9	14.1	3.9	0.1	0.4	129.9
per capita	0.0058	0.0063	0.0066	0.0057	0.0090	0.0079	0.0003	0.0018	0.0062
Sub-factor	0.93841	1.00520	1.05319	0.91869	1.43678	1.26592	0.04100	0.28666	1.00000
Agriculture factor income									
\$m	3893	5085	5544	3085	2374	844	5	353	21183
\$pc	568	984	1341	1482	1506	1717	15	1659	1016
Sub-factor	0.55915	0.96897	1.32003	1.45904	1.48268	1.69040	0.01462	1.63343	1.00000
Sub-factor weights									
No of establishments	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Factor income	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Economic environment factor	0.74878	0.98708	1.18661	1.18887	1.45973	1.47816	0.02781	0.96005	1.00000

Dispersion factor

- 53 The dispersion factor measures the impact of the geographical dispersion of a State's population on its costs of providing services. The extra costs of servicing scattered, remote populations include higher telecommunications, freight, maintenance and travel costs, and those resulting from higher staff turnover and locality allowances.
- 54 Population dispersion was assessed with reference to the capital city, regional centres and urban centres of a State, using State data on dispersion affected expenses. To calculate the dispersion factor, the Commission developed a conceptual model which related per capita dispersion affected expenses to the dispersion of a States' population. The method is discussed in Volume 7 of the 2004 Review working papers and calculation of the factors for primary industry for the 2008 Update can be found in Volume 4 of the 2008 Update working papers.
- 55 Table 13 shows the dispersion factor for the primary industry category in 2006-07.

Table 13 Dispersion factor for primary industry, 2006-07

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
Dispersion factor	0.9793	0.9718	1.0324	1.0423	1.0351	1.0221	0.9283	1.1121

- 56 The dispersion factor is revised annually to reflect changes in the proportion of dispersion related expenses to which the component factors are applied.

Input costs factor

- 57 The input costs factor is assessed to recognise interstate differences, beyond the control of States, in the price of labour, accommodation and electricity used in providing administrative services. It is calculated on a similar basis to the fixed costs input costs factor described earlier in this paper. However, a different weight applies for the wages portion of the input costs factor compared with that for the fixed costs input costs factor.
- 58 The disabilities for the input costs factors are assessed by a common method. The method is discussed in Volume 7 of the 2004 Review working papers.
- 59 The input costs factor depends on the proportion of the regulation component expenses deemed to relate to wages, accommodation expenses and electricity expenses. For this component, these are 60% for wages, 2% for accommodation and 0.5% for electricity. Table 14 shows:
- the price differentials for labour (wages), accommodation and electricity assessed by the Commission. For example, average wages in New South Wales are, for reasons beyond its control, were 3.0 per cent higher than average;
 - the proportion of the regulation component expenses that relate to wages, accommodation and electricity expenses;
 - a total price differential — obtained by weighting each price differential by the proportion of the fixed costs expenses it influences; and
 - the 2006-07 input costs factor — which is one plus the total price differential.

Table 14 Derivation of input costs factor, 2006-07

	Prop'n	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
	%	%	%	%	%	%	%	%	%
Wages	60.0	3.0	-0.5	-2.7	-1.4	-2.2	-4.1	2.5	2.5
Accommodation	2.0	5.0	-19.6	29.4	13.2	-34.2	-41.6	-1.1	-35.8
Electricity	0.5	-1.9	-1.9	-1.9	13.6	2.6	-40.3	-1.9	90.1
Balance of expenses	37.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total price	100.0	1.9	-0.7	-1.1	-0.5	-2.0	-3.5	1.4	1.3
Factor (average = 1.00000)	-	1.01919	0.99309	0.98935	0.99482	0.98016	0.96490	1.01447	1.01260

- 60 The input costs factor is revised annually to allow for changes in the prices of labour, accommodation and electricity.

Combining economic environment, dispersion and input costs factors to produce the regulation component factor

- 61 The formula for calculating the regulation component factor is:

$$\text{Regulation component factor} = \frac{\text{Economic environment factor} *}{(\text{Dispersion factor} + \text{Input costs factor} - 1)}$$

which can be simplified to the following general form:

$$\text{Component factor} = \frac{\text{Quantity of services factor} *}{\text{Unit cost of services factor}}$$

- 62 Sub-factors for dispersion and input costs both affect the unit cost of delivering services. They are added together because each affect different costs — input costs affect labour rates, accommodation and electricity costs while dispersion affects transport, telecommunications and staff turnover costs. The dispersion and input cost factors are not multiplied because the dispersion factor does not directly the same expenses as the input cost factor.
- 63 The economic environment factor measures the size of the regulatory task, and therefore measures the quantity of services needed. The economic environment factor is affected by unit cost factors (input costs and dispersion) since intuitively, the overall assessed cost of delivering services is equal to:

$$\text{Quantity of services} * \text{unit cost of services}$$

- 64 Table 15 shows the derivation of the regulation component factor for 2006-07.

Table 15 Primary industry, calculation of regulation component factor, 2006-07

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
A. Dispersion factor	0.97930	0.97178	1.03238	1.04225	1.03510	1.02207	0.92825	1.11208	1.00000
B. Input costs factor	1.01919	0.99309	0.98935	0.99482	0.98016	0.96490	1.01447	1.01260	1.00000
C. Unit cost factor (A+B-1)	0.99849	0.96486	1.02173	1.03707	1.01526	0.98697	0.94272	1.12469	1.00000
D. Economic environment factor	0.74878	0.98708	1.18661	1.18887	1.45973	1.47816	0.02781	0.96005	1.00000
E. Regulation component factor (C* D)	0.74543	0.94958	1.20880	1.22928	1.47762	1.45458	0.02614	1.07655	1.00000

Note The component factor shown here is the component factor after it has been scaled to ensure total assessed expenses equals average expenses (see Box 4). The component factor shown in Table 19 is the component factor prior to scaling.

Box 4: Scaling factors

Some factor assessments cause total assessed expenses to move away from average expenses. To prevent gaps opening up in the assessments, the Commission scales these factors to ensure total assessed expenses equals average expenses. It also scales component factors.

The scaling procedure is to:

- (i) apply the factor to mean resident population;
- (ii) calculate the total weighted population by summing the weighted population of all States;
- (iii) divide total mean resident population by the total weighted population to give the scaling factor; and
- (iv) multiply each State's factor by the scaling factor.

DERIVING THE NAPSWQ COMPONENT FACTOR

- 65 The Australian Government introduced the National Action Plan for Salinity and Water Quality (NAPSWQ) after agreement by the Council of Australian Governments in November 2000. Agreements have been signed by the Australian Government and all States through which funding is provided, on a matching basis from States. In total, approximately \$1.4 billion has been committed over the initial seven year life of the program. More detail on NAPSWQ is available from the program website (www.napswq.gov.au).
- 66 State NAPSWQ expenses are those related to the costs of managing dryland salinity problems. Soon after the NAPSWQ program was established, an analysis was undertaken to determine the split of funding between States over the life of the program, based on the needs of each State. The Commission has used this funding split to calculate the NAPSWQ factor.
- 67 A single factor is calculated and applied to both the Australian government-funded expenses and those funded on a matching basis by each State. The calculation of the NAPSWQ factor is shown in Table 16. The factor is the relative NAPSWQ expenses per capita in each State.

Table 16 Calculation of the NAPSWQ factor, 2006-07

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
NAPSWQ Australian government contribution (\$m)	198	152	82	158	93	12	0	5	700
Mean resident population 2005-06 (millions)	6.856	5.168	4.136	2.082	1.577	0.492	0.337	0.213	20.859
NAPSWQ Australian government contribution (\$pc)	30.70	32.24	23.22	84.81	61.92	25.42	0	25.77	36.76
Factor (\$pc/\$pc _{Aust})	0.83678	0.87867	0.63293	2.31150	1.68766	0.69364	0	0.70193	1.00000

Note The component factor shown here is the component factor after it has been scaled to ensure total assessed expenses equals average expenses (see Box 4).

- 68 As only one factor is assessed for this component; the NAPSWQ component factor is assessed using the formula:

$$\begin{array}{l} \text{NAPSWQ} \\ \text{component factor} \end{array} = [\text{NAPSWQ factor}]$$

- 69 The raw factor is not updated annually since it is based on the total funding over the life of the NAPSWQ initiative. However, the factor does change each year due to rescaling as a result of differential population growth between States (see Box 4).

DERIVING THE SOIL CONSERVATION COMPONENT FACTOR

- 70 A proportion of State expenses are directed towards soil conservation activities for agricultural industries. The NAPSWQ factor also assesses differences between States related to specific aspects of soil conservation, namely those related to soil salinity. However, there are other soil conservation activities where State expenses are affected by influences not within the State's direct control. Such activities include those to address soil erosion. A separate physical environment factor is assessed to measure the different disabilities faced by States for soil conservation.
- 71 The Commission concluded that the unit cost of providing soil conservation services also varied from State to State because of population dispersion and input costs.

Physical environment factor

- 72 To measure the size of the soil conservation task in each State, the Commission used expenditure by farm establishments on selected Landcare activities that had a bearing on soil conservation. These activities were those dealing with:
- animal pests and weeds;
 - earthworks;
 - fencing; and
 - tree and shrub establishment.
- 73 Data on Landcare expenditure was obtained from the Australian Bureau of Agricultural and Resource Economics (ABARE) which periodically conducts a survey of such expenditure. The most recent survey covered 2004-05², and data from that survey were used in the calculation of the physical environment factor for soil conservation. The Commission noted that this survey data may not have been fully indicative of State government expense needs, and could be influenced by State policies, but it was accepted that they gave a reasonable indication of the relative size of the soil conservation problem in each State.
- 74 The Commission also decided that the overall amount of agricultural activity in a State influenced the effort required on soil conservation. It used factor income for agriculture, forestry and fisheries to measure the overall amount of agricultural activity.

² ABARE will undertake a survey in 2008 to collect data on Landcare expenses. ABARE anticipates this data will become available in early 2009.

- 75 The Commission averaged the sub-factors based on Landcare expenditure and factor income for agriculture, forestry and fisheries. It then discounted the combined factor by 50 per cent recognising that both the Landcare expenditure and agricultural output can also be affected by State policies.
- 76 Calculation of the factor is shown in Table 17. In summary, the factor is calculated as follows:
- The per capita Landcare expenditure on farms was calculated for each State and divided by the Australian average figure to produce the Landcare sub-factor;
 - The per capita amount of factor income for agriculture, forestry and fisheries in each State was calculated and divided by the Australian average figure to produce the agricultural activity sub-factor; and
 - The two sub-factors were weighted by 0.25 and the balance of the category was assessed EPC, to produce the physical environment factor (this is mathematically identical to averaging the two factors then weighting the resultant average by 50 per cent).

$$\text{Physical environment factor} = \frac{(\text{Landcare sub-factor} * 0.25) + (\text{Agricultural activity sub-factor} * 0.25) + 0.5}{2}$$

Table 17 Derivation of the physical environment factor for 2006-07

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
Agriculture factor income									
Total (\$m)	3 893	5 085	5 544	3 085	2 374	844	5	353	21 183
\$pc	568	984	1 341	1 482	1 506	1 717	15	1 659	1 016
Sub-factor (\$pc/\$pc_{Aust})	0.55915	0.96897	1.32003	1.45904	1.48268	1.69040	0.01462	1.63343	1.00000
Selected Landcare expenditure on farms									
Total ('000)	129 798	55 891	73 883	25 211	14 840	6 641	239	1 186	307 687
\$pc	18.93	10.82	17.86	12.11	9.41	13.51	0.71	5.57	14.75
Sub-factor (\$pc/\$pc_{Aust})	1.28347	0.73322	1.21111	0.82087	0.63807	0.91574	0.04814	0.37784	1.00000
Sub-factor weights									
Factor income	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Landcare exp.	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Balance (EPC)	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
Physical environment factor	0.96066	0.92555	1.13278	1.06998	1.03019	1.15154	0.51569	1.00282	1.00000

Population dispersion and input costs factors

- 77 The dispersion and input costs factors are the same as those used in the regulation component factor above. These factors are shown in Table 13 and Table 14.

Combining physical environment, dispersion and input costs factors to produce the soil conservation component factor

78 The formula for calculating the soil conservation component factor is:

$$\text{Soil conservation component factor} = \frac{\text{Physical environment factor} *}{(\text{Dispersion factor} + \text{Input costs factor} - 1)}$$

which can be simplified to the following general form:

$$\text{Component factor} = \frac{\text{Quantity of services factor} *}{\text{Unit cost of services factor}}$$

79 The sub-factors for dispersion and input costs both affect the unit cost of delivering services. They are added together because they affect different costs — input costs affect labour rates, accommodation and electricity while dispersion affects transport, telecommunications, staff turnover costs. A change in the dispersion factor should not directly influence the same expenses as the input costs factor, and therefore they are combined by adding instead of multiplying.

80 The physical environment factor measures the size of the soil conservation task, and therefore measures the quantity of services needed. The physical environment factor is multiplied by unit cost factors (input costs and dispersion) since intuitively, the overall assessed cost of delivering services is equal to:

$$\text{Quantity of services} * \text{unit cost of services}$$

81 Table 18 shows the calculation of the soil conservation component factor for 2006-07.

Table 18 Derivation of soil conservation component factor, 2006-07

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
A. Dispersion factor	0.97930	0.97178	1.03238	1.04225	1.03510	1.02207	0.92825	1.11208	1.00000
B. Input costs factor	1.01919	0.99309	0.98935	0.99482	0.98016	0.96490	1.01447	1.01260	1.00000
C. Unit cost factor (A+B-1)	0.99849	0.96486	1.02173	1.03707	1.01526	0.98697	0.94272	1.12469	1.00000
D. Physical environment factor	0.96066	0.92555	1.13278	1.06998	1.03019	1.15154	0.51569	1.00282	1.00000
E. Soil conservation component factor (C* D)	0.95735	0.89130	1.15516	1.10749	1.04389	1.13433	0.48521	1.12567	1.00000

Note: The component factor shown here is the component factor after it has been scaled to ensure total assessed expenses equals average expenses (see Box 4). The component factor shown in Table 19 is the component factor prior to scaling.

CALCULATING CATEGORY FACTORS

82 Category factors measure the combined impact on a State of those circumstances that are beyond its control and that impact on its cost of providing services to primary industry.

Category factors are calculated by:

- weighting the component factors to reflect the importance of the component in the category. This is done by multiplying each component factor by its component weight (the percentages in Table 19); and
- adding the weighted component factors together.

83 Table 19 summarises the components, component weights and factors, for the category factor for the last year of the 2008 Update (2006-07) and shows the calculation of the category factor for that year.

Table 19 Primary industry, derivation of category factor, 2008 Update, 2006-07

Factors	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
Fixed costs (component weight = 1.24 %)								
Administrative scale	0.41489	0.55043	0.68778	1.36615	1.80407	5.78540	2.81601	13.36631
Input costs	1.02528	0.99212	0.98387	0.99199	0.97579	0.95664	1.01939	1.01769
Component factor	0.42537	0.54610	0.67668	1.35520	1.76039	5.53456	2.87062	13.60272
A Wgtd comp factor	0.00531	0.00682	0.00845	0.01693	0.02199	0.06914	0.03586	0.16993
Regulation (component weight = 51 %)								
Economic environment	0.74878	0.98708	1.18661	1.18887	1.45973	1.47816	0.02781	0.96005
Dispersion	0.97930	0.97178	1.03238	1.04225	1.03510	1.02207	0.92825	1.11208
Input costs	1.01919	0.99309	0.98935	0.99482	0.98016	0.96490	1.01447	1.01260
Component factor	0.74765	0.95240	1.21239	1.23294	1.48201	1.45890	0.02622	1.07975
B Wgtd comp factor	0.38018	0.48430	0.61651	0.62695	0.75361	0.74186	0.01333	0.54906
Economic development (component weight = 34 %)								
EPC	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000
Component factor	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000
C Wgtd comp factor	0.34001	0.34001	0.34001	0.34001	0.34001	0.34001	0.34001	0.34001
Soil conservation (component weight = 4.32 %)								
Physical environment	0.96066	0.92555	1.13278	1.06998	1.03019	1.15154	0.51569	1.00282
Dispersion	0.97930	0.97178	1.03238	1.04225	1.03510	1.02207	0.92825	1.11208
Input costs	1.01919	0.99309	0.98935	0.99482	0.98016	0.96490	1.01447	1.01260
Component factor	0.95920	0.89303	1.15739	1.10964	1.04591	1.13653	0.48615	1.12785
D Wgtd comp factor	0.04137	0.03851	0.04991	0.04785	0.04511	0.04901	0.02097	0.04864
NAPSWQ commonwealth expenses (component weight = 4.6 %)								
NAPSWQ commonwealth expenses	0.83678	0.87867	0.63293	2.31150	1.68766	0.69364	0.00000	0.70193
Component factor	0.83678	0.87867	0.63293	2.31150	1.68766	0.69364	0.00000	0.70193
E Wgtd comp factor	0.03851	0.04044	0.02913	0.10637	0.07767	0.03192	0.00000	0.03230
NAPSWQ state expenses (component weight = 4.6 %)								
NAPSWQ state expenses	0.83678	0.87867	0.63293	2.31150	1.68766	0.69364	0.00000	0.70193
Component factor	0.83678	0.87867	0.63293	2.31150	1.68766	0.69364	0.00000	0.70193
F Wgtd comp factor	0.03851	0.04044	0.02913	0.10637	0.07767	0.03192	0.00000	0.03230

Table 19 Primary industry, derivation of category factor, 2008 Update, 2006-07 (continued)

Factors	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
Native title (component weight = 0.01 %)								
Native title	0.03706	0.00000	0.00000	0.00000	13.06872	0.00000	0.00000	0.00000
Component factor	0.03706	0.00000	0.00000	0.00000	13.06872	0.00000	0.00000	0.00000
G Wgtd comp factor	0.00000	0.00000	0.00000	0.00000	0.00082	0.00000	0.00000	0.00000
Isolation (component weight = 0.23 %)								
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
H Wgtd comp factor	0.00009	0.00016	0.00025	0.00407	0.00247	0.00620	0.00277	0.13242
Category factor	0.84398	0.95068	1.07339	1.24857	1.31933	1.27007	0.41294	1.30466

- (a) Component factors have been scaled so that the sum of assessed expenses equals average expenses — see Box 4.
(b) Category factor is the sum of the weighted component factors. It equals A + B + C + D + E + F + G + H.

RESULTS FOR 2006-07

- 84 Table 28 at the end of this section shows the actual, average and assessed expenses for each State for all years of the 2008 Update.
- 85 Assessed expenses per capita are calculated by multiplying each States' category factor by the average expense per capita. Table 20 shows, for 2006-07, the actual and assessed gross expenses per capita and the assessed cost of providing services ratios. The assessed cost of providing services ratios are the same as the category factors shown in Table 19 expressed as percentages.

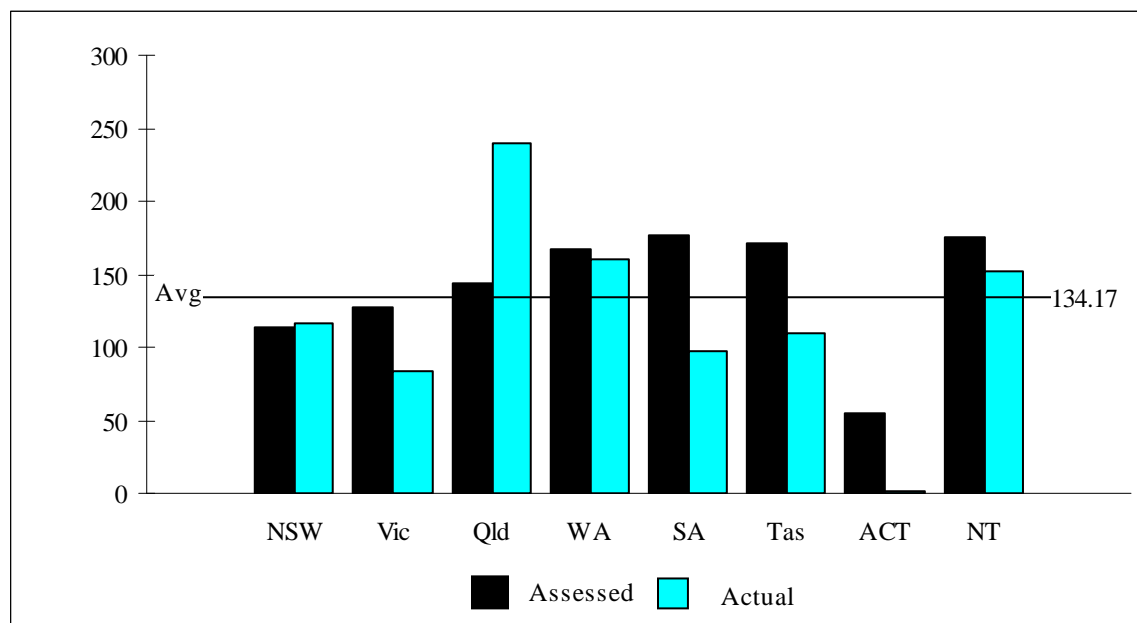
Table 20 Primary industry assessment results, 2006-07

	NSW	Vic	Qld	WA	SA	Tas	ACT(a)	NT	Avg
	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc
Actual expenses	116.4	83.9	240.2	159.9	97.4	110.0	1.6	152.4	134.2
Assessed expenses	113.2	127.6	144.0	167.5	177.0	170.4	55.4	175.1	134.2
	%	%	%	%	%	%	%	%	%
Assessed cost of providing services ratio (b)	84	95	107	125	132	127	41	130	100

- (a) ACT expenses may include municipal transactions.
(b) The cost service provision ratio is the ratio of assessed expenses per capita to average expenses per capita.

- 86 Figure 1 illustrates the actual, average and assessed expenses for services to primary industry for 2006-07.

Figure 1 Primary industry, expenses per capita — assessed, actual^(a) and average, 2006-07



(a) Actual expenses for the ACT may include municipal transactions.

CONTRIBUTION TO GST AND HCG REVENUE DISTRIBUTION.

87 The assessed difference from average in millions of dollars provides an indication of the impact of this assessment on GST and HCG pool shares of States. This can be calculated by:

- subtracting the average expense per capita from each State's assessed expenses per capita; and
- multiplying by each State's population.

88 Table 21 shows this calculation for 2006-07.

Table 21 Assessed difference from average, 2006-07

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
Assessed expenses (\$pc)	113.24	127.56	144.02	167.53	177.02	170.41	55.41	175.05	134.17
Difference from average (\$pc)	-20.93	-6.62	9.85	33.35	42.85	36.24	-78.77	40.88	0.00
Population (m)	6.856	5.168	4.136	2.082	1.577	0.492	0.337	0.213	20.859
Assessed difference from average (\$m)	-143.514	-34.199	40.726	69.440	67.553	17.815	-26.521	8.699	0.000

89 The average assessed expenses for the last five years are used to calculate the GST and HCG pool shares. Table 22 shows the assessed difference from average in millions of dollars for the last five years (2002-03 to 2006-07).

Table 22 Assessed difference from average, 2008 Update

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
2002-03	-77.506	-24.539	15.415	33.011	52.292	13.286	-16.066	4.107	0.000
2003-04	-107.186	-24.310	8.688	66.498	59.431	11.017	-18.842	4.703	0.000
2004-05	-87.108	-22.235	23.165	42.741	43.523	10.828	-16.529	5.616	0.000
2005-06	-115.173	-28.470	15.728	72.233	61.242	11.279	-20.830	3.991	0.000
2006-07	-143.514	-34.199	40.726	69.440	67.553	17.815	-26.521	8.699	0.000
Average	-106.098	-26.750	20.744	56.785	56.808	12.845	-19.757	5.423	0.000

- 90 The impact of the primary industry assessment on the distribution of GST and HCG pool is equal to the average from the table above scaled by the growth in the pool. This impact can be sub-divided to show the effect of each factor.
- 91 Table 23 shows the category's contribution to the distribution of GST and HCG pool. It also shows the contribution of each factor and component.

Table 23 Primary industry, contribution to GST and HCG pool 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	-7.4	-4.2	-2.3	1.5	2.3	4.2	1.1	4.9	13.9
Input costs	0.4	0.0	-0.2	-0.1	-0.1	0.0	0.0	0.0	0.4
Component factor	-7.2	-4.2	-2.4	1.4	2.2	4.0	1.2	5.0	13.8
Regulation									
Economic environment	-98.7	-5.4	40.1	26.5	48.0	12.6	-19.5	-3.5	127.1
Dispersion	-8.6	-8.9	8.2	5.4	3.3	0.7	-1.5	1.5	19.0
Input costs	9.7	-1.1	-4.9	-1.4	-1.9	-1.0	0.3	0.2	10.2
Component factor	-98.5	-15.9	43.4	30.9	49.9	12.0	-19.5	-2.3	136.2
Economic development									
EPC	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
Soil conservation									
Physical environment	-2.5	-2.2	1.9	1.9	1.2	0.3	-0.8	0.1	5.5
Dispersion	-0.7	-0.7	0.6	0.4	0.3	0.0	-0.1	0.1	1.4
Input costs	0.8	-0.1	-0.4	-0.1	-0.2	-0.1	0.0	0.0	0.8
Component factor	-2.5	-3.0	2.1	2.3	1.3	0.3	-0.8	0.2	6.2
NAPSWQ Australian Government expenses									
NAPSWQ Australian Government expenses	-6.6	-3.7	-9.0	16.1	6.3	-0.9	-2.0	-0.4	22.4
Component factor	-6.6	-3.7	-9.0	16.1	6.3	-0.9	-2.0	-0.4	22.4
NAPSWQ State expenses									
NAPSWQ State expenses	-6.6	-3.7	-9.0	16.1	6.3	-0.9	-2.0	-0.4	22.4
Component factor	-6.6	-3.7	-9.0	16.1	6.3	-0.9	-2.0	-0.4	22.4
Native title									
Native title	-0.1	-0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.2
Component factor	-0.1	-0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.2
Isolation									
Isolation	-2.2	-1.6	-1.3	0.6	0.1	0.3	0.0	4.2	5.1
Component factor	-2.2	-1.6	-1.3	0.6	0.1	0.3	0.0	4.2	5.1
Redistribution from EPC resulting from the 2008 Update assessment									
	-123.6	-32.2	24.0	67.4	66.2	14.9	-23.1	6.4	178.9

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

- 92 Table 23 indicates that the disabilities which had the biggest impact on the assessment were:
- the economic environment factor, which recognises the difference in the quantity of services required in each State, as measured by the size of each's agriculture, forestry and fisheries sectors; and
 - the NAPSQ factors, which recognise the differences in soil and water salinity problems between States.
- 93 The category factor reflected the following on a State by State basis.
- 94 ***New South Wales*** — Its negative redistribution is a result of lower per capita costs due to all the assessed factors, particularly the economic environment factor which reflected an agricultural sector that was markedly smaller than average in per capita terms.
- 95 ***Victoria*** — Its negative redistribution is a result of lower per capita costs due to all the assessed factors. Even though Victoria's agricultural sector was smaller than average in per capita terms, it was only slightly below average resulting in a much smaller negative redistribution than that seen for New South Wales.
- 96 ***Queensland*** — Queensland had a positive redistribution. Agricultural activity per capita was above average and a more dispersed population increased assessed costs as well. Soil conservation needs as measured through the physical environment factor were also above average. These were partly offset by lower assessed costs due to lower fixed costs per capita, lower input costs (notably wages) and lower soil salinity problems.
- 97 ***Western Australia*** — The State's positive GST redistribution was due to its larger than average per capita agricultural activity and its above average assessed expenses due to soil salinity. Western Australia also had higher than average fixed costs per capita, population dispersion and isolation costs.
- 98 ***South Australia*** — South Australia had a positive redistribution that was more than a third of the total net positive redistribution for all States combined. This result was due to higher assessed costs due to all factors except input costs where South Australia's below average wage levels led to a cost advantage. The main factor affecting the positive redistribution was economic environment, reflecting above average per capita agricultural activity.
- 99 ***Tasmania*** — Tasmania's positive redistribution was due to higher assessed costs from all factors except input costs (reflecting lower than average wages) and soil salinity. Like South Australia, the positive redistribution was largely due to higher than average per capita agricultural activity.
- 100 ***ACT*** — The ACT had a negative redistribution. Assessed costs were lower for all factors except fixed costs which were above average due to the small population of the ACT. The main influence on the negative redistribution was the very low level of agricultural activity in the ACT per capita.

- 101 *Northern Territory* — It had a positive redistribution. Analysis of individual factors shows that this was due to a combination of positive and negative influences on its assessed costs. The Northern Territory had higher assessed fixed costs per capita, above average isolation expenses and population dispersion. Lower assessed costs due to smaller than average per capita agricultural activity and soil salinity needs only partly offset its cost disadvantages.

CHANGES IN GST AND HCG POOL DISTRIBUTION: 2008 UPDATE COMPARED TO 2007 UPDATE

Effect of assessment on the distribution of GST and HCG pool

- 102 The assessments in each update are based on a five year average of the most recent expense data and indicators of disability. For the 2007 Update, data for the period 2001-02 to 2005-06 were used, and for the 2008 Update the data covered the period 2002-03 to 2006-07. In addition to ‘shifting’ the data window one year forward when performing the next update, data for each year are revised where necessary to account for any changes or corrections since the last update. For example, expense data can be revised by the ABS between the updates. Hence, changes in the distribution of GST and HCG 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.
- 103 The analysis of change between the updates shown in this section is calculated after removing the NAPSWQ SPP amounts from assessed expenses, since the disabilities assessed for the Australian Government component are, over time, intended to be fully funded by the SPPs received by States. The NAPSWQ SPP is included in expenses reported elsewhere in this paper.
- 104 Table 24 shows the distribution of GST and HCG revenue resulting from the assessments in the 2007 Update and the 2008 Update. It also summarises the effect of revisions and the effect of moving the five year window forward showing that, overall, replacing 2001-02 data with 2006-07 data was the main influence on the change between the two updates. The contribution of the revision and replacement effects vary from State to State.

Table 24 Primary industry, 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)	-109.9	-35.4	26.7	56.1	59.9	16.4	-20.8	7.1	166.1
Effect of revising category averages and factors for 2001-02 to 2005-06									
Category average	-0.4	-0.1	0.1	0.1	0.2	0.1	-0.1	0.0	0.5
Category factors	-2.8	1.4	0.7	1.3	0.2	-0.5	0.0	-0.3	3.6
Interactions	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	-3.2	1.3	0.8	1.4	0.4	-0.4	0.0	-0.3	3.9
Effect of replacing 2001-02 category averages and factors with those for 2006-07									
Category average	0.2	0.1	-0.1	-0.1	-0.2	0.0	0.1	0.0	0.4
Category factors	-8.2	2.9	6.1	-0.3	-1.2	0.8	-0.6	0.5	10.3
Interactions	0.1	0.0	-0.1	0.0	0.0	0.0	0.0	0.0	0.1
Total	-7.8	2.9	5.9	-0.4	-1.3	0.8	-0.5	0.5	10.1
Redistribution from EPC resulting from the 2008 Update assessment (a)	-120.9	-31.1	33.4	57.1	58.9	16.8	-21.4	7.3	173.4
Total effect of revisions and updating (b)	-11.0	4.2	6.8	1.0	-1.0	0.3	-0.6	0.2	12.6

(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.

105 Compared with an Equal Per Capita (EPC) assessment, the 2008 Update redistributed \$173.4 million away from New South Wales, Victoria and the Australian Capital Territory to the other States, particularly South Australia. The overall redistribution grew slightly between the updates. The difference in redistribution between updates was \$12.6 million.

106 Table 25 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. The economic environment and soil salinity (NAPSWQ) factors make the largest contributions to the redistribution between this update and the 2007 Update, \$8.2 million and \$7.7 million respectively.

Table 25 Primary industry, 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	0.5	0.2	0.0	-0.1	-0.1	-0.2	0.0	-0.2	0.7
Input costs	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Regulation									
Economic environment	-4.2	0.3	4.4	2.5	-3.9	0.3	-0.1	0.7	8.2
Dispersion	0.0	-0.3	0.2	0.1	-0.1	0.0	0.0	0.1	0.4
Input costs	-1.2	-0.4	1.0	0.3	0.3	0.0	0.0	0.0	1.6
Economic development									
EPC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Soil conservation									
Physical environment	0.7	0.5	0.0	-0.6	-0.7	0.0	0.2	0.0	1.4
Dispersion	0.1	0.1	-0.1	-0.1	-0.1	0.0	0.0	0.0	0.3
Input costs	-0.3	0.0	0.2	0.1	0.1	0.0	0.0	0.0	0.4
NAPSWQ expenses									
NAPSWQ expenses	-2.1	-1.3	-3.2	5.6	2.1	-0.3	-0.7	-0.1	7.7
Native title									
Native title	0.0	0.0	-0.1	0.0	0.0	0.0	0.0	0.0	0.1
Isolation									
Isolation	0.2	0.1	0.1	-0.1	0.0	0.0	0.0	-0.2	0.3

107 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

108 *Revising average expenses.* Table 26 shows the average expenses for the six financial years of the 2007 and 2008 Updates. Overall there was a small upward revision to the average expenses for 2001-02 to 2005-06. This increased the importance of the category to GST distribution but only by a small amount. It increased the amount of GST revenue redistributed in this update by \$0.5 million. The changes increased the amount of GST revenue redistributed to States with above average assessed costs of service provision (Queensland, Western Australia, South Australia, Tasmania and the Northern Territory, although the effect for the Northern Territory was too small to observe).

Table 26 Services to Primary Industry, Average expenses^(a) 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		95.97	86.70	95.06	83.29	96.36	128.00
2007 Update	91.41	96.92	87.47	96.21	80.00	94.92	
Difference	-	-0.96	-0.77	-1.14	3.29	1.43	-

(a) NAPSWQ payments subtracted from average expenses.

109 *Revising category factors.* The second largest impact on the GST redistributions between the updates (\$3.6 million) was caused by revisions to factors, particularly measures of economic activity in the category, which is assessed using primary industry factor income. For most States the changes were small and in the ACT the effect on redistribution rounded to zero. Relative downward revisions of primary industry factor incomes in New South Wales, Tasmania and the Northern Territory reduced the GST distributions of these States. Relative upward revisions of factor income in Victoria, Queensland, Western Australia and South Australia increased of the GST distributions of these States.

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

110 *Replacing average expenses.* Since 2001-02, State spending on this function has increased by 42.4 per cent³, slightly less than growth in the GST pool (43.9 per cent). When growth in State spending is lower than growth in the pool, the category's importance in determining GST shares reduces. States whose assessed service provision costs are above the national average will receive a smaller share of GST revenue than in the previous update. Hence, replacing the 2001-02 average expenses with 2006-07 average expenses has increased the GST revenue distribution to New South Wales, Victoria and the ACT whose service provision costs are below average and reduced the GST revenue shares of Queensland, Western Australia and South Australia. The changes for the other States were small and rounded to zero in Table 24.

³ This is the increase with payments for the NAPSWQ SPP removed from category expenses since the analysis of change is performed on this basis.

Table 27 Primary industry, actual expenses and assessed cost of providing services, 2001-02 and 2006-07 (a)

	NSW	Vic	Qld	WA	SA	Tas	ACT(b)	NT	Avg
	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc
Actual expenses(b)									
2001-02	75.47	80.72	145.73	117.83	91.79	113.19	4.42	156.83	95.97
2006-07	109.87	80.87	238.31	138.72	88.93	107.63	-2.13	150.02	128.00
	%	%	%	%	%	%	%	%	%
Change between 2001-02 and 2006-07(b)									
	45.6	0.2	63.5	17.7	-3.1	-4.9	-148.2	-4.3	33.4
	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc
Assessed expenses									
2001-02	84.28	91.54	101.57	110.38	129.17	120.23	45.12	120.91	95.97
2006-07	106.67	124.56	142.14	146.32	168.54	168.04	51.64	172.66	128.00
	%	%	%	%	%	%	%	%	%
Assessed cost of providing services ratio									
2001-02	88	95	106	115	135	125	47	126	100
2006-07	83	97	111	114	132	131	40	135	100

(a) NAPSWQ payments have been deducted from actual and assessed expenses.

(b) Changes may occur over time in how expenses are classified so trends for individual States should be treated with some caution.

111 *Replacing category factors.* In this update, the assessed costs of providing services increased in Victoria, Queensland, Tasmania and the Northern Territory (Table 27) between 2001-02 and 2006-07. Consequently, replacing the 2001-02 factors with 2006-07 factors increased the GST revenue shares of these States (\$10.3 million), away from New South Wales, Western Australia, South Australia and the ACT. Several factors caused the change. For Queensland, Tasmania and the Northern Territory, there was above average growth in the level of industry activity between 2001-02 and 2006-07 (as measured by factor income), resulting in a higher assessed cost of service delivery. The reverse was true for particularly for New South Wales and South Australia where there was below average growth in economic activity in the sector. The increase in redistribution for Victoria was primarily due to the effect from removing its NAPSWQ payment from the analysis presented here.

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 28 Assessment of expenses, Primary industry

	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		89.50		99.74		87.60		104.17		134.17
New South Wales										
Assessed difference	- 77.506	- 11.65	- 107.186	- 16.02	- 87.108	- 12.94	- 115.173	- 16.96	- 143.514	- 20.93
Expenses - Assessed	517.953	77.85	560.339	83.73	502.696	74.66	592.030	87.20	776.358	113.24
Actual	533.565	80.20	597.992	89.35	386.439	57.40	537.317	79.15	798.308	116.44
Victoria										
Assessed difference	- 24.539	- 5.01	- 24.310	- 4.91	- 22.235	- 4.43	- 28.470	- 5.59	- 34.199	- 6.62
Expenses - Assessed	413.613	84.49	470.019	94.84	417.480	83.17	501.854	98.58	659.148	127.56
Actual	298.708	61.02	403.021	81.32	313.343	62.43	337.395	66.27	433.416	83.87
Queensland										
Assessed difference	15.415	4.09	8.688	2.25	23.165	5.85	15.728	3.88	40.726	9.85
Expenses - Assessed	352.614	93.59	393.960	101.99	369.757	93.46	437.495	108.05	595.619	144.02
Actual	509.521	135.24	532.500	137.86	635.931	160.73	716.075	176.86	993.370	240.20
Western Australia										
Assessed difference	33.011	17.03	66.498	33.79	42.741	21.37	72.233	35.43	69.440	33.35
Expenses - Assessed	206.514	106.53	262.811	133.53	217.945	108.97	284.593	139.60	348.796	167.53
Actual	224.435	115.78	253.052	128.57	260.306	130.15	337.640	165.62	332.968	159.92
South Australia										
Assessed difference	52.292	34.26	59.431	38.68	43.523	28.14	61.242	39.25	67.553	42.85
Expenses - Assessed	188.904	123.76	212.662	138.43	179.013	115.74	223.796	143.41	279.098	177.02
Actual	110.997	72.72	124.016	80.72	122.035	78.90	143.486	91.95	153.576	97.41
Tasmania										
Assessed difference	13.286	27.97	11.017	22.92	10.828	22.33	11.279	23.09	17.815	36.24
Expenses - Assessed	55.804	117.47	58.962	122.66	53.298	109.94	62.163	127.26	83.782	170.41
Actual	59.539	125.33	46.485	96.71	20.156	41.58	34.904	71.46	54.084	110.01
Australian Capital Territory(a)										
Assessed difference	- 16.066	- 49.56	- 18.842	- 57.76	- 16.529	- 50.31	- 20.830	- 62.70	- 26.521	- 78.77
Expenses - Assessed	12.946	39.94	13.695	41.98	12.252	37.29	13.779	41.47	18.655	55.41
Actual	0.000	0.00	1.262	3.87	0.000	0.00	1.225	3.69	0.552	1.64
Northern Territory										
Assessed difference	4.107	20.59	4.703	23.41	5.616	27.49	3.991	19.12	8.699	40.88
Expenses - Assessed	21.957	110.10	24.742	123.15	23.511	115.09	25.734	123.29	37.251	175.05
Actual	33.541	168.18	38.862	193.43	37.743	184.77	33.401	160.03	32.434	152.41

(a) ACT expenses may include municipal transactions.

Note: Refer to Attachment A of the 2008 Update, *Relative Fiscal Capacity of States* for how these figures are compiled.