

ATTACHMENT 9

EXPENSE ASSESSMENTS OVERVIEW

Summary of changes since the 2010 Review

Many individual expense categories have had changes to the methods or data used. The general changes that affect all, or most, expense categories are:

- All administrative scale and native title and lands rights expenditure is now included within the Other expenses category, and not as a separate component in each expense category.
- Where we use remoteness in a category, we use ABS remoteness areas, rather than the State Accessibility and Remoteness Index for Australia (SARIA).
- Where we used SEIFA in the 2010 Review, we propose to use Indigenous and non-Indigenous specific measures of disadvantage where appropriate.

- 1 Expense assessments aim to measure the effects of each State's disabilities (which reflect their economic, geographic and demographic characteristics) on average expenses.
- 2 **Disabilities** are circumstances beyond the control of individual States that require a State to spend more (or allow it to spend less) per capita than other States to provide the average level of service. Disabilities can be broadly classified into two types — use and cost disabilities.
 - **Use disabilities** reflect differences between States in the use of services arising mainly from population characteristics. They are assessed by identifying the users of the service, which may be the whole population, part of the population (for example, students for school services) or the number of businesses. Next, the Commission looks to see if, across Australia, some population groups use the service more or less than others. For example, hospital services are used more intensively by some age groups and by Indigenous people. States are assessed to have a disability if the groups that make most use of a service are a larger proportion of their population than they are of the national population. Conversely, they have an advantage (negative disability) if the size of the group is smaller than the national average.
 - **Cost disabilities** affect the cost per unit of service provided to particular groups of people or regions. For example, higher costs might be incurred in providing services in large cities or in remote areas. States with relatively large

populations in the groups that cost more (or living in regions that cost more) are assessed to have disabilities. Wage rates may also vary between States for reasons beyond the control of individual States and some States face diseconomies of small scale. However, higher costs arising from a State's decision to provide a higher level of service do not constitute a disability.

Summary of assessed disabilities

- 3 Table 1 is a summary of the disability factors assessed in each expenditure category. It does not attempt to give sufficient detail to understand how each category is assessed, but rather shows the drivers captured in each. Details of each category assessment are provided in remaining attachments.

Table 1 Summary of disabilities measured in each expense category

		Disaggregated use attributes					Other disabilities assessed					
Category	Indicator of State shares	Indigeneity	SES	Remoteness	Age	Urban/Rural pop	Non-State sector	Wages costs	Regional costs	Service delivery scale	National capital	Cross-border
Schools education	Student numbers	X	X	X		X	X	X		X		
Post-secondary education	Population	X	X	X	X			X				X
Health	Population	X	X	X	X		X	X	X			X
Welfare	Population	X	X					X	X	X		X
Housing	Households	X	X					X	X			
Services to communities	Population	X				X		X				
Justice	Population	X	X		X			X	X	X	X	
Services to industry	Sector size and number of establishments							X	X			
Roads	Length and use of roads					X		X	X			
Transport	Population					X		X				
Other expenses	Population							X	X		X	X

Note: The Infrastructure assessment recognises relevant category specific use disabilities and a capital cost disability. The impact of population growth is also recognised for investment. Administrative scale costs and Native title and land rights for all categories are now assessed in the Other expenses category. Regional costs, service delivery scale and cross-border may only apply to a proportion of the category. For more information, please refer to each category assessment attachment. The disabilities used in the Infrastructure assessment are described in that attachment.

Depreciation and investment

- 4 The depreciation and investment associated with categories are not included within each category, they are treated separately in the Infrastructure assessment.

Administrative scale and Native title and land rights assessments

- 5 Administrative scale and native title and land rights expenses are integral parts of the expenses associated with delivering each category of services. For example, there are administrative scale type expenses associated with schools education. However, to avoid repetition, we have not replicated these components within each assessment, but have made the assessment once, in the Other expenses category.
- 6 The expense standards in each category have been adjusted, so there is no impact on the GST distribution.
- 7 States wishing to compare their actual expenditures with our assessed expenditure can still do so. In the final report, we will include assessed administrative scale and native title and land rights expenses, disaggregated by category, in the data supporting the calculation of the relativities on the CGC web site.

Change from the 2014 Update

- 8 This draft report does not quantify the change in GST from the 2014 Update to the 2015 Draft Report. We have not done so because we consider such a comparison is misleading. Particularly in expense categories, there are a number of issues that prevent a direct comparison between the 2014 Update and 2015 Draft report.
 - Some issues have not been resolved, and we have placeholders that do not reflect the changes that will be made for the Final report.
 - Some data are not yet available, and so current assessments do not reflect our current intention.¹ This is particularly the case in Justice and Health, where Indigenous specific socio-economic status has not yet been incorporated.
 - Data for all years has not been obtained. Disaggregated population data are only available for 2010-11. We have used this data for other assessment years to ensure the mechanics of our assessments are clear. However, the misalignment of administrative and population data could represent a major bias in some expense categories.

¹ Data received from States after May 2014 have not been incorporated in the expense category tables. These data will however, be incorporated in the final report.

CHANGES SINCE THE 2010 REVIEW

- 9 Where we use remoteness in a category, we use ABS remoteness areas, rather than the State Accessibility and Remoteness Index for Australia (SARIA). Attachment 23 — Regional costs describes the differences between the two classifications, and the implications for that assessment. The change in classifications also affects how we have assessed socio-demographic composition across a range of expense categories.
- 10 Where we used SEIFA in the 2010 Review, we propose to use Indigenous and non-Indigenous specific measures of disadvantage where appropriate. However, this has not yet been reflected in all relevant assessments. This is discussed in Attachment 26 — Indigeneity and category attachments.

ATTACHMENT 10

SCHOOLS EDUCATION

Summary of changes since the 2010 Review

- The assessments now use actual enrolments as the broad measure of use for all age groups with an adjustment to the distribution of students in pre-Year 1.
- ACARA data is used to directly estimate cost weights for Indigeneity, socio-economic status (SES), service delivery scale (SDS) and remoteness contained in State Government funding of government and non-government students.
- Following new policy, State funding of non-government students reflects their socio-demographic characteristics rather than being set as a proportion of funding for the average government student.
- The assessment of expenditure of Commonwealth NERA funding for government schools is based on the average SRS amount for government students in each State to avoid unwinding the recognition of educational disadvantage embedded in the NERA funding arrangements.

WHAT IS INCLUDED IN THE SCHOOLS EDUCATION CATEGORY?

- 1 The Schools education category includes State recurrent spending on:
 - government pre-schools, primary and secondary schools
 - non-government pre-schools, primary and secondary schools
 - student transport services.
- 2 The Commonwealth makes payments to the States to meet a proportion of the cost of government and non-government schools. The expenditure of these payments is included in category expenses.
- 3 All revenues generated from user charges for this category are assessed on an equal per capita basis (EPC) in the Other revenue category. User charges account for less than 2% of category expenses.
- 4 Table 1 shows schools education expenses were \$44.8 billion in 2012-13. The share of schools expenditures in State budgets varied from 16.0% in the ACT to 25.3% in Victoria. The average was 22.3% for all States.

Table 1 Schools education category expenses, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
State funded (\$m)	8 945	7 590	6 511	3 912	2 415	714	471	601	31 160
Commonwealth funded:									
Government schools (\$m)	1 416	993	902	441	320	113	61	67	4 312
Non-government schools (\$m)	2 483	2 043	1 632	805	632	161	142	82	7 980
Student transport (\$m)	732	313	156	103	27	33	3	10	1 377
Total expenses (\$m)	13 576	10 939	9 201	5 261	3 394	1 021	678	760	44 829
Total expenses (\$pc)	1 846	1 925	1 995	2 123	2 042	1 993	1 794	3 194	1 956
Proportion of operating expenses (%)	21.8	25.3	21.7	21.3	22.8	21.6	16.0	16.5	22.3

Source: Commission calculation using Commonwealth budget papers and State data.

- 5 Table 2 shows the share of State expenses directed to schools education rose from 22.2% in 2009-10 to 22.3% in 2012-13.

Table 2 Schools education expenses as a proportion of State operating expenses

	2009-10	2010-11	2011-12	2012-13
Total for category (\$m)	38 343	39 977	41 723	44 829
Total operating expenses (\$m)	172 788	181 377	190 502	201 171
Proportion of total operating expenses (%)	22.2	22.0	21.9	22.3

Source: Commission calculation using ABS Government Finance Statistics (GFS) and State data.

How are services delivered and funded?

- 6 All States provide government schools education services. They also provide the regulatory framework governing non-government schools and financial assistance to them. Around 66% of students attend government schools, although the proportion has been declining in recent years.
- 7 The age at which children typically start school varies slightly. However, all States now provide 13 years of schooling, with a requirement that all students complete Year 10 followed by full-time schooling, training or employment until age 17. This standardisation flows from States adopting a national approach and has reduced the influence of State policies on enrolment numbers.
- 8 All States have agreed to implement a National Curriculum; the Australian Curriculum and Reporting Authority (ACARA) is responsible for its development. ACARA is also responsible for collecting, collating and publishing detailed data on all government and non-government schools in Australia. The data are published on the My School website.
- 9 The Commonwealth and State governments provide funding for government and non-government schools. Both sectors receive additional funding from private sources although for government schools these amounts are not significant.

- 10 States and the Commonwealth provide different shares of funding for government and non-government schools:
 - States provide around 87% of total government recurrent funding for government schools, and the Commonwealth provides 13%
 - States provide around 29% of total government recurrent funding for non-government schools, and the Commonwealth provides 71%.
- 11 Payments by the Commonwealth for non-government schools are paid through the States to non-government schools. The States have no flexibility in how these funds are spent.
- 12 New funding arrangements for schools — the National Education Reform Agreement or NERA — came into effect in 2014. This involves changes to how the Commonwealth determines funding levels for government and non-government schools. It will be based on the Schooling Resource Standard (SRS) which provides a base amount per student and extra loadings for disadvantage, such as:
 - disability
 - low socio-economic background
 - school size
 - remoteness
 - the number of Indigenous students
 - capacity to pay (non-government schools only)
 - lack of English proficiency.
- 13 All States are being funded on this basis.
- 14 The NERA arrangements have changed how some States are funding government schools. New South Wales, Victoria, South Australia, Tasmania and the ACT have made a commitment to implement needs based funding models that align with the SRS and to increase their total level of funding. Queensland, Western Australia and the Northern Territory have not made the same commitment. Nevertheless, all States determine schools funding based on school and student characteristics.
- 15 NERA has also changed how some States are funding non-government schools. New South Wales, Victoria, South Australia, Tasmania and the ACT are committed to funding non-government schools in the same way as government schools. Specifically, non-government school funding is based on school and student characteristics and their total level of funding is determined through a bottom up approach.
- 16 By contrast, the other States determine their total level of funding for the non-government sector based on a per student amount. This is unaffected by the socio-demographic composition (SDC) of their non-government students. Once the

total level of funding is determined, each school's share of the funding pool is based on student and school characteristics.

COMMONWEALTH FUNDING

- 17 The Commonwealth provides funding to States to assist them in meeting their schools education expenses. In addition to the National schools specific purpose payment (SPP) the Commonwealth also provides States with national partnership payments (NPPs).
- 18 In 2014, Students first funding replaced the NERA payments, which rolled together National schools SPP and various school-related NPPs.
- 19 Table 3 details the major Commonwealth payments provided to States for school education services.

Table 3 Commonwealth payments to States for schools, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
National schools SPP (government)	1 291	921	817	406	290	102	60	58	3 945
Early childhood education — universal access to early education	143	113	101	49	32	11	7	6	462
Smarter schools — low socio-economic status school communities	144	67	55	23	39	17	1	17	363
National schools SPP (non-government)	2 483	2 043	1 632	805	632	161	142	82	7 980
Other NPPs	126	86	88	42	32	10	7	44	434
Total	4 187	3 230	2 693	1 325	1 024	300	217	208	13 184

Note: This table includes recurrent payments for the government sector and all payments for the non-government sector.

Source: Commonwealth of Australia's *Final Budget Outcome, 2012-13*.

- 20 A complete list of Commonwealth payments and their treatment is provided in Appendix 2.

CATEGORY STRUCTURE

- 21 The assessment of Schools education expenses is undertaken separately for each of the following components:
 - State funded schools expenses
 - Commonwealth funded government schools expenses

- Commonwealth funded non-government schools expenses
 - student transport services.
- 22 The category structure allows us to assess each of these expenses in a different way.
- 23 We have assessed State funded schools expenses based on the number of students and the observed loadings for some student groups (for example, Indigenous, socio-economically disadvantaged, remote).
- 24 We have assessed Commonwealth funding for government schools separately to allow us to give effect to the terms of reference (ToR) related to the NERA, which instructs us to ensure the recognition of educational disadvantage embedded in the NERA funding arrangements is not unwound by the GST distribution process. This component only includes Commonwealth NERA funding for government schools. Only that part of the interstate distribution of these funds not reflecting educational loadings affects relative State fiscal capacities.
- 25 Commonwealth funding for non-government schools through the National schools SPP (now referred to as Students first funding for non-government schools) is also assessed separately. The National schools SPP for non-government schools is passed on by the States to independent and Catholic schools, and the States have no flexibility in how these funds are spent. This payment is assessed so it does not impact on State fiscal capacities.
- 26 Student transport expenses are assessed in a separate component because the drivers of this spending are different to those for other schools expenses.
- 27 Table 4 shows the assessment structure for the category, the disabilities that are assessed and the size of each component.

Table 4 **Category structure, Schools education, 2012-13**

Component	Component expenses	Disability	Influence measured by disability
	\$m		
State funded expenses	31 160	Socio-demographic composition	Recognises that use and cost of State schools education services differ among different students groups. For government students, this disability also recognises differences in the cost of providing services to different regions within a State.
		Service delivery scale	Recognises the cost of providing government schools education in small population centres.
Commonwealth funded government schools expenses	4 312	Student funding	Recognises differences in use and cost of government schools education services funded by the Commonwealth using the Commonwealth's estimate of cost based on the SRS amount per student in each State.
Commonwealth funded non-government schools expenses	7 980	Actual per capita (APC)	Recognises the differences between States in the distribution of the Commonwealth's funding to the States for non-government schools through the non-government schools SPP.
Student transport	1 377	Student transport	Recognises the differences between States in the cost of providing school transport services to students.

Note: The wages costs factor is applied to State funded expenses and Commonwealth funded government schools expenses.

Source: Commission calculation.

STATE FUNDED SCHOOLS

28 Expenses for this component include:

- State's own expenditure on government schools
- State's own expenditure on non-government schools
- expenditure of Commonwealth payments for government schools outside the NERA funding arrangements.

29 The assessment of these expenses recognises that the number of students is the primary determinant of State schools education expenses and that it is more (or less) costly to deliver services to some groups of students.

30 The ACT said the assessment of State spending should be based on the loadings in the SRS developed under NERA, supplemented by the inclusion of relevant disabilities such as wage costs. However, we do not interpret the ToR in this way and consider this is not 'what States do'. New South Wales said the Commission should assess State schools expenses on an equal per capita (EPC) basis because equalisation is

achieved through the NERA funding arrangements. However, since the States provide a significant proportion of schools funding we do not consider equalisation is fully achieved through the NERA.

Socio-demographic composition

31 The extent of State funding for schools in each State is driven by the number of enrolments, and the presence of those groups of students which are more costly, such as:

- Indigenous students
- socio-economically disadvantaged students
- students in remote areas
- government students.

Enrolments

32 Given that students typically complete 13 years of schooling in all States, we use actual enrolment numbers as the measure of use in this assessment. We have used ABS data on full-time equivalent enrolments from *Schools Australia 4221.0*.¹

33 New South Wales and the ACT supported the use of actual enrolments for all school age groups. Queensland, South Australia and the Northern Territory expressed concerns about the use of actual enrolments for the pre-compulsory years. Western Australia and Tasmania said they did not support the use of actual enrolments because policy differences continue to influence pre- and post-compulsory enrolments.

34 Despite some move towards standardising starting ages, there are still differences in starting age between States. For example, Tasmania has a later starting age than other States and this means it has fewer students aged 5 years and under. However, all States offered 13 years of schooling regardless of their starting age, so while Tasmanian students start school later, they will also finish school later.

35 However, South Australia's pre-year 1 (known as Reception in South Australia) is a larger cohort than for other years. This reflects South Australia's gradual intake policy prior to 2014 which resulted in some students undertaking Reception for more than 12 months. Making an adjustment to remove the impact of policy differences in school starting age is material for South Australia. We have decided to use Year 1 enrolments as a proxy for the pre-Year 1 enrolments to remove policy effects of differences in starting age. South Australia changed its gradual intake policy in 2014.

¹ ABS enrolments are disaggregated by Indigeneity and sector. We have used ACARA data to disaggregate enrolments by remoteness areas, and non-Indigenous students by the Non-Indigenous Socio-economic Index for Areas (NISEIFA).

When this is reflected in the assessment years, we will revert to using actual enrolments in this assessment.

- 36 By using actual enrolments for all age groups (with an adjustment to the distribution of students in pre-Year 1) we are able to more simply capture the differences in the size of the educational task facing States, including the additional cost incurred by the ACT from the use of its education services by New South Wales residents.

High cost students

- 37 We observe that States spend more delivering school services to some groups of students (for example, Indigenous, low SES, remote and government students). This is a reflection of State education policies and resourcing models, and most States agreed our assessment should recognise this.
- 38 We have estimated the additional expenses for some student groups using regression modelling based on ACARA data. We have used ACARA data because it is the most comprehensive and reliable dataset available. The data reflect State decisions in the relevant year and can differ from NERA loadings.
- 39 We developed two separate regression models to examine State spending on different types of students in government and non-government schools to determine the relative costs of different socio-demographic groups in each sector. As such, we have used the same broad approach for government and non-government students.
- 40 This is different to how we assessed non-government student costs in the 2010 Review. In the 2010 Review our approach was to assess the cost of a non-government student as a fixed proportion of the cost of a government student. The assessment reflected our understanding of average policy at that time. Because States have moved to apply loadings in setting non-government schools support, we have used the ACARA data to determine separate cost loadings for non-government students.
- 41 The relative costs of different socio-demographic groups derived from the government and non-government schools regressions are presented in Table 5. In developing our regression model for non-government schools we found that service delivery scale and most remoteness areas were not significant. As such, we have not included those variables in our assessment.

Table 5 Student loadings based on ACARA data (a)

Variable	Government student loadings	Non-Government student loadings
	%	%
Non-Indigenous SEIFA (b)		
Least disadvantaged	100	21
2nd least disadvantaged	104	23
Middle quintile	106	26
2nd most disadvantaged	110	26
Most disadvantaged	116	28
Indigenous	191	56
ARIA		
Major cities of Australia	100	—
Inner regional Australia	107	—
Outer regional Australia	108	—
Remote Australia	128	—
Very remote Australia	151	—
Service delivery scale (SDS)	110	—

(a) The R^2 for the government and non-government regression models were 0.96 and 0.93 respectively.

(b) SEIFA refers to the ABS Socio-economic Indexes for Areas.

Source: Commission calculation using ACARA financial data for 2010 and student and staff data for 2011.

- 42 The regression results provide very different material cost loadings (reflecting educational disadvantage) for government and non-government students.
- For government students we calculated independent loadings for Indigeneity, SES (for non-Indigenous students only), remoteness and SDS. The cost loadings are additive, so an Indigenous student in a very remote government school costs 142% (91% + 51%) more than a non-Indigenous student in a least disadvantaged major city government school.
 - For non-government students, we only identified reliable loadings for Indigenous students, and for non-Indigenous students based on SES. The base case student in a non-government school (non-Indigenous, major city, high socio-economic SES) receives 21% of the State government funding for a similar student in a government school. State spending per Indigenous non-government student is 56% of the spending on a non-Indigenous student in a least disadvantaged major city government school, while a non-Indigenous non-government student in the most disadvantaged socio-economic group costs 28% of a non-Indigenous student in a least disadvantaged major city government school.
- 43 The revealed loadings in State spending differ from the prospective loadings contained in the SRS. Over time, if States move to use NERA loadings, we would expect the loadings to converge.

- 44 **State views.** Some States expressed concerns about the quality of ACARA financial data. While not without problems, we consider the ACARA data represent the most reliable data available for determining costs weights for the Schools assessment. We consider the use of State dummy variables in the model removes most differences between States in accounting standards or other State specific policies.
- 45 Some States said we should include all possible variables such as students from non-English speaking backgrounds (NESB), even if those variables are not used in the assessment.
- 46 We have asked a consultant to review the regression modelling based on ACARA data. The consultant's report will be made available to States when it is finalised.
- 47 Western Australia asked the Commission to consider using Indigenous and non-Indigenous specific measures of SES in the model. We attempted to do this, but the model did not produce reliable estimates for Indigenous SES. We have therefore, only used non-Indigenous specific SES. This is addressed in Attachment 26 — Indigeneity.
- 48 New South Wales said the 'no unwinding' instruction in the ToR and impact of past policy decisions means the Commission should assess State funding of non-government schools on an EPC basis. We consider the 'no unwinding' instruction only relates to Commonwealth funding of government schools and not to States' own funded expenses.

Backcasting

- 49 Changes to States' own funding of schools are expected to result from the NERA funding arrangements, at least for some States. These changes are part of a major change in Commonwealth State relations, and we usually backcast such changes to make the GST distribution more contemporaneous. However, we have not backcast changes to State resourcing models. While we expect the pattern of national spending for schools to change under NERA, we do not have reliable information on the details of each State's new resourcing model, or the rate at which they are evolving. We have decided that what we observe historically is the only reliable measure of State spending patterns, although we intend to use the latest available ACARA data to recalculate student loadings for each update.

Service delivery scale

- 50 We have recognised that States face different service delivery costs in certain parts of the State where the small size and dispersed nature of communities leads to above average staffing levels. These influences are measured in a similar way for most expense categories and the methods are described in the Service delivery scale attachment. We have recognised the influence of service delivery scale (SDS) for

government schools only. The regression modelling indicated that there are no statistically significant SDS effects for non-government schools.

51 Table 6 shows the SDC assessed expenses for 2012-13.

Table 6 Illustrative SDC assessed expenses, State funded component, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
SDC assessed government schools (\$m)	8 970	6 249	6 161	2 975	1 979	734	388	512	27 967
SDS factor	0.998	0.997	1.001	1.003	1.009	1.003	0.994	1.029	1.000
Total SDC assessed government schools (\$m)	8 945	6 228	6 168	2 982	1 996	736	385	526	27 967
SDC assessed non-government schools (\$m)	1 007	814	648	322	247	65	59	30	3 192
Total (\$m)	9 953	7 042	6 817	3 304	2 243	802	445	556	31 160

Source: Commission calculation.

Location

52 We have recognised that differences between States in wage costs have a differential effect on the cost of providing school services across States. These influences are measured in a similar way for most expense categories and the methods are described in Attachment 22 — Wages costs.

53 We do not need to recognise differences in the costs of providing services to government students in different areas within a State as these disabilities are captured by the SDC assessment through remoteness.

54 As indicated in paragraph 41, the regression analysis did not support a cost loading for non-government schools and so we have not assessed any differences in cost within the State for non-government students.

Bringing the State funded schools expenses component together

55 Table 7 shows the total assessed spending for the component in 2012-13.

Table 7 Illustrative State funded schools expenses component, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
SDC assessed (\$m)	9 951	7 032	6 821	3 306	2 241	802	445	561	31 160
Location factor	1.006	0.985	0.986	1.046	0.985	0.971	1.036	1.052	1.000
Total (\$m)	10 012	6 928	6 726	3 456	2 208	778	460	590	31 160
Total (\$pc)	1 361	1 219	1 458	1 395	1 328	1 519	1 218	2 479	1 359

Source: Commission calculation.

COMMONWEALTH FUNDING FOR GOVERNMENT SCHOOLS

- 56 A separate assessment of Commonwealth NERA funding for government school expenses has been included to make it easier to see how we have given effect to the 'no unwinding' instruction in the ToR. The ToR ask the Commission to:
- ... ensure that the GST distribution process will not have the effect of unwinding the recognition of educational disadvantage embedded in the National Education Reform Agreement (NERA) funding arrangements. The Commission will also ensure that no State or Territory receives a windfall gain through the GST distribution from non-participation in NERA funding arrangements.
- 57 Under the current NERA funding arrangements the Commonwealth is providing school funding determined by a base amount per student and loadings for educational disadvantage for particular groups of students; for example Indigenous students. Commonwealth funding of the base and loading amounts vary among States.
- 58 We consider that the ToR requires us to ensure that the impact on State budgets of loadings for educational disadvantage contained in Commonwealth payments for both government and non-government is not unwound. This component deals with how we avoid unwinding the payment for government schools.
- 59 Our proposed assessment of the Commonwealth NERA funding is based on our current understanding of how it will be implemented.
- 60 Our proposed assessment is built so that the impact on State fiscal capacities of Commonwealth payments for government schools will be the difference between what States actually receive and what they would have received had the Commonwealth funds been distributed among States only on the basis of the SRS amounts for different students, and the numbers of such students in each State. The difference reflects factors such as different base funding negotiated between the Commonwealth and States, which should be the subject of equalisation.
- 61 While we ensure that funding for educational disadvantage embedded in Commonwealth funding for government schools is not unwound, we will recognise other cost influences affecting what States need to spend to deliver government schools services, such as the impact of interstate wage cost differentials. We consider that recognising these cost differences does not unwind the impact of loadings for educational disadvantage because these are independent influences determining the allocation of a pool of untied funding.
- 62 Commonwealth payments to States for non-government schools have no impact on the GST distribution because we assess that every State has to spend exactly what it receives from the Commonwealth so that there is no impact on State fiscal capacities. As a result we are not unwinding any of the educational disadvantage embedded in

the payments for these schools. The expenditure of this payment is assessed in the schools education component relating to Commonwealth funding for non-government schools.

- 63 We consider this approach ensures that the impact of funding for educational disadvantage on State budgets is not unwound by the GST distribution.
- 64 **Size of the component.** The Commonwealth government has rolled a number of government school NPPs into the NERA payment. These payments will be combined with the National schools SPP to determine total component expenses in the assessment years. They are:
- Rewards for great Teachers NPP
 - Smarter schools – Low socio economic status school communities NPP
 - Empowering local schools NPP.
- 65 Other NPPs for government schools have not been rolled into the NERA funding. Expenditure of these payments is included in the State funding of government schools component. In 2012 13, these total around \$500 million.
- 66 **Backcasting.** Because we base our recommendations on historical data, to give effect to the no unwinding direction, we will modify the relevant historical data to reflect changed funding arrangements and the assessment approach outlined above.

Calculating component expenses

- 67 The assessment of the expenditure of NERA payments for government schools involves:
- assessing the expenditure of Commonwealth NERA payments based on the average SRS per student in each State calculated by the Commonwealth Department of Education in the application year
 - backcasting the expenditure of the payments applicable in the application year into the assessment years to ensure that no unwinding of educational disadvantage takes place.
- 68 The calculation of component expenses is shown in Table 8.

Table 8 Illustrative Commonwealth SRS based funding, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
SRS amount per student (\$)	14 341	13 870	14 570	16 336	15 133	16 158	12 558	23 608	14 680
Number of enrolments ('000)	747	545	498	245	165	56	36	29	2 321
Notional SRS funding (\$m)	10 711	7 559	7 256	4 000	2 499	911	447	693	34 076
Commonwealth funding of notional SRS funding (%)									12.7
Assessed Commonwealth expense (\$m)	1 355	957	918	506	316	115	57	88	4 312

Note: The SRS amount per student refers to 2014-15.

Source: Commission calculation using SRS funding per student and government student enrolments for each State provided by the Commonwealth Department of Education for 2014 and 2015.

- 69 This approach means we do not 'unwind' the recognition of educational disadvantage embedded in the NERA funding for government schools, but we do 'unwind' the differential transitional paths States have agreed to in bilateral agreements with the Commonwealth, and differential Commonwealth funding proportions.

Location

- 70 We have recognised the differences in wage costs between States in this assessment. These influences are measured in a similar way for most categories. The assessment of wage differences is discussed in Attachment 22 — Wages costs.
- 71 As discussed in paragraph 61, these differences are not captured in the SRS amounts and we consider their assessment to complement, but not unwind, the measures of educational disadvantage.
- 72 We do not need to recognise differences in the costs of providing services in different areas within a State as that is captured by the Commonwealth's loadings for remoteness.

Bringing the component together

- 73 Table 9 shows the total assessed spending for the component.

Table 9 Illustrative Commonwealth funded government schools expense component, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Assessed Commonwealth expense (\$m)	1 355	957	918	506	316	115	57	88	4 312
Location factor	1.006	0.985	0.986	1.046	0.985	0.971	1.036	1.052	1.000
Total (\$m)	1 363	942	905	529	311	112	59	92	4 312
Total (\$pc)	185	166	196	213	187	218	155	387	188

Source: Commission calculation.

2014-15 Budget changes

- 74 In the 2014-15 Budget, the Commonwealth Government announced changes to schools funding. From the 2018 school year onwards, recurrent funding per student will be indexed by the consumer price index. We will continue to assess Commonwealth funding of government students based on the SRS amount until otherwise instructed in the ToR.

COMMONWEALTH FUNDING FOR NON-GOVERNMENT SCHOOLS

- 75 This component includes the expenditure of Commonwealth funding of non-government schools through the National schools SPP which is paid through the States to independent and Catholic schools.
- 76 Since States have no flexibility in how these funds are spent, we consider their receipt and expenditure should not affect the relative fiscal capacities of the States. Accordingly, we have assessed the expenditure of these payments and related revenue from the Commonwealth on an actual per capita basis. As a result, the payments and their expense have no net impact on State relative fiscal capacities. States support this assessment.
- 77 Table 10 shows total assessed spending for the component.

Table 10 Illustrative Commonwealth funded non-government schools expenses component, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Total (\$m)	2 483	2 043	1 632	805	632	161	142	82	7 980
Total (\$pc)	338	359	354	325	380	314	377	346	348

Source: Commission calculation.

STUDENT TRANSPORT

- 78 The average policy of the States is to provide free bus transport for rural students and subsidised transport for urban students. Most State spending on student transport in the Schools category relates to rural students. An assessment of urban student transport expenses recorded in the Schools category is not material. We have decided to assess total student transport expenses in the Schools category based on the number of rural students and the average distance travelled by these students.
- 79 The data used in the assessment are from the 2011 Census. Estimates of average distance travelled have been calculated for all Statistical Area 1's to the nearest urban centre and locality (UCL) of 1 000 or more people. For primary school students we

used a threshold of 60 kilometres and for secondary students 100 kilometres. We then applied the total number of rural students to the average distance travelled. The calculation of the student transport component is shown in Table 11.

Table 11 Illustrative student transport component, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Expenses (\$m)	732	313	156	103	27	33	3	10	1 377
Rural students ('000)	270	187	195	69	70	38	0	18	847
Average distance travelled (km)	12.6	10.5	11.0	12.5	13.3	11.7	6.3	11.2	11.7
Total distance travelled ('000 km)	3 414	1 983	2 165	867	944	443	2	203	10 021
Share of assessed distance (%)	34.1	19.8	21.6	8.6	9.4	4.4	0.0	2.0	100
Total (\$m)	469	272	297	119	130	61	0	28	1 377
Totals (\$pc)	64	48	64	48	78	119	1	117	60

Source: Commission calculation.

- 80 Most States supported the use of 2011 Census data to update the average distance travelled by rural students. New South Wales said the urban student transport assessment based on State shares of urban students is simplistic and should include an allowance for distance travelled, however we have found a differential assessment of urban students is not material and have not made such an assessment. The ACT said the rural student transport assessment is overly simplistic and highly likely to overstate the relative disadvantage in respect of rural students. We agree the assessment is a simplification of 'what States do'. However, we have not identified a reliable and material adjustment that would make it more representative of 'what States do'.

BRINGING THE ASSESSMENT TOGETHER

- 81 Table 12 brings the assessed expenses for each component together to derive the total assessed expenses for each State for the category.

Table 12 Illustrative category assessment, Schools education, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc
State funded schools expenses									
Equal per capita	1 359	1 359	1 359	1 359	1 359	1 359	1 359	1 359	1 359
SDC									
Share of students	1	-22	43	-64	-3	69	64	111	0
Non-government students	8	-30	28	-1	-28	83	-126	129	0
Remote	-10	-12	8	11	6	43	-28	217	0
Indigenous	-5	-46	26	26	-14	29	-30	487	0
SES (Non-Indigenous SEIFA)	9	0	-1	-34	29	48	-100	-85	0
Service delivery scale	-3	-4	2	4	12	4	-8	39	0
SDC total	0	-89	60	11	-13	199	-248	768	0
Location	9	-20	-19	62	-20	-40	48	71	0
Total	1 361	1 219	1 458	1 395	1 328	1 519	1 218	2 479	1 359
Commonwealth funded government schools expenses									
Equal per capita	188	188	188	188	188	188	188	188	188
Commonwealth expense	-4	-20	11	16	2	37	-39	180	0
Location	1	-3	-3	9	-3	-6	7	10	0
Total	185	166	196	213	187	218	155	387	188
Commonwealth funded non-government schools expenses									
Actual per capita	338	359	354	325	380	314	377	346	348
Transport of school children									
Equal per capita	60	60	60	60	60	60	60	60	60
Student transport	4	-12	4	-12	18	59	-59	57	0
Total	64	48	64	48	78	119	1	117	60
Category total	1 948	1 792	2 072	1 981	1 974	2 170	1 750	3 329	1 956

Source: Commission calculation.

Alternative presentation

82 Table 13 provides an alternative presentation using a factor approach. The table shows for each disability how the expenses per capita in each component and in total are affected by differences in State characteristics. Disability factors below one indicate a State is assessed to need to spend less than average. Disability factors above one indicate a State is assessed to need to spend more than average.

Table 13 Category factor, Schools education, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Average
State funded schools education expenses (component weight = 70%)									
SDC	0.995	0.910	1.088	0.981	0.992	1.152	0.865	1.734	1.000
Location	1.006	0.985	0.986	1.046	0.985	0.971	1.036	1.052	1.000
Component factor	1.001	0.897	1.073	1.026	0.977	1.117	0.896	1.823	1.000
A. Weighted factor	1.001	0.928	1.050	1.018	0.984	1.082	0.928	1.572	1.000
Commonwealth funded government schools expenses (component weight = 10%)									
Commonwealth expense	0.979	0.895	1.058	1.086	1.011	1.196	0.795	1.957	1.000
Location	1.006	0.985	0.986	1.046	0.985	0.971	1.036	1.052	1.000
Component factor	0.985	0.881	1.043	1.134	0.996	1.160	0.823	2.057	1.000
B. Weighted factor	0.999	0.989	1.004	1.013	1.000	1.015	0.983	1.102	1.000
Commonwealth funded non-government schools expenses (component weight = 18%)									
Actual per capita	0.970	1.032	1.016	0.933	1.091	0.902	1.082	0.993	1.000
C. Weighted factor	0.995	1.006	1.003	0.988	1.016	0.983	1.015	0.999	1.000
Student transport (component weight = 3%)									
Student transport	1.062	0.798	1.073	0.800	1.299	1.979	0.012	1.952	1.000
D. Weighted factor	1.002	0.994	1.002	0.994	1.009	1.030	0.970	1.029	1.000
Category factor	0.996	0.916	1.060	1.013	1.009	1.110	0.895	1.702	1.000

Source: Commission calculation.

INFLUENCES NOT ASSESSED IN THIS CATEGORY

Low English Fluency

- 83 Our regression model does not include a low English proficiency variable despite the fact that the SRS includes an allowance for students with low English fluency. New South Wales and Victoria said Language Background Other Than English (LBOTE) should have been included.
- 84 We believe the LBOTE population is more heterogeneous than other groups and that some LBOTE students attract higher than average State spending, but others attract lower than average spending. We are not convinced adding an LBOTE indicator would lead to a better equalisation outcome so the variable was excluded. This is consistent with our decision not to assess cultural and linguistic diversity in any assessment as discussed in Attachment 28 — Other disabilities.

Students with a disability

- 85 We recognise that students with a disability are more costly to educate, however, there is no agreed definition of students with disabilities. We have not assessed a cost weight for these students in the assessment of State funded schools expenses. As

with other measures of educational disadvantage, loadings for disabled students in the Commonwealth funding are not unwound.

- 86 Over time, if better data on State spending on disabled students becomes available, we may be able to include loadings for these students in our assessments.

WHAT IS THE IMPACT ON THE GST DISTRIBUTION?

- 87 Table 14 shows the extent to which the assessment for this category moves the distribution of the GST away from an equal per capita distribution. It shows that GST revenue is redistributed to New South Wales, Queensland, Western Australia, Tasmania and the Northern Territory and away from Victoria, South Australia and the ACT.

Table 14 Illustrative GST impact, Schools education, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Dollars million	19	-994	512	120	-23	127	-89	327	1 106
Dollars per capita	3	-175	111	49	-14	248	-234	1 375	48

Note: This estimate excludes the impact of Commonwealth payments for non-government schools.

Source: Commission calculation.

- 88 The main reasons for these redistributions are the differences between States in the proportions of their populations in the groups that are more costly users of school services. High or costly users of schools services are Indigenous people, people living in remote regions and non-Indigenous people living in areas of relative disadvantage (that is, low SES areas).
- 89 The main reasons for the redistributions for each State are:
- New South Wales has about average profile of students and needs to spend about average
 - Victoria has a lower than average share of enrolments as well as below average proportions of high cost government, Indigenous and remote students
 - Queensland has an above average share of enrolments as well as above average proportions of high cost government and Indigenous students
 - Western Australia has above average proportions of Indigenous and remote students as well as above average wage costs, and this more than offsets its below average share of enrolments and above average proportion of low cost least disadvantaged students
 - South Australia's low cost due to its above average proportion of non-government students and low assessed wages costs is largely offset by its high cost disadvantaged students and students in service delivery scale affected areas

- Tasmania has a high proportion of government students, remote students and most disadvantaged students, which is reflected in the high assessed spending by both the State and Commonwealth governments on Tasmania's students
- The ACT has a below average proportion of high cost government and most disadvantaged students and no assessed spending on transport of school children which more than offsets its above average proportion of enrolments due to the presence of New South Wales students in ACT schools
- The Northern Territory has significantly larger than average proportions of high cost government students, Indigenous students, remote students and students in service delivery scale affected areas, which is reflected in the high assessed spending by both the State and Commonwealth governments on the Northern Territory's students.

90 Table 15 provides a summary of the major reasons the assessment moves GST revenue away from an EPC distribution.

Table 15 Major reasons for difference from EPC, Schools education, illustrative, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
State funded	13	-798	455	87	-51	82	-54	267	903
Commonwealth funded government schools	-21	-127	37	63	-1	15	-13	47	162
Commonwealth funded non-government schools	0	0	0	0	0	0	0	0	0
Student transport	27	-69	20	-30	30	30	-22	14	121
Total	19	-994	512	120	-23	127	-89	327	1 106

Note: The impact attributed to the non-government schools SPP is the net impact of the assessment. In practice, there are two effects which are equal and offsetting; one is included in this assessment and the other in the Commonwealth payments assessment.

Source: Commission calculation.

CHANGES SINCE THE 2010 REVIEW

91 There are a number of category-specific method changes since the 2010 Review. We have:

- used actual enrolments as the broad measure of use for all age groups with an adjustment for policy differences for pre-Year 1 students, whereas in the 2010 Review we calculated a policy neutral number of pre- and post-compulsory students
- used regression analysis based on ACARA data for government schools to estimate cost weights for Indigeneity, SES for non-Indigenous students, SDS and

remoteness, rather than using State data on additional spending targeted at these groups

- used regression analysis of ACARA data for non-government schools to estimate cost weights for Indigeneity and non-Indigenous SES rather than assessing non-government students as costing a fixed proportion of the assessed cost of government students in each State
- assessed the expenditure of Commonwealth NERA funding for government schools based on the average SRS amount for government students in each State to avoid unwinding the recognition of educational disadvantage embedded in the NERA funding arrangements
- updated the average distance travelled by rural students in the student transport assessment using data from the 2011 Census
- applied the assessment of transport of rural school children for all student transport expenses because a separate assessment of urban transport of school children was not made.

ATTACHMENT 11

POST-SECONDARY EDUCATION

Summary of changes since the 2010 Review

- Vocational education and training expenses previously recorded in Services to industry have been moved to this category.
- The assessment now recognises non-remote Indigenous and non-Indigenous people from low socio-economic backgrounds use post-secondary education services more.
- The differential use and cost of people who do not speak English at home is no longer assessed.

WHAT IS INCLUDED IN THE POST-SECONDARY EDUCATION CATEGORY?

- 1 This category includes State expenses on vocational education and training (VET) and higher education.
 - Vocational education and training is mainly provided by technical and further education (TAFE) institutes and privately-run registered training organisations (RTOs) although some universities provide VET services.
 - Higher education services are provided mainly by universities. However, some higher education services are provided by TAFE institutes.
- 2 VET expenses previously included in Services to industry are now included in this category. Most of these expenses relate to government funded training hours provided by private RTOs. In 2012-13, about \$1.0 billion were added to post-secondary expenses due to this reclassification.¹ States supported this change.
- 3 All revenues generated from user charges are assessed equal per capita (EPC) within the Other revenue category. The reasons are discussed later in the attachment.

¹ Government funded vocational training provided by private RTOs are already included in the National Centre for Vocational Education Research (NCVER) contact hours data used to assess service use in this category.

- 4 Table 1 shows gross category expenses were \$7.4 billion in 2012-13. On average, States spend around 3.7% of their budgets on post-secondary education services but the proportion varies from 2.1% in Queensland to 6.4% in Victoria.

Table 1 Post-secondary education expenses, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Category expenses (\$m)	1 916	2 773	903	842	528	148	109	131	7 350
Category expenses (pc)	260	488	196	340	318	289	289	549	321
Proportion of operating expenses (%)	3.1	6.4	2.1	3.4	3.6	3.1	2.6	2.8	3.7

Source: Commission calculation using State data.

- 5 Table 2 shows the share of State expenses directed to post-secondary education services remained unchanged at 3.7% between 2009-10 and 2012-13.

Table 2 Post-secondary education expenses as a proportion of State operating expenses

	2009-10	2010-11	2011-12	2012-13
Total for category (\$m)	6 436	6 866	7 198	7 350
Total operating expense (\$m)	172 788	181 377	190 502	201 171
Proportion of operating expenses (%)	3.7	3.8	3.8	3.7

Source: Commission calculation using ABS Government Finance Statistics (GFS) data and State data.

How are services delivered?

- 6 Most State provision of post-secondary education services is for VET, with only about 4% of funding provided to universities. States provide most VET services through networks of TAFE institutes and RTOs. The campuses used for service delivery are widely dispersed in all States. States with dispersed, small communities provide services in many of those communities.
- 7 States are increasingly using private RTOs to deliver subsidised training. Table 3 shows the share of government funded contact hours provided by private RTOs increased from 13.9% in 2008 to 32.0% in 2012.

Table 3 Proportion of State funded contact hours by provider type, 2008 to 2012

	2008	2009	2010	2011	2012
	%	%	%	%	%
TAFE and other government providers	86.1	85.6	80.1	71.1	68.0
Private RTOs (a)	13.9	14.4	19.9	28.9	32.0

Notes: Includes community education providers.

Source: National Centre for Vocational Education Research (NCVER), 2012.

COMMONWEALTH FUNDING

- 8 State provided technical and further education services are met by a number of funding sources including State-own source revenue, Commonwealth payments, user charges and the GST. The majority of expenses funded by Commonwealth payments are assessed in the same way as State funded expenses and the actual revenue from the payments is treated as an offset to the assessed expenses. The main payment is the National skills and workforce development specific purpose payment (SPP) which provided \$1.4 billion for the States in 2012-13.
- 9 Table 4 details the major Commonwealth payments provided to States for post-secondary education.

Table 4 Commonwealth payments to States for post-secondary education services, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
National skills and workforce development SPP	452	344	275	145	102	32	23	14	1 388
Building Australia's workforce - skills reform	77	59	49	25	17	5	4	2	238
Other NPPs	20	32	17	7	5	2	2	1	87
Total	549	435	340	178	125	39	29	18	1 712

Source: Commonwealth of Australia's *Final Budget Outcome, 2012-13*.

- 10 A complete list of Commonwealth payments and their treatment is provided in Appendix 2.
- 11 The Commonwealth provides the vast majority of funding for higher education. It also provides support for students by way of income support payments, loans and fee deferrals. Total Commonwealth funding for higher education was \$8.7 billion in 2012-13. Commonwealth higher education expenses are not included in the Post-secondary assessment and they do not impact on States' assessed fiscal capacities.

CATEGORY STRUCTURE

- 12 The assessment of the Post-secondary education category is undertaken in one component. Table 5 shows the assessment structure for the category, the disabilities that are assessed and level of spending.

Table 5 **Category structure, Post-secondary education, 2012-13**

Component	Component expense	Disability	Influence measured by disability
	\$m		
Post-secondary education	7 350	Socio-demographic composition	Recognises that certain population characteristics affect the use and cost of providing post-secondary education services.
		Cross-border	Recognises the cost to the ACT of providing post-secondary education services to New South Wales residents.
		Location	Recognises differences in wage costs between States.

Source: Commission calculation.

SOCIO-DEMOGRAPHIC COMPOSITION

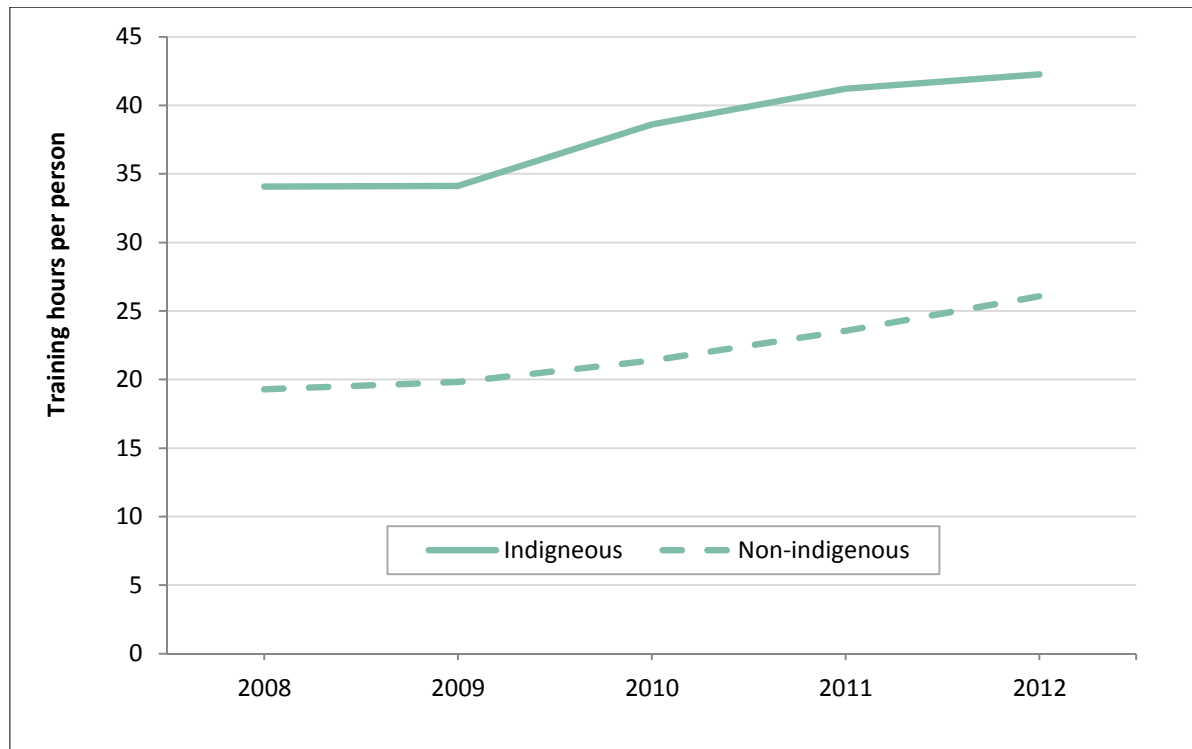
13 Post-secondary education is primarily aimed at people in the working age group of 15 to 64 years. The Commission uses this population as the broad measure of use for these services. However, within the working age population there are different intensities of use by some sub-groups, such as:

- Indigenous people
- people in non-remote areas
- socio-economically disadvantaged persons.

Indigeneity

14 Figure 1 shows State funded training hours per Indigenous and non-Indigenous person of working age. Indigenous people use services at nearly twice the rate of non-Indigenous people. In addition, the assessment recognises that it is more costly to deliver services to Indigenous students. As a placeholder we have applied the same cost weight (30%) used in the 2010 Review. We intend to update this weight using recently supplied State data for 2010 to 2012, prior to the final report.

Figure 1 State funded training hours per person by Indigenous status, 2008 to 2012

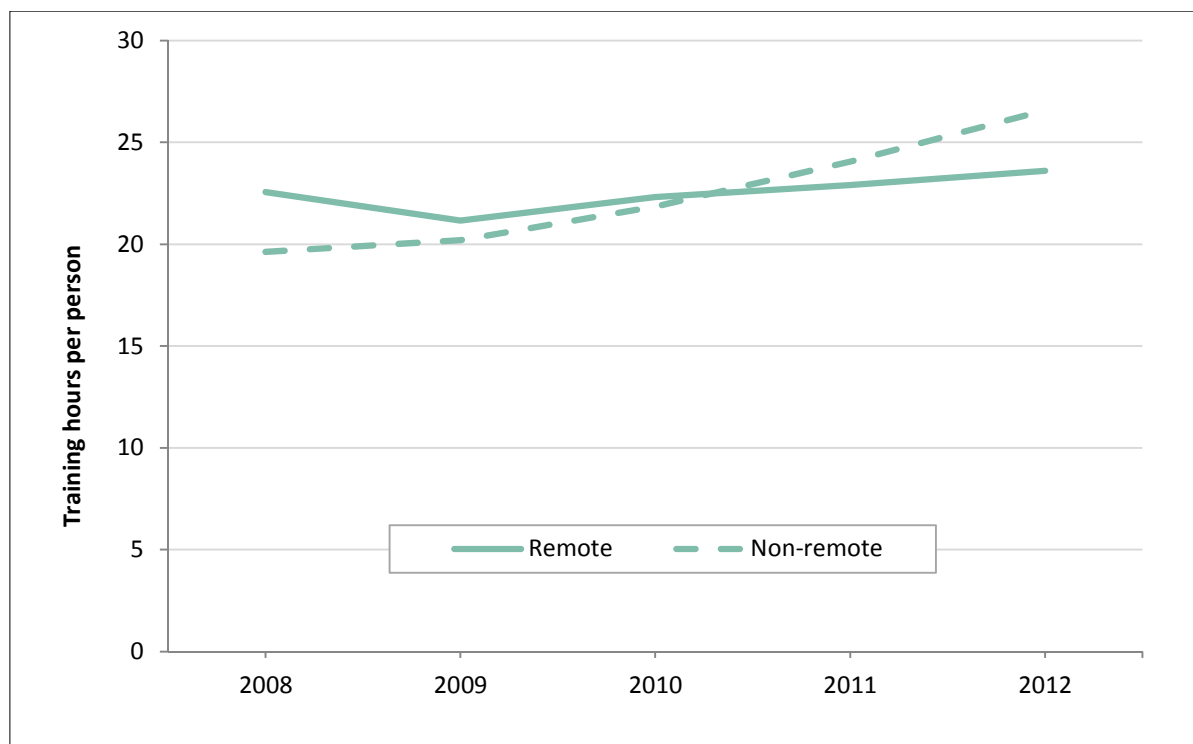


Source: NCVER data and ABS population estimates.

Where people live

- 15 Figure 2 shows State funded training hours per person by remoteness. Remote and non-remote people have different use rates but the relationship between these sub-groups has changed. In 2011 and 2012, non-remote students tended to use post-secondary education services more intensively than remote students. Prior to 2011, remote students used the services more intensively. This change was driven by strong growth in post-secondary education services in Victoria where the number of contact hours doubled between 2008 and 2012 following the introduction of the Victorian Training Guarantee (VTG). Over the same period, training hours for the remaining seven States grew by 20%.
- 16 The assessment also recognises that it is more costly to deliver services to students attending remote institutions. As a placeholder we have applied the same cost weight (35%) used in the 2010 Review. We intend to update this weight using recently supplied State data for 2010 to 2012, prior to the final report.

Figure 2 State funded training hours per person by remoteness, 2008 to 2012



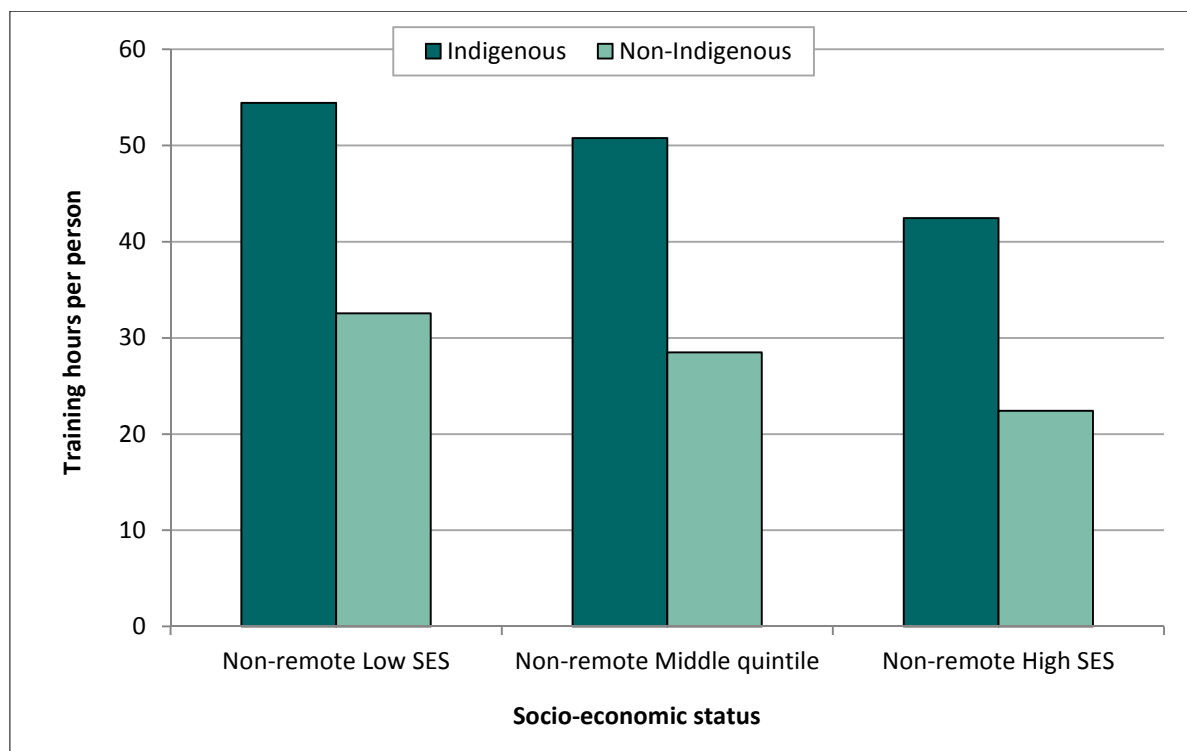
Source: NCVER data and ABS population estimates.

- 17 Regional location bands have been based on two groups — remote and non-remote. Remote includes contact hours for people living in the ABS remoteness areas remote and very remote. All other hours are classified as non-remote.

Socio-economic disadvantage

- 18 Use rates for post-secondary education are higher for Indigenous and non-Indigenous people from low socio-economic status (SES) areas in non-remote Australia. This is shown in Figure 3. However, our analysis does not reveal a discernible pattern of usage for people from different SES regions who live in remote areas. As such, we consider that disaggregating remote areas by socio-economic status is not warranted.

Figure 3 State funded non-remote training hours per persons by SES, 2012



Note: Indigenous SES based on IRSEO and non-Indigenous SES based on NISEIFA.

Source: NCVER data.

- 19 Attachment 26 — Indigeneity, explains that our strategy for measuring SES is using Indigenous and non-Indigenous specific measures. We use the Non-Indigenous Socio-economic Indexes for Areas (NISEIFA) and Indigenous Relative Socio-Economic Outcomes (IRSEO) Index for non-Indigenous and Indigenous people respectively. We have used three bands for each index: the two most disadvantaged quintiles, the middle quintile and two least disadvantaged quintiles.

Calculating the socio-demographic composition assessment

- 20 The level of State spending on post-secondary education services is related to the socio-demographic characteristics described above. The assessment of socio-demographic composition (SDC) is derived using NCVER data on government funded contact hours for people aged 15 to 64 years disaggregated by Indigeneity, SES and remoteness. Data on the additional costs of remoteness and Indigeneity were obtained from the States and State population data are provided by the ABS. Table 6 shows the assessed spending for each population group for 2012-13.

Table 6 National spending on post-secondary students aged 15-64, 2012-13

Socio-demographic composition	Allocated expenses	Expenses per person
	\$m	\$pc
Indigenous		
Non-remote low SES	101	1 220
Non-remote middle quintile	82	1 138
Non-remote high SES	154	952
Remote	91	1 013
Non-Indigenous		
Non-remote low SES	3 118	561
Non-remote middle quintile	1 422	491
Non-remote high SES	2 276	386
Remote	106	401

Source: Commission calculation using NCVER data and ABS population data.

Cross-border

- 21 The NCVER data allows the Commission to determine the annual hours each State provides to residents of other States. For most States the cross-border provision is not material but it is material for the ACT. In 2012, 16.8% of the annual contact hours for the ACT were provided to residents of New South Wales. The assessment reflects net cross-border use by New South Wales residents in the ACT.

Location

- 22 We have recognised that differences between States in wage costs have a differential effect on the cost of providing post-secondary education services. These influences are measured in a similar way for most expense categories and the methods are described in Attachment 22 — Wages costs.
- 23 We do not need to recognise differences in costs of providing services to different areas within a State as these disabilities are captured in the allowances for remoteness discussed above.

BRINGING THE ASSESSMENT TOGETHER

- 24 Table 7 shows the total assessed expenses.

Table 7 Illustrative category assessment, Post-secondary education, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc
Equal per capita	321	321	321	321	321	321	321	321	321
SDC	2	-7	3	-10	8	21	-28	85	0
Cross-border	-2	0	0	0	0	0	46	0	0
Location	2	-4	-4	14	-4	-9	11	16	0
Total	322	310	320	324	324	332	346	426	321

Source: Commission calculation.

Alternative presentation

- 25 Table 8 provides an alternative presentation using a factor approach. The table shows for each disability how the expenses per capita are affected by differences in State characteristics. Disability factors below one indicate a State is assessed to need to spend less than average. Disability factors above one indicate a State is assessed to need to spend more than average.

Table 8 Illustrative category factor, Post-secondary education, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Average
Post-secondary education (component weight = 100%)									
SDC	1.006	0.980	1.010	0.970	1.024	1.066	0.913	1.266	1.000
Cross-border	0.993	1.000	1.000	1.000	1.000	1.000	1.144	1.000	1.000
Location	1.006	0.986	0.987	1.043	0.986	0.973	1.033	1.049	1.000
Category factor	1.004	0.967	0.997	1.011	1.010	1.037	1.079	1.328	1.000

Source: Commission calculation.

Influences not assessed in this category

Impact of the non-State sector

- 26 Private RTOs are playing an increasingly important role in the delivery of services. On average private RTOs accounted for about 32% of government funded training hours in 2012 compared with 14% in 2008. Table 9 shows that the growth in private training hours since 2008 has been concentrated in Victoria, and to a lesser extent, Queensland and South Australia.
- 27 If this reflected the difference in the economic structure of the States, or the preferences of the population, then having a large private sector would alleviate the need for States to provide services, and we would assess the impact, just as we assess the impact of the size of the private school market in the Schools category. However, if the difference reflects differences in State policy towards private sector providers,

we would treat that as a policy choice rather than a disability, and it would not affect our assessment.

- 28 Table 9 shows that over a five year period Victoria changed from having the third lowest level of private provision to the highest. This change coincided with major reforms to Victoria's post-secondary system. The Victorian Department of Education consider that 'as a result of this reform trajectory, training activity now increasingly occurs outside of publicly owned TAFE institutes.' There are major differences between States in how they choose to offer VET services, and we consider that this difference is the primary reason for differences in the level of private provision, both over time, and between States. As such, we have concluded that the distribution of privately provided training hours reflects State policy choice and not any underlying disability.

Table 9 Proportion of private RTO hours by State, 2008 to 2012

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	%	%	%	%	%	%	%	%	%
2008	8.6	13.2	15.1	12.1	19.1	17.1	24.8	27.0	12.5
2012	10.5	47.8	36.9	20.3	41.7	24.0	26.4	40.2	32.0

Source: NCVER.

Qualification level, course mix or Industry mix

- 29 Victoria said differences in course mix influenced how much they spend. The NCVER provides student numbers by qualification level and course and industry mix. We asked States to provide cost data on this basis to see if differences between the States in course mix influenced how much they spend. A number of States said they do not have information on costs by qualification level or course mix, and if they did the data would not be comparable between States. Consequently, no allowance has been made for differences in qualification level, or course and industry mix.

User charges

- 30 States meet some post-secondary costs through user charges. In 2011-12, user charges were about \$1.5 billion, comprising fees for training services provided to government, businesses and individuals (including foreign students). Table 10 shows that on average, States recover around 21% of the cost of providing post-secondary education services. Cost recovery rates vary between States. Victoria recovers around 27% of costs while the Northern Territory recovers around 5%.

Table 10 User charges, Post-secondary education, 2011-12

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Expenses (\$m)	1 916	2 773	903	842	528	148	109	131	7 350
User charges (\$m)	330	664	257	157	86	18	23	6	1 541
Ratio (%)	17.2	23.9	28.5	18.6	16.3	12.1	21.1	4.6	21.0

Source: ABS Government Finance Statistics.

- 31 The low recovery rate in the Northern Territory and high recovery rate in Victoria suggest that there may be a different recovery rate for Indigenous students and non-Indigenous students. As such, we consider that it is likely the drivers of revenue are somewhat different to the drivers of expenses, and netting the revenue off would be inappropriate. We have not identified any data source that would identify the revenue raised from different groups of students which we would require for a differential assessment of user charges. As such we have assessed the revenue EPC within the Other revenue category, although acknowledge that some disabilities we have assessed, such as cross-border influences, are likely to affect States' capacity to raise revenue from this source.

WHAT IS THE IMPACT ON THE GST DISTRIBUTION?

- 32 Table 11 shows the extent to which the assessment for this category moves the distribution of the GST away from an equal per capita distribution. It shows that GST revenue is redistributed away from Victoria and Queensland to the other States, mainly the Northern Territory.

Table 11 Illustrative GST impact, Post-secondary education, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Redist
Dollars million	10	-61	-4	9	5	6	10	25	65
Dollars per capita	1	-11	-1	4	3	12	25	105	3

Source: Commission calculation.

- 33 The main reasons for these redistributions are the differences between States in the proportions of their populations in the groups that are high or costly users of post-secondary education services. High or costly users of these services are Indigenous people, people living in non-remote regions and people from a low socio-economic background.
- Victoria is assessed as needing to spend less than the average because of its below average shares of most high use or cost population groups (Indigenous and low SES) and below average wage levels.
 - Queensland is assessed as needing to spend slightly below average because of its below average wages and a below average share of high use low SES population groups.

- Western Australia is assessed as needing to spend more mainly because of its above average share wage costs which more than offsets its above average share of low use high SES population groups and below average share of high use low SES users.
- The ACT is assessed as needing to spend more mainly because it has relatively high wage costs and provides services to New South Wales residents.
- New South Wales, South Australia and Tasmania are assessed as needing to spend more because of their above average shares of low SES people.
- The Northern Territory's high expenses are driven by its above average share of nearly all high cost student groups.

34 Table 12 provides a summary of the major reasons the assessment moves State GST revenue away from an equal per capita distribution.

Table 12 Major reasons for difference from EPC, Post-secondary education, illustrative, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Redist
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
SDC	13	-37	15	-24	13	11	-11	20	72
Cross-border	-18	0	0	0	0	0	17	0	18
Location	14	-25	-19	34	-7	-5	4	4	56
Total	10	-61	-4	9	5	6	10	25	65

Source: Commission calculation.

CHANGES SINCE THE 2010 REVIEW

- 35 Vocational education and training expenses recorded in government purpose classification (GPC) 1331 have been moved from the Services to industry category to this category.
- 36 In responding to the priority issue for Indigeneity in this review we examined service use among different groups of Indigenous and non-Indigenous people. We observed that non-remote Indigenous and non-Indigenous people from low SES backgrounds use post-secondary education services more. Introducing this characteristic has changed the pattern of assessed use.
- 37 **Low English fluency.** In the 2010 Review, we assessed low English fluency in this category.
- 38 We investigated whether a low English fluency assessment is still warranted. Our analysis of the latest NCVER data showed that non-Indigenous people with low English fluency (for example, recent migrants) use post-secondary education services

at a slightly lower rate than other non-Indigenous people and an assessment would redistribute less than \$2 per capita for any State.

- 39 As is discussed in Attachment 26 — Indigeneity, we have decided that the Commission’s standard approach to identifying differences in the socio-demographic makeup of Indigenous people in different States is to use the IRSEO. This should capture any differences in service use for the Indigenous population arising from low English fluency. As such, we no longer use language spoken at home as a driver.

ATTACHMENT 12

HEALTH

Summary of changes since the 2010 Review

- There is a single Health category and a direct method of assessment is used for all components, instead of the previous subtraction method. The impact of the private sector is assessed using economic environment factors.
- Category expenses are assessed net of user charges, because we have data on the net expenditure on different socio-demographic groups.
- Data on the use and cost of health services are sourced from IHPA instead of the AIHW.

In this review, we considered that reforms to Commonwealth-State funding arrangements and the data those reforms would generate would provide an opportunity to simplify the assessment of State health expenditures. This attachment provides information on such an assessment, based on the best information we have to date. The assessment is far from complete and we have used placeholders for some of the key parameters, for example, degrees of substitutability for non-inpatient services. We seek State views on this assessment and the placeholders we have used.

However, there is also a broader issue surrounding the data we seek to use in the assessment. Some States are concerned that the collection is not yet mature enough to use and recent Budget changes might suggest that its form or availability might change over the review period.

We face a choice between the simplification we sought and retaining the 2010 Review methodology, updated to reflect changing circumstances, which we find difficult to resolve at this point in time, but which developments over coming months might make easier to resolve by the time of the final report. We see the approach contained in this attachment as a placeholder pending further consultation with States and in particular, we seek State views on whether a simpler approach, along the lines in this attachment or the 2010 Review approach, is appropriate at this time.

Tables in this attachment

- All tables in the Health attachment, including those detailing the differences from EPC, are based on data from 2011-12 (other assessments are based on data from 2012-13). This is because we have only received admitted patients and ED data from IHPA for 2011-12 and ABS ERP data for 2010-11.
- Data for all years will be updated for the final report.

WHAT IS INCLUDED IN THE HEALTH CATEGORY?

- 1 The Health category comprises recurrent expenses on:
 - Public hospitals
 - Admitted patient services – acute and non-acute medical care and treatment for public patients admitted in public hospitals and public patients treated in private hospitals.
 - Non-admitted patient services – all emergency care delivered to presentations at public hospitals and all outpatient type services such as obstetrics, gynaecology, cardiology, pathology, radiology and imaging services etc.
 - Non-hospital patient transport – aero-medical ambulance services and the reimbursement of costs through Patient Assisted Travel Schemes (PATs).
 - Other health services
 - Community health centre services – a wide range of health services provided in a community setting including domiciliary nursing services, well baby clinics, mental health services, home nursing services, family planning, alcohol and drug rehabilitation etc.
 - Public health services – activities for the protection and promotion of health and the prevention of disease, illness or injury. These include organised immunisation, health promotion, screening programs, communicable disease control, and prevention of hazardous and harmful drug use.
- 2 All revenues generated from user charges (\$6.3 billion in 2011-12) are offset against expenses. The reasons are discussed later in the attachment.
- 3 Table 1 shows category expenses (net of user charges) were \$45.3 billion in 2011-12. The share of health expenditure to State budgets varied from 21.4% in the ACT to 27.3% in South Australia. The average was 23.8% for all States.

Table 1 Health category expenses, 2011-12

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Category expenses (\$m)	12 903	9 831	10 253	5 540	3 874	1 131	780	987	45 299
Category expenses (\$pc)	1 777	1 761	2 269	2 316	2 352	2 209	2 102	4 243	2 012
Proportion of operating expenses (%)	22.7	23.4	24.8	23.7	27.3	24.9	21.4	21.8	23.8

Source: Commission calculation using State data.

- 4 Table 2 shows the share of State expenses on health rose from 23.1% in 2009-10 to 23.8% in 2011-12.

Table 2 Health category expenses as a proportion of State operating expenses

	2009-10	2010-11	2011-12	2012-13
Total for category (\$m)	39 870	42 740	45 299	49 241
Total operating expenses (\$m)	172 788	181 377	190 502	201 171
Proportion of total operating expenses (%)	23.1	23.6	23.8	24.5

Source: Commission calculation using ABS Government Finance Statistics (GFS) data and State data.

How are services delivered?

- 5 States provide health care through public hospitals and community health services. These services are available to the whole population, with access to services largely dependent upon clinical need.
- 6 States own and manage the operations of public hospitals. Admissions to public hospitals may be planned, such as for elective surgery, or unplanned, such as through the emergency department. Under the National Healthcare Agreement, State governments are responsible for ensuring all residents have access to public hospital services. This means a broad range of hospital services (including emergency) are available, free of charge, throughout each State. As a result, States provide a diverse range of public hospitals in various locations with a variety of services.
- 7 Principal referral hospitals provide more complex types of hospital care such as major trauma and surgery, organ transplants and specialist outpatient clinics. These tend to be located in major cities or larger regional centres. On the other hand, small hospitals provide a limited range of services and tend to be located in regional and remote regions. For more complex procedures, patients are transported to larger hospitals.
- 8 Alternatively, community health centres tend to focus on prevention and early intervention and are often the first point of contact with the health system. They are designed to take pressure off the acute care health system. Community health centres vary significantly in size and tend to offer a wide range of health related

services to local residents. The size of each centre depends on the population of the local community and the health needs of families and other groups living in the area.

Private provision

- 9 State government spending on public hospitals and other health services is only part of the total cost of the health services provided to State residents. The Commonwealth (Medicare) and the non-government sector (private health funds and individuals' out-of-pocket expenses) also fund health service provision. Almost all of these services are provided by non-government organisations and professionals in private practice including general practitioners (GPs), medical and non-medical specialists and allied health professionals (particularly dentists, pharmacists and physiotherapists).

COMMONWEALTH FUNDING

- 10 The Commonwealth provides funding to States to assist them in meeting their health services expenses. In addition to the National health reform (NHR) funding, the Commonwealth also provides States with National partnership payments (NPPs). The NHR funding directly impacts on State fiscal capacities as it assists to fund health services. The expenses funded by these payments are assessed in the same way as State funded expenses and the actual revenue is treated as an offset to assessed expenses.
- 11 Depending on their purpose, some of the NPPs related to this category have an effect on State fiscal capacities and some do not. The NPPs that assist States fulfil their responsibility in delivering health services are treated in the same manner as the NHR. However, payments for purposes outside State responsibilities, such as to the Royal Darwin Hospital for the operation of a national critical care and trauma response centre, have been treated as having no impact on State fiscal capacities.
- 12 Similarly, the treatment of Commonwealth own-purpose expense payments to States depends on whether they have an effect on State fiscal capacities or not, or whether they are specifically required by the Commission's terms of reference not to have an impact on State fiscal capacities. For example, the terms of reference require that the Commonwealth's ongoing operation of the Mersey Hospital through the Tasmanian Government should not influence Tasmania's fiscal capacity.
- 13 Table 3 details the major Commonwealth payments provided to States for health services.

Table 3 Commonwealth payments to States for health services, 2011-12

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
National health reform SPP	4 089	3 060	2 505	1 305	978	278	183	150	12 548
Subacute beds NPP	131	93	76	38	28	1	9	4	381
Long stay older patients NPP	33	13	21	16	18	3	1	1	106
Other NPPs	330	261	262	128	115	26	22	51	1 195
Total	4 584	3 427	2 865	1 488	1 139	309	214	206	14 231

Source: Commonwealth of Australia's *Final Budget Outcome, 2011-12*.

- 14 A complete list of Commonwealth payments and their treatment is provided in Appendix 2.

CATEGORY STRUCTURE

- 15 The assessment of the Health category is undertaken separately for each of the following components:
- admitted patients
 - emergency departments
 - outpatients
 - non-hospital patient transport
 - community health.
- 16 Table 4 shows the assessment structure for the category, the disabilities that are assessed and the size of each component, using 2011-12 data.

Table 4 **Category structure, Health, 2011-12**

Component	Component expense	Disability	Influence measured by disability
	\$m		
Admitted patients	28 393	Socio-demographic composition	Recognises that use and cost of State provided services differ among different population groups
Emergency departments	3 397	Socio-demographic composition	Recognises that use and cost of State provided services differ among different population groups
		Economic environment	Recognises the impact of the non-State sector on the provision of 40% of ED services
Outpatients	3 397	Socio-demographic composition	Recognises that use and cost of State provided services differ among different population groups
		Economic environment	Recognises the impact of the non-State sector on the provision of 40% of outpatient services
Non-hospital patient transport	461	Socio-demographic composition	Recognises the additional costs of providing non-hospital patient transport to people in remote and very remote regions
Community health	9 650	Socio-demographic composition	Recognises that use and cost of State provided services differ among different population groups, discounted by 25%
		Economic environment	Recognises the impact of the non-State sector on the provision of 75% of community health services
		IRHD economic environment	Recognises the impact of the Commonwealth grants to Indigenous community health organisations
		Cross-border	Recognises the cost to the ACT of providing services to NSW residents

Note: The wages costs factor is applied to all components. Regional costs are also applied to the outpatients component.

Source: Commission calculation.

ADMITTED PATIENTS

Socio-demographic composition

17 The extent of admitted patient services provided by each State government is driven by the size of its population, and the presence of those groups of people who use public hospital services more intensively, such as:

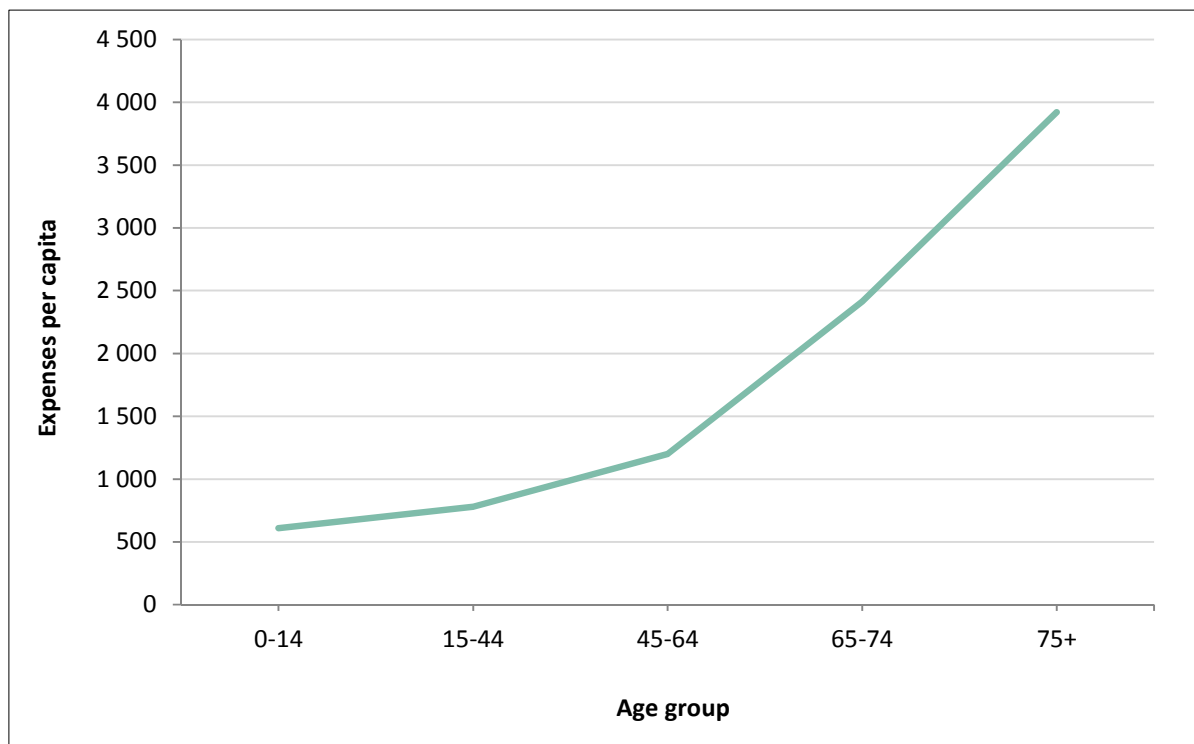
- elderly people
- Indigenous people

- people in remote areas
- socio-economically disadvantaged persons.

Age

- 18 Figure 1 shows spending on admitted patient services varies significantly by age. The figure also shows the age groups used in this assessment.
- 19 After assessing the materiality of various age groups, we found that it was not material to disaggregate age using any more than five age groups. Disaggregating the 85+ age group from the 75-84 age group was not material at the \$30 per capita threshold. While these age groups have very different use and cost patterns, the difference in the distribution of populations between the States is small, hence disaggregating any more than five age groups does not result in any material difference.

Figure 1 Admitted patient expenses per capita, by age, 2011-12



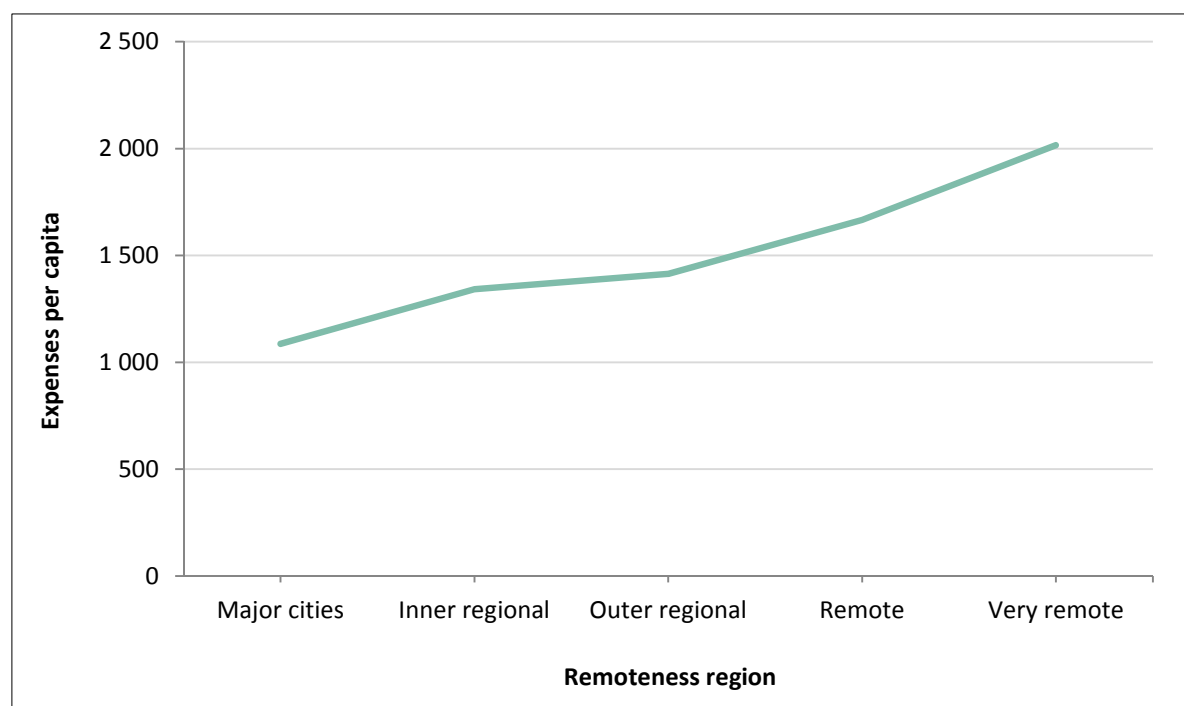
Note: Based on National Weighted Activity Units (NWAUs) and GFS expense data.
Source: Special data request, Independent Hospital Pricing Authority (IHPA).

Where people live

- 20 Figure 2 shows spending on admitted patient services varies significantly by remoteness. Spending on people living in remote and very remote areas in 2011-12 was 1.5 and 1.9 times greater compared with spending in major cities. This suggests a clear relationship between location and the spending on admitted patient services.

- 21 The Commission will use the ABS remoteness areas as the standard classification of remoteness. Based on the available data, we found the material effects of location on admitted patient costs should be captured using five bands: major cities, inner regional, outer regional, remote and very remote regions.

Figure 2 Admitted patient expenses per capita, by remoteness, 2011 12



Note: Based on NWAUs and GFS expense data.

Source: Special data request, IHPA.

- 22 New South Wales considered that large cities such as Sydney faced higher per capita costs than smaller major cities. We have not identified any reliable evidence to conclude this disability exists or its size.

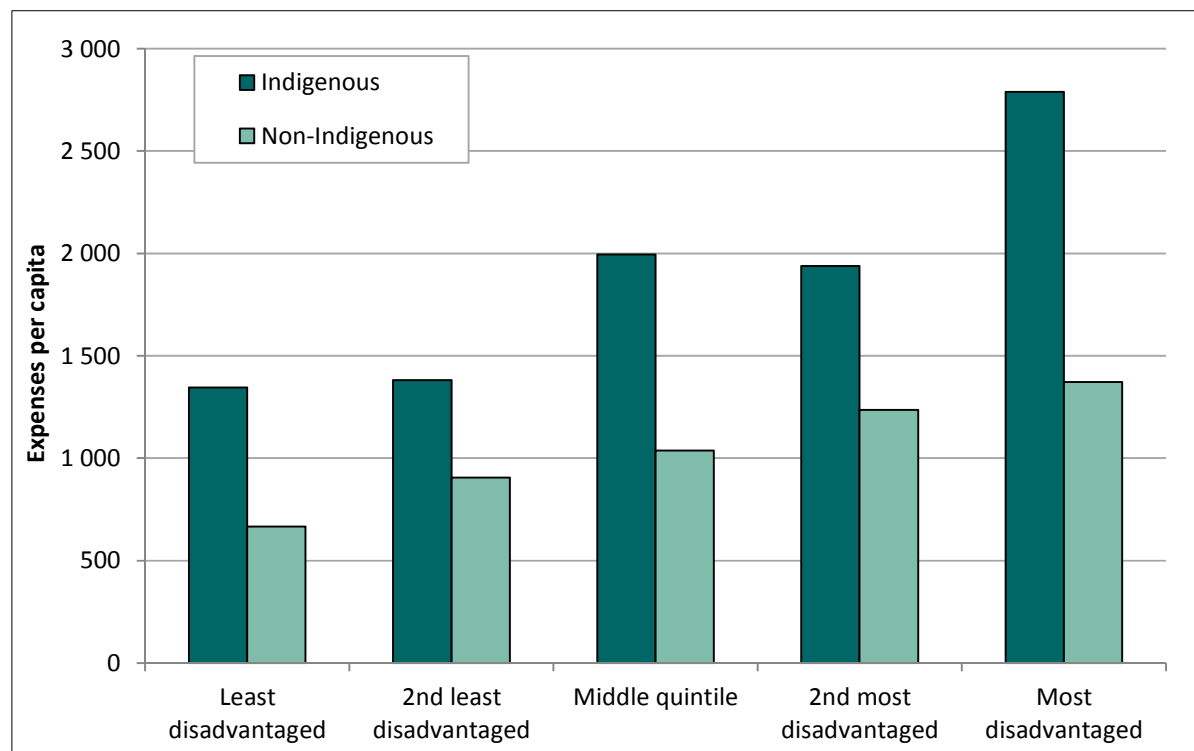
Indigeneity and socio-economic status

- 23 Figure 3 shows spending on admitted patient services varies significantly for Indigenous and non-Indigenous people and by socio-economic status (SES). Spending on Indigenous people is twice that on non-Indigenous people. In addition, the most disadvantaged patients use public hospitals more than people who are in the least disadvantaged quintile.
- 24 In responding to the terms of reference for this review, we are measuring SES on Indigenous and non-Indigenous people separately. We are using the Indigenous Relative Socio-Economic Outcomes (IRSEO) index for the non-remote Indigenous population and the Non-Indigenous Socio-Economic Index for Areas (NISEIFA) for the

non-remote non-Indigenous population.¹ This is described in more detail in Attachment 26 — Indigeneity.

- 25 Similar to the 2010 Review, we decided to group the five socio-economic index for areas (SEIFA) bands into three bands: the bottom quintile, the three middle quintiles, and the top quintile.

Figure 3 Admitted patient expenses per capita, by Indigenous IRSEO and non-Indigenous NISEIFA quintiles, 2011-12



Source: Special data request, Australian Institute of Health and Welfare (AIHW).

Data

- 26 The Independent Hospital Pricing Authority (IHPA) was established to work with States to classify all services delivered by public hospitals into National Weighted Activity Units (NWAUs), that are then translated into costs.
- 27 The IHPA admitted patients database uses a detailed and comprehensive allocation of the actual services and costs for each patient. It also makes adjustments for paediatrics, Indigenous, remoteness, etc. Some States said that these adjustments could distort the Commission’s unit costs. However, we consider these adjustments should improve, rather than distort our assessment, as they reflect the actual costs incurred by States in treating different demographic groups.

¹ While we have data using IRSEO and NISEIFA from the Australian Institute of Health and Welfare (AIHW), we have not yet received data from Independent Hospital Pricing Authority (IHPA). Tables in this attachment are therefore, based on SEIFA.

- 28 IHPA also make adjustments to the admitted patients' data to account for the costs recovered from private patients in public hospitals. It nets off the actual costs of private patients that are met through alternative funding sources. These alternative sources include medical benefit payments by the Australian Government, private health insurance benefits and payments made by patients. We believe this provides us with a more accurate estimate of the net cost for each population group.

Potential impact of the 2014-15 Budget

From 2014-15 to 2016-17, National health reform funding will be directly linked to the growth in public hospital activity provided in each jurisdiction.

From 2017-18, the Commonwealth will index its contribution for public hospitals funding by the CPI and population growth. State funding entitlements in 2017-18 are reported in Budget Paper No. 3 on an equal per capita basis.

This may have implications on the data that are available from IHPA. When we receive more information on data availability, we will advise States.

Calculating the socio-demographic composition assessment

- 29 We consider the features of the socio-demographic composition (SDC) profile that drive cost differences are Indigeneity, remoteness, SES and age. As such, we propose using the breakdown of those variables as shown in Table 5.

Table 5 Proposed SDC breakdown

Indigeneity	Remoteness	IRSEO/NISEIFA	Age
Indigenous	Major cities	1st quintile	0 to 14
Non-Indigenous	Inner regional	Middle 3 quintiles	15 to 44
	Outer regional	5th quintile	45 to 64
	Remote		65 to 74
	Very remote		75+

Note: When the final dataset becomes available, we will reflect the most appropriate disaggregations for Indigeneity and SES.

Source: Commission calculation.

- 30 The SDC assessed expenses for each State for the admitted patients component is derived by:
- allocating the national aggregate net spending on admitted patients to each of the population groups in the above table on the basis of the NWAU data provided by IHPA²

² We have assessed component expenses net of user charges, consistent with our assessment of SDC spending net of user charges.

- dividing the total spending attributable to each population group by the national population in that group. Table 6 provides a sample of the national spending per capita of providing admitted patient services to various population groups
- national average spending per capita for each population group is then multiplied by the number of people in the corresponding SDC group in each State
- assessed spending for each population group are summed to give the total assessed spending for each State.

Table 6 Sample matrix of national per capita spending on admitted patients, 2011-12

Indigeneity	Remoteness	IRSEO/NISEIFA	Age	Spending
				\$pc
Non-Indigenous	Major cities	High	0-14	462
Non-Indigenous	Major cities	High	15-44	610
Non-Indigenous	Major cities	High	45-64	841
Non-Indigenous	Major cities	High	65-74	2 069
Non-Indigenous	Major cities	High	75+	4 696
Non-Indigenous	Major cities	Middle	0-14	628
Non-Indigenous	Major cities	Middle	15-44	748
Non-Indigenous	Major cities	Middle	45-64	1 223
Non-Indigenous	Major cities	Middle	65-74	2 643
Non-Indigenous	Major cities	Middle	75+	4 221
Non-Indigenous	Major cities	Low	0-14	811
Non-Indigenous	Major cities	Low	15-44	930
Non-Indigenous	Major cities	Low	45-64	1 567
Non-Indigenous	Major cities	Low	65-74	2 938
Non-Indigenous	Major cities	Low	75+	3 711

Note: The sample matrix shows the per capita costs for non-Indigenous people for one remoteness region. Other regions are inner regional, outer regional, remote and very remote regions. The Indigenous disaggregation is the same as that for non-Indigenous people.

Source: Commission calculation using a special data request from IHPA, 2011-12 and ABS ERP 2010-11.

Location

- 31 We have recognised that differences between States in wage costs have a differential effect on the cost of providing admitted patient services across States. These influences are measured in a similar way for most expense categories and the methods are described in Attachment 22 — Wages costs.

Bringing the admitted patients component together

32 Table 7 shows the total assessed expenses.

Table 7 Illustrative assessed expenses, admitted patients component, 2011-12

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
SDC assessed (\$m)	9 256	6 848	5 678	2 848	2 216	768	376	403	28 393
Location factor	1.007	0.986	0.988	1.038	0.986	0.973	1.036	1.049	1.000
Total (\$m)	9 324	6 754	5 612	2 957	2 186	747	390	423	28 393
Total (\$pc)	1 284	1 210	1 242	1 236	1 327	1 460	1 051	1 817	1 261

Source: Commission calculation.

EMERGENCY DEPARTMENTS

Socio-demographic composition

33 We consider that the features of the SDC profile that drive differences in admitted patient costs are similar to those that drive differences in emergency department (ED) costs. These include Indigeneity, remoteness, SES and age. We will use the same SDC breakdowns for EDs as we have used for admitted patients, but will use ED specific data from IHPA.

Data

34 In the past, there have been limited data available on the use and cost of EDs by various population groups. However, with the establishment of IHPA, activity on EDs has been classified and costed, although the data are less comprehensive than the data on admitted patients. The classification systems in use are relatively new and the activity and costing data for these are less mature than for admitted patients.

35 Detailed ED activity and cost data are available for all principal referral and large hospitals with formal EDs. This makes up approximately 78% of the total presentations to EDs across the country. The other 22% of presentations are for medium and small hospitals, which are mainly block funded hospitals, and detailed demographic data on the use of these services are not available.

36 If we were to only use the detailed activity data from the known presentations, then we would not be fully capturing the greater use of ED services by Indigenous people and people in remote regions. This is because the block funded hospitals are disproportionately located in remote regions where there are a greater proportion of Indigenous people.

37 To ensure that there are no urban or non-Indigenous biases in the data, we sought the detailed activity data from IHPA (based on the demographics of the patient)

disaggregated by the remoteness region of the hospital location. The presentations in hospitals where we had no demographic data, predominantly block funded hospitals, were allocated the user profile of hospitals in the same remoteness region. Table 8 provides an overview of the total number of presentations where we have detailed activity data and where we only have total presentations.

- 38 We believe that by making this adjustment, it provides us with a more accurate estimate of the cost for each population group.

Table 8 ED presentations by remoteness of hospital, 2011-12

	Major cities	Inner regional	Outer regional	Remote	Very remote	Total
Demographics recorded ('000)	4 320	1 283	452	138	23	6 216
Demographics not recorded ('000)	432	539	538	148	134	1 790
Proportion not recorded (%)	9	30	54	52	85	22

Source: Special data request from IHPA.

- 39 Similar to admitted patient activity, each ED presentation is allocated an NWAU, based on variables such as the assigned triage category, mode of separation, principal diagnosis etc. We believe that the NWAUs for EDs are sufficiently robust enough to be used in our assessment and provide us with a more accurate measure of the use and cost of particular population groups than if we only assessed the number of presentations.

Calculating the socio-demographic composition assessment

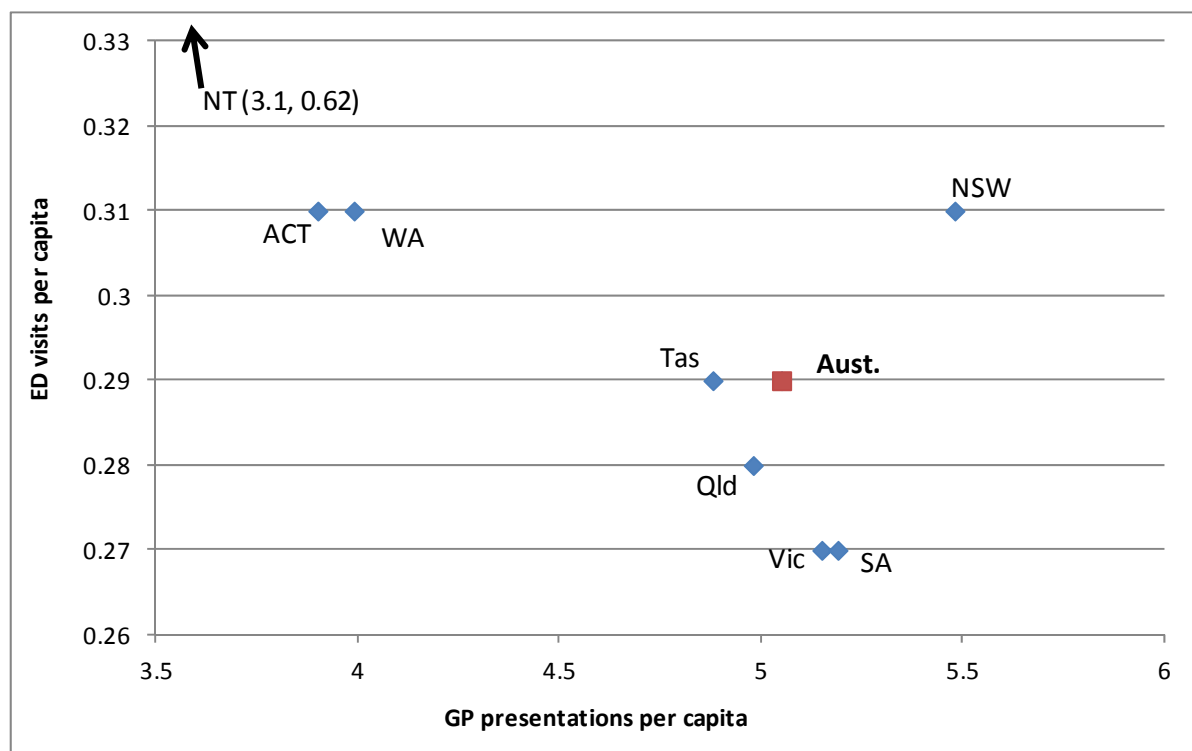
- 40 We have used the same assessment approach for the ED component as we used for the admitted patients component. That is, we calculated a national average net spending per capita for each population group and then multiplied that by the number of people in the corresponding SDC group in each State.

Impact of the non-State sector

- 41 Health services are provided by State governments, the private sector and the Commonwealth government. Some of these non-State services have no equivalent service provided by the State government (for example, States tend not to provide optometry services). However, some of these health services can be provided either by State, or non-State providers. If a State has more non-State providers than another, it should be able to provide the average standard of service to its population at a lower cost.
- 42 However, the issues around the substitutability of State provided health services are very complex. Some States believe that the majority, if not all health services provided by a State are substitutable for similar services provided by the private sector, while other States say there is very little substitutability, if any.

- 43 The ABS *Patient Experiences in Australia 2012-13*³ survey, found that of the 2.5 million people who had attended an ED in the past 12 months, 23% thought the care could have been provided by a general practitioner (GP). We consider this strong evidence of substitutability between GPs and EDs.
- 44 New South Wales argued that substitutability should not be assessed at all because New South Wales has above average GP services and ED presentations, while in Queensland there is below average use for both, as is shown in Figure 4. However, we consider Figure 4 provides fairly strong evidence for an inverse relationship.

Figure 4 GP and ED presentations per capita



Source: New South Wales submission.

- 45 Several States identified studies that indicated a varied level of substitutability. Studies based on clinical assessments of ED presentations estimate the proportion that could have been managed by a GP.
- 10-12% in 3 major metropolitan hospitals in Perth.⁴

³ *Patient Experiences in Australia: Summary of Findings, 2012-13*, Cat. 4839.0, ABS. The *Patient experiences in Australia* survey is part of the larger *Multipurpose Household Survey* (MPHS). The MPHS is conducted each financial year by the ABS. The Patient experiences survey collects information from individuals about their experiences with selected aspects of the health system in the 12 months before interview.

⁴ Nagree et al, *Quantifying the proportion of general practice and low-acuity patients in the emergency department*, Medical Journal of Australia 198(11), June 2013.

- 38% in a national Australian Institute of Health and Welfare (AIHW) study⁵, based on patients allocated to triage 4 or 5, did not arrive by ambulance, police or correctional vehicle, were not admitted to the hospital or referred to another hospital and did not die.
- 46 Alternatively, as mentioned previously, the ABS *Patient Experiences in Australia* study found that 23% of people that presented at the ED thought care could have been provided by a GP. In addition to this, another 15% who thought that the care could not be provided by a GP cited the time or day as the main reason for not seeing a GP. This suggests that around 38% of presentations could have been substitutable, if a GP had been available.
- 47 The patient experience survey gives a measure of what patients (rather than clinicians) consider to be substitutable. As such, we believe that this is closer to the concept that we want to measure.
- 48 Other States also said that the extent of substitutability of services did not equate with the substitutability of costs, as the ED activity that could be substituted by GPs is much lower in cost. They cite the Perth study mentioned above which showed that while 10-12% of visits were deemed substitutable, these visits represented only 3-5% of total hours in EDs.
- 49 Both the ABS survey and the AIHW clinical assessment indicate that approximately 38% of ED visits are potentially substitutable. While we understand the argument that these may tend to be lower cost presentations, we are unsure if this is the case in reality, and if so, the impact.
- 50 As a result, we consider that a placeholder of 40% would be a reasonable estimate of the substitutability of ED and GP services, and seek State views.

Calculating an economic environment factor

- 51 To calculate an economic environment factor, the simplest and most appropriate assessment would be based on a measure of bulk billed GP throughput. This removes the income constraint faced by people. For example, some low SES people can't afford to go to a fee paying GP and so will automatically go to the ED, irrespective of the severity of the condition. We believe a measure of bulk billed GP throughput is closer to the concept that we want to measure.

⁵ *Australian hospital statistics 2011-12 — Emergency department care (AIHW)*. Note, the figure is based on larger hospitals only and does not include GP-type presentations to smaller hospital EDs.

Potential impact of the 2014-15 Budget

From 1 July 2015, previously bulk billed patients will make a co-payment of \$7 per visit towards the cost of standard GP consultations and out-of-hospital pathology and imaging services. For concessional patients and children under 16 years the contribution will be for the first 10 services each calendar year.

This may have implications on our assumptions on substitutability. However, we will not change our assumptions until we receive further data. No data will be available before the release of the 2015 Review final report.

- 52 The SDC assessment captures that people in remote areas are more likely to present to EDs. This is likely, in part, to reflect the lower levels of GPs in those areas. To ensure that we don't double count the high use of State services by certain population groups by attributing it to both SDC and the level of GP services provided in the State, we have calculated our factor based on GP bulk billed benefits paid from Medicare, standardised by Indigeneity and remoteness.
- 53 Some States were concerned that we were not standardising for age and SES. We would prefer to, but have not been able to source the data required.
- 54 The calculation is more easily explained in a step process as detailed in Table 9.
- Assessed GPs — calculate the level of bulk billed services each State would need based on the national profile of people using GP services (by remoteness and Indigeneity).
 - Actual GPs — obtain the actual level of bulk billed GP services in each State.
 - Ratio — calculate the ratio of assessed GPs to actual GPs for each State.
 - Divide the 40% of ED services that are substitutable by the ratio to determine the needs of substitutable ED services adjusted for economic environment.

Table 9 Illustrative economic environment factor, emergency department component, 2011-12

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Assessed benefits (\$m) (a)	1 502	1 157	910	480	336	99	78	39	4 600
Actual benefits (\$m) (a)	1 704	1 150	910	333	349	90	35	28	4 600
Raw factor	0.852	0.973	0.967	1.394	0.930	1.063	2.174	1.330	1.000
Substitutability									40%
Weighted factor	0.941	0.989	0.987	1.157	0.972	1.025	1.470	1.132	1.000

(a) Based on bulk billed GP benefits paid (also includes other non-referred services such as enhanced primary care and practice nurse items).

Source: Medicare.

- 55 An example of the mechanics of the process.
- New South Wales is assessed as needing \$1.5 billion bulk billed GP benefits based on the national user profile of people accessing those services.
 - There are \$1.7 billion of bulk billed GP benefits paid in New South Wales.
 - This means that we assess New South Wales as having 13% more bulk billed services than average.
 - Therefore, they need 13% less ED services that we regard as substitutable (40% of all ED services).

Location

- 56 As with the admitted patients component, we recognised that differences in wage costs have a differential effect on the cost of providing ED services across States.

Bringing the emergency departments component together

- 57 Table 10 shows the total assessed expenses.

Table 10 Illustrative assessed expenses, emergency departments component, 2011-12

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
SDC assessed (\$m)	1 054	776	717	364	255	101	42	88	3 397
Economic environment factor	0.941	0.989	0.987	1.157	0.972	1.025	1.470	1.132	1.000
Location factor	1.007	0.986	0.988	1.038	0.986	0.973	1.036	1.049	1.000
Total (\$m)	996	755	698	436	244	101	64	105	3 397
Total (\$pc)	137	135	154	182	148	197	172	450	151

Source: Commission calculation.

OUTPATIENTS

Socio-demographic composition

- 58 We consider that the features of the SDC profile that drive differences in admitted patient and ED costs are similar to those that drive differences in outpatient costs. These include Indigeneity, remoteness, SES and age. We use the same SDC breakdowns for outpatients as we have used for admitted patients and EDs.

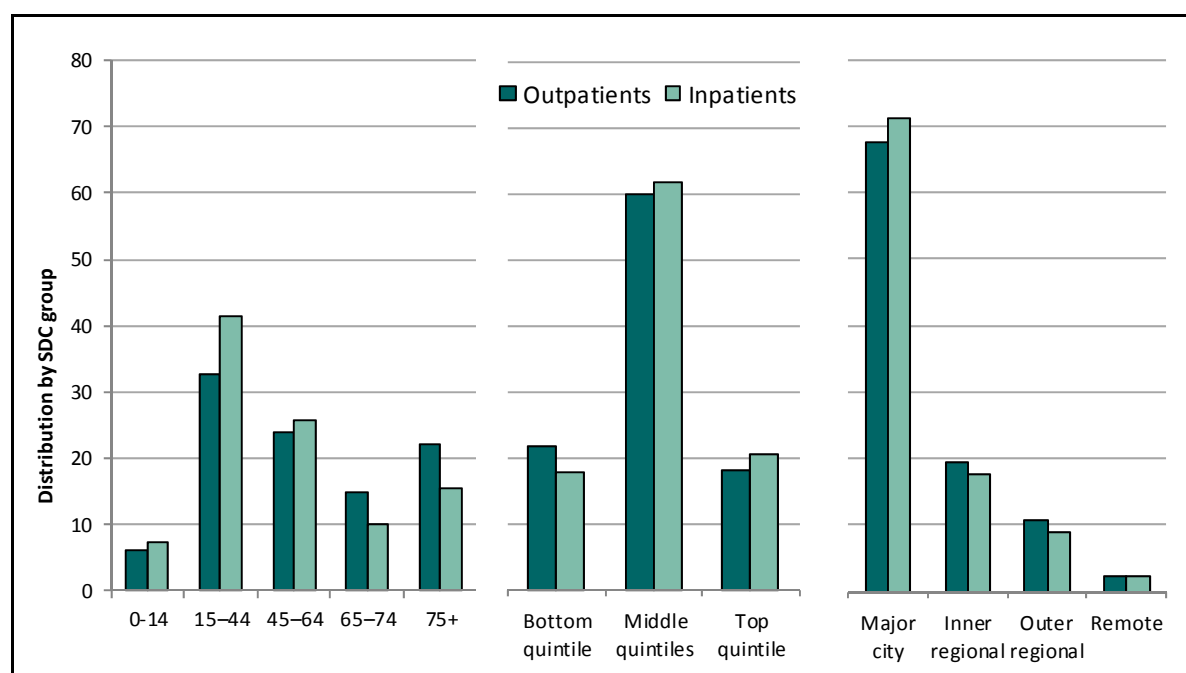
Data

- 59 There are limited data available on the use and cost of outpatient and other non-admitted patient services provided in public hospitals by various population groups. While IHPA was asked to classify and cost outpatient service activity, the data

are not sufficiently mature enough to undertake a robust assessment. As a result, unless data reach an acceptable quality, we will use the profile of people that use admitted patient services (from IHPA) as a proxy for those using outpatient services.

- 60 Data from the ABS *National Health Survey* (NHS) show that the SDC profile of patients who visited a hospital as an inpatient are very similar to those that visited as an outpatient in terms of their age, SES and remoteness. This can be seen in Figure 5.
- 61 The NHS also shows that 50% of people who visited an outpatient clinic in the past two weeks had been admitted to a hospital within the past 12 months. Considering this information, we believe the relationship seems plausible. Based on the admitted patient profile being a suitable proxy for outpatients by age, SES and remoteness, we assume that it is also a good proxy for Indigeneity.
- 62 We consider that making an assessment using admitted patient services as a proxy for those using outpatient services is better than using data directly from the NHS. The demographic attributes available from the survey are not able to be cross-classified and the usage by Indigenous people of outpatient services is combined with ED presentations and day clinic visits.

Figure 5 Inpatient and outpatient visits, by age, SES and remoteness, 2011-12



Note: Visits or admissions in the past two weeks.

Source: ABS *National Health Survey, TableBuilder 2011-12*.

Calculating the socio-demographic composition assessment

- 63 We have used the same assessment approach for the outpatients component as we used for the admitted patients component. That is, we calculated a national average

net spending per capita for each population group and then multiplied that by the number of people in the corresponding SDC group in each State.

- 64 We propose to use admitted patient separations rather than expenditure as the proxy, because we consider that the large variation in cost per separation in admitted patient services is unlikely to be reflected in outpatient services.

Impact of the non-State sector

- 65 The provision of outpatient and other non-admitted patient type care is complex. Services include a wide range of pre and post hospital and clinical treatments, including:
- the management of chronic conditions and pain management
 - obstetrics, gynaecology, cardiology, oncology and other specialist services
 - numerous ancillary services, often referred to as allied health, such as physiotherapy, chiropractic, dental, dietetics and optical
 - pharmacy, pathology, and radiology and imaging services
 - mental health and alcohol and drug treatment.
- 66 The majority, if not all, services provided in public hospital outpatient clinics are also provided in the private sector. There are private gynaecologists, cardiologists, physiotherapists and chiropractors that all offer the same type of service as that provided in public hospitals. There are also pathology, radiology and imaging services that are provided in a private setting. As such, people have a choice to attend an outpatient service provided in a public or private setting and there would be some level of substitutability in these services.
- 67 However, while we agree that there is a private alternative for outpatient type services, we are unsure as to what degree the quantity of these services provided in the private sector influence the level of services provided in the public sector.
- 68 Many of the services that are included as outpatient and non-admitted patient services are largely dependent on the level of inpatient services provided in the hospital. If more surgeries are performed or more beds are opened up, then more outpatient services, particularly specialists and other allied health would be needed. The number of services provided is largely independent of the level of outpatient services provided in the private sector.
- 69 As mentioned in paragraph 61, the NHS found that 50% of people visiting an outpatient clinic had been admitted to hospital in the past 12 months. For most of these people, their visit seems likely to be connected to their earlier admission, and there would be low levels of substitutability for this group, although not negligible.
- 70 For the 50% of visits without a previous admission, we consider there is some level of substitutability. To be fully substitutable, each outpatient service would have to be

available in a bulk billed and accessible setting in a State with the national average economic environment. However, we consider that in an average State, many services would be available in a narrower range of locations in a private clinic than in an outpatients setting, and many would not be bulk billed. In the absence of information on the similarity between the cost and availability of individual services, we have assumed most are substitutable.

- 71 Combined, this gives us an overall level of substitutability probably below 50%.
- 72 We consider that a placeholder consistent with the ED placeholder of 40% would be a reasonable estimate of the substitutability of outpatient services, and seek State views.

Calculating an economic environment factor

- 73 To calculate an economic environment factor, the simplest and most appropriate assessment would be based on a measure of bulk billed specialist and pathology and imaging benefits paid. Similar to the argument for EDs, this removes the income constraint faced by people and is closer to the concept that we want to measure.
- 74 To ensure that we don't double count the high use of State services by certain population groups and the level of services provided in the State, we have calculated our factor based on bulk billed benefits paid from Medicare, standardised by Indigeneity and remoteness.
- 75 The calculation is the same as for EDs but we use the value of bulk billed specialist, pathology and imaging benefits paid as our proxy measure and apply it to 40% of total outpatient expenses. This can be seen in Table 11.

Table 11 Illustrative economic environment factor, outpatients component, 2011-12

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Assessed benefits (\$m) (a)	1 421	1 102	861	450	317	98	73	33	4 355
Actual benefits (\$m) (a)	1 655	1 074	846	313	307	86	48	26	4 355
Raw factor	0.835	0.998	0.991	1.400	1.003	1.112	1.465	1.240	1.000
Substitutability									40%
Weighted factor	0.934	0.999	0.996	1.160	1.001	1.045	1.186	1.096	1.000

(a) Based on bulk-billed specialist, pathology and imaging bulk billed benefits.

Source: Medicare.

Location

- 76 As with previous components, we recognised that differences in wage costs have a differential effect on the cost of providing outpatient services across States.
- 77 We also consider that the costs of providing these services increase with increasing remoteness. Therefore, we have recognised the costs of providing services to

different areas within a State in this assessment. This is because our measure of SDC in this component only recognises the greater use of services by people in remote regions and not the additional costs of those groups (like the SDC in admitted patients and EDs). The methods are described in Attachment 23 — Regional costs.

Bringing the outpatients component together

78 Table 12 shows the total assessed expenses.

Table 12 Illustrative assessed expenses, outpatients component, 2011-12

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
SDC assessed (\$m)	1 109	824	676	343	261	88	48	48	3 397
Economic environment factor	0.934	0.999	0.996	1.160	1.001	1.045	1.186	1.096	1.000
Location factor	1.001	0.977	0.995	1.046	0.987	1.008	1.014	1.201	1.000
Total (\$m)	1 037	804	670	416	257	93	58	63	3 397
Total (\$pc)	143	144	148	174	156	181	155	270	151

Source: Commission calculation.

NON-HOSPITAL PATIENT TRANSPORT

79 Non-hospital patient transport expenses comprise:

- land ambulance
- aero-medical ambulance (including the Royal Flying Doctor Service)
- Patient Assisted Travel/Transport Scheme (PATs).

80 We assess land ambulance expenses as part of hospital-based costs because we believe the disabilities that influence these expenses are similar to the disabilities that influence hospital-based services.

81 On the other hand, aero-medical services and PATs costs are disproportionately attributable to people in remote and very remote regions and as such, we assess these costs separately from other hospital-based costs.

Socio-demographic composition

82 State provided data indicate that costs related to aero-medical services and PATs totalled \$460 million in 2012-13, up from \$420 million in 2011-12. This represents around 25% of the total net patient transport costs in the Government Financial Statistics (GFS).

83 State data also suggests aero-medical services and PATs costs are disproportionately provided to people in remote and very remote regions where spending is 25 times more per capita than in non-remote regions. As a result, we have applied a weight of

one to the population of each State living in non-remote areas and a weight of 25 to the population living in remote areas.

- 84 Total spending is then apportioned based on each State's share of their weighted population.
- 85 On the grounds of simplicity, the proportion of non-hospital patient transport costs compared with GFS net patient transport costs (25%) and the weights applied to remote populations (25 to 1) will be fixed for the duration of the 2015 Review period.

Location

- 86 As with previous components, we have recognised the differences in wage costs have a differential effect on the cost of providing non-hospital patient transport services across States.

Bringing the non-hospital patient transport component together

- 87 Table 13 shows the total assessed expenses.

Table 13 Illustrative assessed expenses, non-hospital patient transport component, 2011-12

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
SDC assessed (\$m)	108	75	103	83	41	10	5	36	461
Location factor	1.007	0.986	0.988	1.038	0.986	0.973	1.036	1.049	1.000
Total (\$m)	109	74	101	86	40	10	5	37	461
Total (\$pc)	15	13	22	36	24	19	14	160	20

Source: Commission calculation.

COMMUNITY HEALTH

Socio-demographic composition

- 88 There are limited national data available on the use and cost of community health centres and public health services. While there is partial data available on the use of cancer screening services or anecdotal evidence on the users of mental health and drug and alcohol services, these services only form part of the total community health spending by State governments.
- 89 As a result, we use the same SDC breakdowns as we have used for the hospital components which include Indigeneity, remoteness, SES and age.

Data

- 90 Considering the diverse range of community and public health services provided by States, it would not seem appropriate to use the limited data on some health services provided in a community setting as a proxy for all community health services. Nor would it be appropriate to proxy the use of GP services, considering the relative use of GP services by Indigenous and low SES people compared with State provided community health services appears low.
- 91 In the absence of reliable and comprehensive national data, we have used the IHPA data on ED NWAUs for triage categories 4 and 5, as a proxy for community health services.
- 92 We consider that these triage categories are a better proxy than using all ED triage categories. Categories 1 to 3 involve treatment for life threatening or very serious conditions that are more complex and costlier. It is unlikely that community health services generally would have to deal with resuscitation or other emergencies of this nature. Triage categories 4 and 5 provide treatment for less severe injuries or minor illnesses. These are probably closer to the services provided in community health centres such as well baby clinics, home nursing services, family planning, and alcohol and drug rehabilitation.
- 93 **Discount.** While using IHPA data on ED NWAUs may not be completely accurate because those data measure the differential use of services within a hospital, it is hard to say that any other measure will provide a more accurate assessment. In saying that, we have concerns about how closely the socio-demographic profile of people using EDs reflects the profile of people using community health services. As such, we consider a medium discount of 25% is warranted.

Calculating the socio-demographic composition assessment

- 94 We have used the same assessment approach for the community health component (based on NWAUs) as we used in the ED component. That is, we calculated a national average net spending per capita for each population group and then multiplied that by the number of people in the corresponding SDC group in each State.
- 95 A 25% discount means that 25% of total community health spending has been assessed on an equal per capita basis. The other 75% is allocated based on NWAUs as stated above.

Impact of the non-State sector

- 96 There is significant variety both within and between States in how community health services are delivered. While the majority are provided in dedicated community

health centres, they can also be provided in schools, local councils and in clients' homes.⁶

- 97 In addition, there is considerable overlap in the services provided in the public and private sector. There are many similarities in the services provided by GPs and those provided in community health centres and public health programs. For example, a GP provides immunisation vaccines as do State funded professionals. GPs also assist people with drug rehabilitation programs, family planning, anti-smoking advice and other health promotion activities.
- 98 We consider this strong evidence of substitutability between GPs and community health services. However, similar to the difficulties in outpatients, we are unsure as to what degree the quantity of these services provided in the private sector influence the level of services provided in the public sector.
- 99 For individual community health services, the level of substitutability is likely to vary.
- Community health centre services – health services provided in a community setting including domiciliary nursing services, well baby clinics, dental health, home nursing services, community health centre programs, family planning, alcohol and drug rehabilitation etc. The majority of these services can be provided by a GP or alternative private provider.
 - Public health services – activities for the protection and promotion of health and the prevention of disease, illness or injury. These include organised immunisation, health promotion, screening programs, communicable disease control, and prevention of hazardous and harmful drug use. Some of these services would have a private health provider alternative such as immunisation and some health promotion activities.
 - Mental health services – mental health services provided in a community setting. Many services could be provided by a GP or private provider but some services are provided by community organisations that are part funded by State governments.
 - Other health services – these include health research and administration and pharmaceuticals, medical aids and appliances etc. While the Commonwealth and many universities provide health research, we doubt the provision of any of these services would impact on State government provision.
- 100 In the absence of any further information, we consider that a placeholder of 75% would be a reasonable estimate of the substitutability of community health services, and seek State views.

⁶ AIHW, Australia's Health 2010, pp 356-357.

Calculating an economic environment factor

- 101 Similar to the arguments for EDs and outpatients, the simplest and most appropriate assessment would be based on a measure of bulk billed GP throughput. This removes the income constraint faced by people and is closer to the concept that we want to measure.
- 102 To ensure that we don't double count the high use of State services by certain population groups and the level of GP services provided in the State, we have calculated our factor based on bulk billed benefits paid from Medicare, standardised by Indigeneity and remoteness.
- 103 The calculation is the same as for EDs but it is applied to 75% of total community health expenses. This can be seen in Table 14.

Table 14 Illustrative economic environment factor, community health component, 2011-12

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Assessed benefits (\$m) (a)	1 502	1 157	910	480	336	99	78	39	4 600
Actual benefits (\$m) (a)	1 704	1 150	910	333	349	90	35	28	4 600
Raw factor	0.852	0.973	0.967	1.394	0.930	1.063	2.174	1.330	1.000
Substitutability									75%
Weighted factor	0.889	0.980	0.975	1.295	0.948	1.047	1.881	1.248	1.000
(a)	Based on bulk billed GP benefits paid (also includes other non-referred services such as enhanced primary care and practice nurse items).								

Source: Medicare.

Grants for Indigenous community health organisations

- 104 The Indigenous and Rural Health Division (IRHD) grants, formerly known as the Office for Aboriginal and Torres Strait Islander Health (OATSIH) grants are provided to around 280 Indigenous organisations. They provide: clinical care and health education, promotion, screening, immunisation and counselling, as well as specific programs such as hearing health, sexual health, substance use and mental health.
- 105 The services provided by these non-government organisations are similar to those provided by State governments through community health centres and our assessment should reflect this.
- 106 We have developed an economic environment factor based on the difference between a State's share of their Indigenous population and the actual level of IRHD grants provided in each State. If a State's share of the total IRHD grants is higher than its share of the national Indigenous population, then it would be assessed as needing less GST compared to the other States. This can be seen in Table 15.

107 Similar to other economic environment factors, the raw factor is weighted so that it only applies to the proportion of IRHD grants compared to all community health expenses, approximately 5%. This assumes full substitutability of these services.

Table 15 Illustrative IRHD economic environment factor, community health component, 2011-12

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
IRHD grants (\$m)	91	41	111	87	41	10	4	107	493
Proportion (%)	18.4	8.3	22.5	17.7	8.4	2.0	0.9	21.8	100.0
Indigenous population (%)	31.1	7.1	28.2	13.2	5.6	3.6	0.9	10.3	100.0
Raw factor	1.410	0.705	1.043	0.621	0.553	1.539	0.879	0.393	1.000
Grants as % of component									5%
Weighted factor	1.021	0.985	1.002	0.981	0.977	1.028	0.994	0.969	1.000

Source: Department of Health and ABS.

Location

108 As with previous components, we recognised that differences in wage costs have a differential effect on the cost of providing community health services across States.

Cross-border

109 Cross-border disabilities reflect the nature and geography of the ACT. Being a large centre surrounded by New South Wales means that the ACT provides many community health services to New South Wales residents. For example, the ACT's Queen Elizabeth II Family Centre (QEII) has a high non-ACT resident use.

110 The method used to calculate the general cross-border factor is described in the Attachment 28 — Other disabilities.

Bringing the community health component together

111 Table 16 shows total assessed expenses.

Table 16 Illustrative assessed expenses, community health component, 2011-12

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
SDC assessed (\$m)	2 970	2 206	2 044	1 052	708	286	125	258	9 650
Economic environment factor	0.889	0.980	0.975	1.295	0.948	1.047	1.881	1.248	1.000
IRHD economic environment factor	1.021	0.985	1.002	0.981	0.977	1.028	0.994	0.969	1.000
Location factor	1.007	0.986	0.988	1.038	0.986	0.973	1.036	1.049	1.000
Cross-border factor	0.995	1.000	1.000	1.000	1.000	1.000	1.096	1.000	1.000
Total (\$m)	2 688	2 088	1 964	1 379	643	298	264	326	9 650
Total (\$pc)	370	374	435	577	390	582	713	1 400	429

Source: Commission calculation.

BRINGING THE ASSESSMENT TOGETHER

112 Table 17 brings the assessed expenses for each component together to derive the total assessed expenses for each State for the category.

Alternative presentation

113 Table 18 provides an alternative presentation using a factor approach. The table shows for each disability how the expenses per capita in each component and in total are affected by differences in State characteristics. Disability factors below one indicate a State is assessed to need to spend less than average. Disability factors above one indicate a State is assessed to need to spend more than average.

Table 17 Illustrative category assessment, Health, 2011–12

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc
Admitted patients									
Equal per capita	1 261	1 261	1 261	1 261	1 261	1 261	1 261	1 261	1 261
SDC	14	-34	-4	-70	85	239	-247	471	0
Location	9	-18	-15	48	-18	-34	45	61	0
Total	1 284	1 210	1 242	1 236	1 327	1 460	1 051	1 817	1 261
Emergency departments									
Equal per capita	151	151	151	151	151	151	151	151	151
SDC	-6	-12	8	1	4	47	-37	229	0
Economic environment	-9	-2	-2	24	-4	4	71	20	0
Location	1	-2	-2	6	-2	-4	5	7	0
Total	137	135	154	182	148	197	172	450	151
Outpatients									
Equal per capita	151	151	151	151	151	151	151	151	151
SDC	2	-3	-1	-7	7	21	-22	54	0
Economic environment	-10	0	-1	24	0	7	28	14	0
Location	0	-3	-1	7	-2	1	2	30	0
Total	143	144	148	174	156	181	155	270	151
Non-hospital patient transport									
Equal per capita	20	20	20	20	20	20	20	20	20
SDC	-6	-7	2	14	4	0	-7	133	0
Location	0	0	0	1	0	-1	1	1	0
Total	15	13	22	36	24	19	14	160	20
Community health									
Equal per capita	429	429	429	429	429	429	429	429	429
SDC	-20	-33	24	11	1	130	-91	682	0
Economic environment	-47	-9	-11	127	-22	20	377	106	0
IRHD economic environment	9	-6	1	-8	-10	12	-3	-13	0
Location	3	-6	-5	16	-6	-12	15	21	0
Cross-border	-2	0	0	0	0	0	41	0	0
Total	370	374	435	577	390	582	713	1 400	429
Category total	1 949	1 876	2 002	2 205	2 046	2 440	2 105	4 097	2 012

Note: Component disabilities do not add up due to interactions.

Source: Commission calculation.

Table 18 Illustrative category factor, Health, 2011–12

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Average
Admitted patients (component weight = 63%)									
SDC	1.011	0.973	0.996	0.944	1.067	1.190	0.804	1.374	1.000
Location	1.007	0.986	0.988	1.038	0.986	0.973	1.036	1.049	1.000
Component factor	1.018	0.959	0.985	0.980	1.053	1.158	0.833	1.441	1.000
A. Weighted factor	1.011	0.975	0.991	0.988	1.033	1.099	0.895	1.276	1.000
Emergency departments (component weight = 8%)									
SDC	0.962	0.921	1.052	1.007	1.026	1.314	0.753	2.517	1.000
Economic environment	0.941	0.989	0.987	1.157	0.972	1.025	1.470	1.132	1.000
Location	1.007	0.986	0.988	1.038	0.986	0.973	1.036	1.049	1.000
Component factor	0.909	0.896	1.023	1.207	0.981	1.307	1.143	2.981	1.000
B. Weighted factor	0.993	0.992	1.002	1.016	0.999	1.023	1.011	1.149	1.000
Outpatients (component weight = 8%)									
SDC	1.013	0.978	0.992	0.951	1.049	1.142	0.857	1.361	1.000
Economic environment	0.934	0.999	0.996	1.160	1.001	1.045	1.186	1.096	1.000
Location	1.001	0.977	0.995	1.046	0.987	1.008	1.014	1.201	1.000
Component factor	0.946	0.955	0.983	1.153	1.035	1.203	1.029	1.791	1.000
C. Weighted factor	0.996	0.997	0.999	1.011	1.003	1.015	1.002	1.059	1.000
Non-hospital patient transport (component weight = 1%)									
SDC	0.729	0.657	1.113	1.693	1.213	0.980	0.643	7.483	1.000
Location	1.007	0.986	0.988	1.038	0.986	0.973	1.036	1.049	1.000
Component factor	0.730	0.644	1.094	1.747	1.189	0.948	0.662	7.801	1.000
D. Weighted factor	0.997	0.996	1.001	1.008	1.002	0.999	0.997	1.069	1.000
Community health (component weight = 21%)									
SDC	0.954	0.922	1.056	1.026	1.003	1.304	0.788	2.591	1.000
Economic environment	0.889	0.980	0.975	1.295	0.948	1.047	1.881	1.248	1.000
IRHD economic environment	1.021	0.985	1.002	0.981	0.977	1.028	0.994	0.969	1.000
Location	1.007	0.986	0.988	1.038	0.986	0.973	1.036	1.049	1.000
Cross-border	0.995	1.000	1.000	1.000	1.000	1.000	1.096	1.000	1.000
Component factor	0.864	0.873	1.014	1.345	0.911	1.358	1.663	3.266	1.000
E. Weighted factor	0.971	0.973	1.003	1.074	0.981	1.076	1.141	1.483	1.000
Category factor	0.969	0.933	0.995	1.096	1.017	1.213	1.046	2.036	1.000

Source: Commission calculation.

Influences not assessed in this category

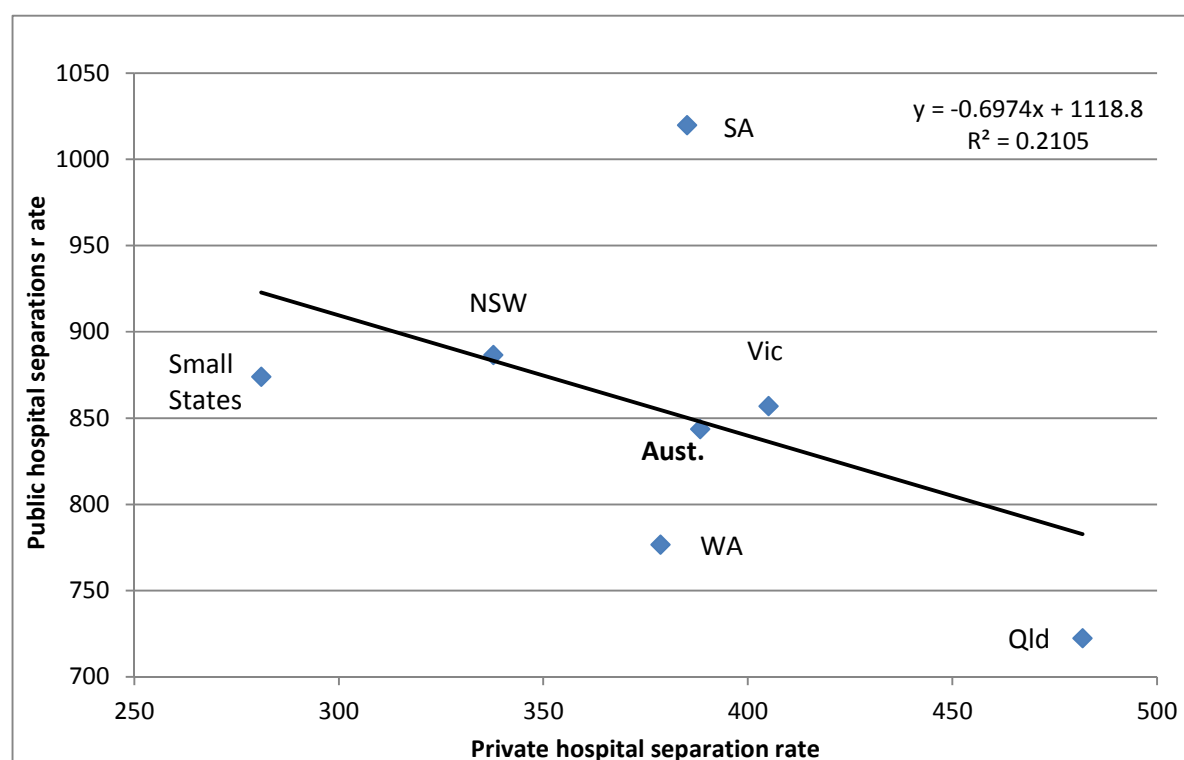
Impact of the non-State sector on admitted patients

- 114 The Commission will not make a separate adjustment for the lack of private provision of admitted patient services in some States. As in the 2010 Review, we assess the substitutability between public and private hospitals by using remoteness within our

assessment of SDC. Admission rates to public hospitals increase with remoteness, in part because of the lack of private hospital alternatives. We assumed that there was no material difference in the availability of private hospital services in comparable areas of different States, except for the Northern Territory.

- 115 However, with the move from State-based Accessibility and Remoteness Index of Australia (SARIA) to ABS's standard classification of remoteness, Darwin is now considered an outer regional area. This will account for the difference in private provision of admitted patient services in Darwin compared with other capital cities.
- 116 Western Australia considers that there is substitutability between public and private hospitals. Figure 6 shows Queensland's high level of private hospitals and low level of public hospitals is consistent with this. However, for other States there is no apparent relationship. As such, we consider that substitutability for admitted patients should not be separately assessed.

Figure 6 Public and private hospital patient days per 1 000 population



Source: AIHW hospital statistics.

Cultural and linguistic diversity

- 117 We have decided not to make a separate adjustment for Cultural and linguistic diversity (CALD). CALD is discussed in Attachment 28 — Other disabilities.

Gender

- 118 Gender was considered separately in our SDC assessments but we found that it was not material to disaggregate by this population characteristic. While males and females have different use and cost patterns, the difference in the distribution of populations between the States is small, hence disaggregating by gender does not result in any material difference.

WHAT IS THE IMPACT ON THE GST DISTRIBUTION?

- 119 Table 19 shows the extent to which the assessment for this category moves the distribution of the GST away from an equal per capita distribution. It shows that GST revenue is redistributed to Western Australia, South Australia, Tasmania, the ACT and the Northern Territory. However, once the Commission's new approach to recognising Indigenous and non-Indigenous socio-economic status is applied in this category, the GST redistribution may change considerably.

Table 19 Illustrative GST impact, Health, 2011-12

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Redist
Dollars million	-455	-757	-45	462	57	219	34	485	1 257
Dollars per capita	-63	-136	-10	193	34	428	93	2 085	56

Source: Commission calculation.

- 120 The main reasons for these redistributions are the differences between States in the proportions of their populations in the groups that are high or costly users of health services, along with differences between States in the provision of services provided by the non-State sector.
- 121 Some of the main reasons for the redistributions for each State are:
- New South Wales has higher than average levels of private provision of health services
 - Victoria has a lower than average proportion of Indigenous people and fewer than average people with low SES, along with fewer than average people living in remote and very remote regions
 - Queensland and Western Australia have above average Indigenous populations and more people living in remote and very remote regions. Western Australia has lower than average levels of private provision of health services
 - South Australia and Tasmania have older populations, along with higher than average proportions of their populations with low SES
 - The ACT has lower than average levels of private provision of health services

- The Northern Territory has a larger than average proportion of Indigenous people as well as a higher than average proportion of people residing in remote and very remote regions.

122 Table 20 provides a summary of the major reasons the assessment moves State GST revenue away from an equal per capita distribution.

Table 20 Major reasons for difference from EPC, Health, illustrative, 2011-12

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Redist
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Admitted patients	168	-286	-85	-59	109	102	-78	129	508
Emergency departments	-99	-88	16	75	-5	24	8	70	192
Outpatients	-59	-38	-12	55	9	16	2	28	109
Non-hospital patient transport	-40	-41	9	37	6	-1	-3	32	84
Community health	-424	-305	28	354	-63	79	105	226	792
Total	-455	-757	-45	462	57	219	34	485	1 257

Source: Commission calculation.

CHANGES SINCE THE 2010 REVIEW

123 There are a number of category-specific method changes associated with this category since the 2010 Review.

Combining expenses to form a new Health category

124 The major change in the health area is the creation of a Health category which combines expenses from all health services.

125 There is a strong similarity in the assessment approach, data sources and the services being provided in the health components. As such, we consider a single health assessment is warranted. Any disaggregation into separate categories appears arbitrary.

Moving from a subtraction model to a direct assessment

126 In the 2010 Review, non-admitted patient and community health expenses were assessed using a subtraction method to take account of non-State services that substitute for State service provision. Under the subtraction model, we assessed total health expenditure of each State using an SDC model, and subtracted off the spending by the private and Commonwealth sectors in each State to derive the amount to be funded by each State.

127 We have decided to move away from this method of assessment for a number of reasons.

- 128 **Level of substitutability.** The subtraction model, conceptually, works with any level of substitutability, and importantly does not require an estimate of the level of substitutability. However, it is more accurate at high levels of substitutability. In this review, we concluded that the level of substitutability is less than was previously assumed. As such, the conceptual strengths of the subtraction model have been mitigated.
- 129 **Uncertainty in the SDC.** The subtraction model used the ABS *National health survey* to measure visits to specified health professionals by different socio-economic groups. During the life of the 2010 Review, it became apparent that these specified health professionals did not fully reflect the diverse range of both State government and non-State health services. For example, the data do not fully capture the use of community health centre services. We believe the data used in the direct method will more accurately reflect the users of State provided community health services.
- 130 **Complexity.** The subtraction model relied on a much wider range of data sources and a higher level of judgement in combining these data sources. The direct method is simpler in that it only uses data from two sources, IHPA and Medicare.
- 131 **Contemporaneity.** While some elements of the subtraction model were able to be updated annually, such as Medicare and private health insurance data, not all SDC elements were able to be updated. We now consider that in the absence of an ability to update all elements, this may result in biases in the results. As such, we consider the direct method, which can be reliably updated annually has a significant advantage in a period when health expenditure patterns by the States, Commonwealth and private sector are changing rapidly.

Moving from AIHW data to IHPA data

- 132 We have moved from using admitted patient data provided by the AIHW to data provided by IHPA. While we acknowledge that data from both organisations are of high quality, we believe the adjustments made by IHPA for Indigeneity, remoteness, etc. and the adjustments for private provision, provide us with a more accurate estimate of the net cost for each population group.
- 133 In addition, using one data provider to measure the use and cost of all health services is an advantage.

Move from SARIA to ABS remoteness so no need for NT adjustment

- 134 We have removed the adjustment in the admitted patients assessment for the lack of private hospital provision in Darwin. This is because we have moved from SARIA to ABS's standard classification of remoteness, where Darwin is now considered an

outer regional area. This will account for the difference in private provision of admitted patient services in Darwin compared with other capital cities.

Changes to SDC groups

- 135 **Age groups.** As explained in the admitted patients component, after assessing the materiality of various age groups, we found that it was not material to disaggregate age using any more than five age groups.
- 136 **Gender.** In the 2010 Review, gender was separately assessed in the Community and other health category. In this review, we considered separately assessing gender in our SDC assessments but we found that it was not material to disaggregate by this population characteristic, at the \$30 per capita threshold.

Category expenses net of user charges

- 137 In the 2010 Review, only admitted patient expenses were assessed net of user charges. With the move away from the subtraction model, which assessed State expenditure for community health services on a gross basis, to a direct method, where user charges are assessed on a net basis in the SDC calculation, we are now able to net off all health user charges from the category.

ATTACHMENT 13

WELFARE

Summary of changes since the 2010 Review

- New child protection unit record data are used which improves the reliability of the family and child welfare services assessment.
- As the Commonwealth has taken over State responsibilities in the areas of aged care services and disability services for older people, needs relating to welfare-related aged care services, including for Western Australia, are assessed EPC.
- During the National Disability Insurance Scheme (NDIS) transition period, we are adopting dual disability services assessments — one for NDIS services and one for existing disability services delivered under the National Disability Agreement. Both NDIS and existing disability services will be assessed using the population eligible for NDIS.
- All concessions other than transport concessions are included in the general welfare component and assessed using the number of concession card holders. The remainder of general welfare services are assessed using the relative State proportions of people in the bottom quintile of the ABS's SEIFI.
- The changes in Commonwealth-State arrangements affecting this category and associated Commonwealth payments are, or will be, backcast as required.

WHAT IS INCLUDED IN THE WELFARE CATEGORY?

- 1 The Welfare category comprises recurrent expenses on:
 - family and child services
 - aged care services (Western Australia only)
 - services for people with a disability
 - general welfare services.Housing is now included as a separate category.
- 2 Revenues from user charges are assessed EPC in the Other revenue category because we consider the capacity to raise user charges is not affected by the same disabilities used to assess the various components of welfare expenses. User charges account for around 2% of category expenses.

3 Table 1 shows welfare expenses were \$15.1 billion in 2012-13.

Table 1 Welfare category expenses, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Category expenses (\$m)	4 853	3 447	2 603	1 714	1 583	355	227	276	15 057
Category expenses (\$pc)	660	607	564	691	952	693	600	1 159	657
Proportion of operating expenses (%)	7.8	8.0	6.1	6.9	10.6	7.5	5.4	6.0	7.5

Source: Commission calculation using State data.

4 Table 2 shows the share of State expenses directed to welfare rose from 6.8% in 2009-10 to 7.5% in 2012-13.

Table 2 Welfare expenses as a proportion of State operating expenses

	2009-10	2010-11	2011-12	2012-13
Total for category (\$m)	11 750	12 974	14 518	15 057
Total operating expenses (\$m)	172 788	181 377	190 502	201 171
Proportion of total operating expenses (%)	6.8	7.2	7.6	7.5

Source: Commission calculation using ABS Government Finance Statistics (GFS) and State data.

How are services delivered?

- 5 States have policy and delivery responsibility for most welfare services other than aged care services. The Australian Government plays a key role in developing national policy and reform directions, and provides significant funding to State governments.
- 6 Since the 2010 Review, there have been many changes to the way welfare services are provided, stemming from changes in Commonwealth-State responsibility.

Family and child services

- 7 The largest expense item under family and child services is State government funding for child protection and out-of-home care. Significant expenses are also associated with early intervention and family support (including intensive family support) services. Family and child services also cover State expenses on child care and after-school care but these represent only a very small proportion of expenses. Services may be delivered by government, non-government organisations, relative and kinship carers, and in some cases, by for-profit providers.
- 8 Child protection services are provided to protect children and young people aged 0-17 years who are at risk of harm within their families or in other settings, or whose families do not have the capacity to protect them. Child protection notifications are investigated to determine whether they are 'substantiated'.

- 9 Out-of-home care services provide care for children and young people who are placed away from their parents or family home for reasons of safety or family crisis. The majority of children on care and protection orders live in home-based care, either foster care or with relative/ kinship carers.¹ Less than 10% are placed in residential care and family group homes. States make financial payments to foster carers and relatives (other than parents) providing out-of-home care.

Aged care services

- 10 Under the aged care and disability services part of the National Health Reform Agreement, signed by all States except Western Australia, the Commonwealth Government has effectively assumed full policy and funding responsibility for aged care services, covering basic home care through to residential care. The Commonwealth has as a result taken over responsibility for basic community care and specialist disability services for older people (those aged over 65; over 50 for Indigenous people) while the States have assumed full responsibility for welfare and disability services for younger people, including the funding of community packaged care and residential care for younger people delivered under Commonwealth aged care programs. Victoria agreed to the new arrangements with effect from July 2015. The new arrangements have applied for the other States since July 2011. Essentially, the only State expenses left for this function will be those of Western Australia.
- 11 For Western Australia, pre-existing policy and funding arrangements for aged care services will continue to apply. In particular, basic community care services will continue to be provided by Western Australia under the Home and Community Care (HACC) program, with a continuing funding contribution from the Commonwealth.

Disability services

- 12 Apart from the NDIS trials which are currently underway, there are three streams of disability services currently provided by the Australian and State governments.
- Specialist disability services are provided under the National Disability Agreement (NDA), for the most part by States, and include accommodation support, community support, community access, respite, employment (a Commonwealth responsibility) and advocacy and information services.
 - Mainstream services are provided by both levels of government and are aimed at ensuring access and to meet special needs of people with a disability (for example, in relation to public housing and education). Expenses associated with mainstream services are included in other expense categories.
 - Income support and allowances are provided by the Commonwealth.

¹ AIHW, Child Protection Australia 2011-12, Table A21.

- 13 The States continue to provide NDA services for older people but the Commonwealth is now paying the States (other than Western Australia) for the delivery of these services, through the Specialist disability services National partnership payment.
- 14 The NDIS has now entered the launch phase and is scheduled to move into the transition phase in July 2016. (See the Main report Chapter 5 — Priority Issues)

General welfare services

- 15 General welfare services include concessions, homeless persons' assistance, prisoners' aid, care of refugees, Indigenous welfare services, women's shelters, and information, advice and referral services.
- 16 States provide water and energy concessions as well as rates and car registration concessions.² (Student transport concessions are included in the Schools education category. Other transport concessions are included in the Transport category.)

COMMONWEALTH FUNDING

- 17 The provision of welfare services is met by a number of funding sources including State own source revenue, Commonwealth payments and the GST. The expenses funded by Commonwealth payments are assessed in the same way as State funded expenses and the actual revenue is treated as an offset to the assessed expenses.
- 18 Table 3 shows the major programs funded in 2012-13. It shows that the National disability SPP is the largest.
- 19 As required by the terms of reference, we have treated the Assisting preparation towards the launch of the National Disability Insurance Scheme payment as having no impact on the relativities.
- 20 The Certain concessions for pensioners National partnership payments ceased in 2013-14 and so we may need to reconsider the treatment of these payments and the assessment of related expenses in our final report.

² The States have relied upon a Commonwealth funding contribution towards the cost of these concessions but this funding will cease from 2014-15.

Table 3 Major Commonwealth payments to States for welfare services, 2012–13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
National Disability SPP	414	306	251	126	109	34	20	13	1 273
Transitioning responsibilities for aged care and disability services: (a)									
Basic community care	0	351	0	150	0	0	0	0	501
Specialist disability services	57	0	0	0	23	13	1	0	94
Certain concessions for pensioners (b)	94	67	47	24	27	9	2	1	271
Homelessness	41	31	40	20	12	3	2	8	157
Other	16	11	4	4	4	1	1	19	61
Total	624	766	342	323	174	59	26	41	2 355

(a) From July 2015, Victoria will have passed across to the Commonwealth responsibility for aged care services and so will no longer be in receipt of the Basic community care maintenance and support services payment.

(b) As a budget savings measure, this payment ended in 2013-14.

Source: Commonwealth of Australia's *Final Budget Outcome, 2012-13*.

21 A complete list of Commonwealth payments and their treatment is provided in Appendix 2.

CATEGORY STRUCTURE

22 The assessment of the Welfare category is undertaken separately for each of the following components:

- family and child services
- aged care services
- disability services
- general welfare.

23 Table 4 shows the assessment structure for the category, the disabilities that are assessed and the size of each component, using 2012-13 data.

Table 4 **Category structure, Welfare, 2012-13**

Component	Component expense	Disability	Influence measured by disability
	\$m		
Family and child	4 354	Socio-demographic composition (SDC)	Recognises that Indigeneity and low socio-economic status (SES) population characteristics affect the use of services.
		Location	Recognises the differences in wage costs between States and in the cost of providing services to different areas within a State.
		Service delivery scale (SDS)	Recognises the cost of providing services in small population centres.
Aged care services	1 083	None	Assessed equal per capita.
Disability services	7 457	NDIS - SDC (transition)	State proportions of total number of younger people who meet the (full coverage) access requirements of the NDIS.
		NDIS - SDC (full implementation)	Assessed actual per capita.
		Non-NDIS - SDC	State proportions of total number of younger people who meet the (full coverage) access requirements of the NDIS.
		Non-NDIS - Cross-border	Recognises the cost to the ACT of providing services to people who are New South Wales residents.
		Non-NDIS - Location	As above.
General welfare	2 164	Concessions - SDC	Recognises that low SES population characteristics affect the use of services.
		Other general welfare - SDC	Recognises that low SES population characteristics affect the use of services.
		Location	As above.

Source: Commission calculation.

FAMILY AND CHILD SERVICES

Socio-demographic composition

- 24 We have recognised the impact of socio-economic status (SES) and Indigeneity on the cost of providing family and child services. We have made separate assessments of child protection expenses and out-of-home care expenses because Indigenous use of each is materially different. No State put a contrary view.

Age

- 25 Family and child services are directed to families with children. Our assessment is therefore based on the 0-17 age group.

Indigeneity

- 26 Indigenous children are disproportionately represented in child protection services and out-of-home care numbers, with sufficiently different Indigenous use of each of these services to necessitate separate assessments (Table 5 and Table 6). Use of child protection services is measured by the number of substantiations, which refer to investigations to determine whether a notification that a child needs protection is ‘substantiated’.

Table 5 Children aged 0–17 in substantiations, 2012-13, by Indigeneity status

	2012-13
	Rate per 1 000 children
Indigenous children	45.1
Non Indigenous children	5.6
All children	7.8
Ratio of Indigenous/non-Indigenous	8.1

Source: Productivity Commission, *Report on Government Services 2014*, Table 15A.8.

Table 6 Children aged 0–17 in out-of-home care, 30 June 2013, by Indigeneity status

	June 2013
	Rate per 1 000 children
Indigenous children	56.9
Non-Indigenous children	5.3
All children	7.7
Ratio of Indigenous/non-Indigenous	10.7

Source: Productivity Commission, *Report on Government Services 2014*, Table 15A.18.

- 27 In the absence of reliable data on the cost of providing services to Indigenous and non-Indigenous children, we have not incorporated a unit cost weight.

Socio-economic status

- 28 Evidence shows that use of State services is strongly associated with low income.
- 29 The Australian Institute of Health and Welfare’s (AIHW) child protection unit record data show greater rates of substantiation in poorer areas. We have based our SES measure on a purpose-built Indigenous specific Socio-Economic Index for Areas (SEIFA) for the Indigenous population and a non-Indigenous specific SEIFA developed for the Commission by the ABS for the non-Indigenous population. (These measures are discussed in more detail in Attachment 26 — Indigeneity.) We have used the bottom two quintiles as our proxy for low SES. Table 7 shows the number of substantiated cases per 1 000 children disaggregated by Indigeneity and SES.

- 30 Based on the available data, the bottom two quintiles accounted for 45% of all Indigenous substantiations and 61% of non-Indigenous substantiations in 2012-13. The overall share, across the Indigenous and non-Indigenous populations, is 57%.

Table 7 Substantiations use rates by SES status, 2012-13

	Indigenous children aged 0-17	Non-Indigenous children aged 0-17
	Rate per 1 000 children	Rate per 1 000 children
High SES	40.5	4.8
Low SES	51.5	12.1

Note: Based on data for all States other than New South Wales, Queensland and Western Australia. Population data relate to the 0-14 age group.

Source: AIHW, special data request.

- 31 Because the SES status of children in out-of-home care cannot be determined by this method, we have used the same relative SES use rates for out-of-home care expenses.
- 32 States were generally supportive of this approach.

Data

- 33 We have decided to use AIHW child protection unit record data on substantiations and out-of-home care numbers. We recognise that substantiation rates can vary between States because of differences in child protection policies and practices. However, we have used the data to estimate national average rates of substantiation. Presently, we have data by Indigeneity for all States and data further broken down by SES for all States other than New South Wales, Queensland and Western Australia. When 2013-14 data become available, we expect to be able to get data that also include Queensland and, possibly, New South Wales and Western Australia.

Calculating the socio-demographic composition assessment

- 34 We have made separate assessments for child protection and out-of-home care services. State spending on family and child services has been split between child protection services and out-of-home care services using Productivity Commission State recurrent expenditure data on each, shown in Table 8. The Productivity Commission splits the family and child services into two additional services. Those services were allocated to child protection and out-of-home care services on a proportional basis, given they are both aimed at reducing the need for child protection and out-of-home care services.

Table 8 State Government recurrent expenditure on family and child services, 2012-13

	2012-13
	\$m
Child protection services	1 147
Out-of-home care services	2 070
Intensive family support services	304
Family support services	360
Total	3 882

Source: Productivity Commission, *Report on Government Services 2014*, Table 15A.1.

- 35 Expenses on child protection and out-of-home care services were each allocated between Indigenous and non-Indigenous people on the basis of Indigenous and non-Indigenous substantiations and out-of-home care service user numbers. Adding the expenses together provided a split of expenses by Indigeneity.
- 36 National average use rates by SES for Indigenous and non-Indigenous children have been calculated by dividing substantiation numbers by the number of 0-14 year old children³ in the corresponding Indigeneity/SEIFA cohort. State assessed substantiation numbers by cohort have then been derived by multiplying these use rates by State 0-14 year old populations in the corresponding cohorts. These assessed substantiation numbers have then been applied to the Indigenous and non-Indigenous expenses to derive assessed expenses.

Location

- 37 We have recognised that differences in wage costs between States and in the cost of providing services to different areas within a State have a differential effect on the cost of providing family and child services across States. These influences are measured in a similar way for most assessment categories and the methods are described in Attachment 22 – Wages costs and Attachment 23 – Regional Costs.

Service delivery scale

- 38 We have recognised that States face different service delivery costs in certain parts of the State where the small size and dispersed nature of many communities leads to above average staffing levels. We have made a SDS assessment using an extrapolation of the SDS cost weight for schools. The rationale and details of the approach taken are outlined in Attachment 24 – Service delivery scale.

³ We have used the 0-14 population as the ABS does not release Indigenous populations by single year of age disaggregated by geography.

Bringing the family and child services component together

39 Table 9 shows the total assessed expenses.

Table 9 Illustrative assessed expenses, family and child services component, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
SDC assessed (\$m)	1 432	816	1 006	470	304	122	44	159	4 354
Location factor	0.996	0.985	1.000	1.028	0.995	1.023	0.994	1.172	1.000
Service delivery scale factor	0.998	0.995	1.002	1.006	1.006	1.005	0.992	1.059	1.000
Total (\$m)	1 412	794	1 001	482	302	125	43	196	4 354
Total (\$pc)	192	140	217	194	182	244	114	824	190

Source: Commission calculation.

AGED CARE SERVICES

- 40 The introduction of the new aged care and related disability services arrangements which took effect for most States from July 2011 (and Victoria from 2015), mean that Western Australia will be the only State with expenses on basic community care and NDA services for older people that the Commonwealth does not fund.
- 41 Since these changes, Update terms of reference have instructed the Commission not to allow the changes to influence the GST relativities. That direction is not part of the terms of reference for this review. Rather, we are instructed:
- where responsibilities for funding and delivering aged care and disability services has not been transferred to the Commonwealth by a State under the NHR Agreement, these responsibilities will continue to be assessed as State services for that State.
- 42 This review is the first time the changes will have an impact.
- 43 Because this is a major change in Commonwealth-State financial relations, we have backcast them into all assessment years. This means that, other than Western Australia, States will have no expenses on aged or disability services for older people. The Commonwealth will either fund them, or where they continue to be provided by the States, such as specialist disability services, States will be reimbursed. We have removed the Basic community care NPPs for all States but Western Australia.
- 44 We have decided that the appropriate assessment of State spending and Commonwealth payments in this area is one which has no impact on the GST distribution.
- 45 In dealing with this issue the Commission had to consider a number of difficult conceptual issues before confronting the usual data and implementation questions.

- 46 Because both the Commonwealth and Western Australia are providing the same service, the boundary of what is a State service is blurred in this instance. The overall spending on this service is the sum of Commonwealth spending in some States and Western Australia's spending in its State. The average could form the basis of what would need to be spent to deliver average service levels in Western Australia and we consider this approach would be consistent with the intent of the terms of reference. In this instance, such an approach would avoid Western Australia as the only State undertaking any expenditure, directly influencing the GST distribution.
- 47 We also have to consider how to deal with the position that Western Australia is the only State not to accept what amounts to a Commonwealth payment for the delivery of this service at the same level as provided in other States. This suggests that, in determining the fiscal impact of the service on Western Australia, we should not only take into account the payment it receives from the Commonwealth, but also the implicit funding it has decided not to accept. This is analogous to a decision by one State not to raise a tax levied by other States, which the Commission treats by imputing revenue at the average tax rate.
- 48 Taken together we have concluded that if Western Australia followed the average policy in this area we would assess a certain level of spending and impute to it the same revenue from the Commonwealth, leading to this service having no net impact on its fiscal capacity, exactly the same position as for other States. Consequently, rather than undertake assessments which negate each other we have decided that it is simpler to ensure that expenses and Commonwealth payments in this area have no impact on the GST distribution. For this reason, Tasmania's proposal to make an assessment of needs for Western Australia's aged population as part of the disability services assessment is not considered necessary.

DISABILITY SERVICES

- 49 Consistent with the approach to the assessment of NDIS expenses discussed in the Main report Chapter 5 — Priority issues, we have decided that during the transition to the NDIS, we will maintain dual disability services assessments — one for the NDIS and one for State expenses associated with existing services. Because the implementation of the NDIS is regarded as a major change in Commonwealth-State relations, we will 'backcast' the change. That is, expenses in each of the three assessment years will be split between NDIS and existing disability services expenses in the respective proportions of the application year.
- 50 Because the Commonwealth has taken over responsibility for aged care services, which include disability services for the aged, this component covers only the population under 65 years of age (50 for Indigenous).

- 51 Commonwealth payments to all States other than Western Australia for the delivery of NDA services to older people on its behalf (Transitioning for aged and disability — Specialist disability services National partnership payments) will become a Commonwealth purchase and subtracted off State expenses. The balance of the National disability SPP will continue to be treated as having an impact on the relativities.

Socio-demographic composition

Existing disability services

- 52 With the existing disability services provided under the NDA expected to phase out over the coming five or so years, we have simplified the assessment. We have decided to use the NDIS eligible population instead of Disability Support Pension (DSP) numbers adjusted for Indigenous use.
- 53 Western Australia has again argued that DSP and Carer Allowance pension numbers are affected by employment opportunities and are therefore not a good guide to disability service use. Table 10 shows that in 2011-12, the reliance of NDA service users on the DSP varied significantly across States. It suggests that different types of pensions are more prevalent in some States than in others. The DSP accounted for just 61.4% of service users in the Northern Territory for whom a pension was the main income source. The DSP share was also significantly below average in Victoria.

Table 10 Main income source of State provided NDA service users aged 16 and over, 2011-12

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	No.	No.	No.	No.	No.	No.	No.	No.	No.
DSP	22 396	23 571	14 221	7 108	9 281	2 746	1 168	643	81 134
Other pension/benefit	933	3 457	791	245	563	148	38	405	6 580
Other income	917	2 087	675	783	748	174	79	57	5 520
Not known (a)	7 171	29 325	2 693	1 765	3 936	187	145	816	46 038
Total	31 417	58 440	18 380	9 901	14 528	3 255	1 430	1 921	139 272
DSP share of users with pension as main income source (%)	96.0	87.2	94.7	96.7	94.3	94.9	96.8	61.4	92.5
DSP share of all users (b) (%)	92.4	81.0	90.7	87.4	87.6	89.5	90.9	58.2	87.0

(a) Includes no income.

(b) Excluding no income/not known/not stated/not collected main income source.

Source: AIHW, *Disability Support Services Appendix 2011-12*, Table B18.

- 54 We have considered two alternative assessment approaches. The first is to just consider Indigeneity and age as disabilities, given associated differences in State

provided NDA service use rates. The second is to use the number of younger people meeting the NDIS full scheme access requirements.

- 55 Both options give similar results. We have decided to base the assessment on the number of younger people meeting the NDIS full scheme access requirements. It would mean we would use the same disabilities as for the NDIS expenses over the transition period. It therefore has the advantage of consistency through the transition period and would mean no need for separate SDC assessments of the existing disability services and NDIS services.

NDIS

- 56 During the transition period, the NDIS assessment will reflect individual States' proportions of the total number of people who meet the (full coverage) access requirements of the NDIS. Upon full implementation, State contributions to the scheme will be assessed APC. (Further information on the NDIS assessment is provided in the Main report Chapter 5 — Priority issues)

Calculating the socio-demographic composition assessment

- 57 For the assessment of existing disability services, we have used the total number of younger people who meet the (full coverage) access requirements of the scheme.
- 58 From the 2016 Update (given backcasting), we will commence the NDIS transition years assessment, which we will also base on the total number of younger people who meet the (full coverage) access requirements of the scheme.

Cross-border

- 59 To recognise the ACT's needs for disability services used by residents from New South Wales, we have applied a cross-border adjustment to 50% of non-NDIS disability expenses. Nationally, in 2011-12, 50% of NDA services expenses excluding employment services related to accommodation support services⁴, and hence would be delivered 'in the home' and have no cross-border element. We have assumed that a cross-border adjustment would be relevant to the remainder of NDA services.

Location

- 60 We have recognised that differences in wage costs between States and in the cost of providing services to different areas within a State have a differential effect on the cost of providing non-NDIS disability services across States. These influences are

⁴ AIHW, 'Disability support services: Services provided under the National Disability Agreement 2011-12', *AIHW Bulletin 118*, July 2013, Table 1.2.

measured in a similar way for most assessment categories and the methods are described in Attachment 22 — Wages costs and Attachment 23 — Regional costs.

Bringing the disability services component together

61 Table 11 shows the total assessed expenses.

Table 11 Illustrative assessed expenses, disability services component, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
SDC assessed (\$m)									
Existing disability services	2 401	1 781	1 543	779	546	179	118	110	7 457
NDIS	0	0	0	0	0	0	0	0	0
Cross-border factor (a)	0.998	1.000	1.000	1.000	1.000	1.000	1.047	1.000	1.000
Location factor (a)	0.996	0.985	1.000	1.028	0.995	1.023	0.994	1.172	1.000
Total (\$m)	2 384	1 753	1 541	801	542	183	123	129	7 457
Total (\$pc)	324	308	334	323	326	357	324	542	325

(a) Existing disability services.

Source: Commission calculation.

GENERAL WELFARE

Socio-demographic composition

62 The Commission has recognised low SES as an influence on the cost of providing general welfare services. We have made separate assessments for concessions and other general welfare services because they have different disabilities and the assessments produce materially different results from those with no split of general welfare expenses. General welfare services expenses were estimated to be \$2.2 billion in 2012-13. Concessions were an estimated \$1.6 billion.

63 Under a 1993 agreement, the Commonwealth and States agreed that certain concessions would be provided by State governments to all pension card holders without discrimination between cardholders, in return for ongoing, indexed Commonwealth funding (the Certain concessions for pensioner and seniors card holders National partnership payments). 'Certain concessions' were defined as those rebates made available to pensioners for council/land and water rates, utilities including energy and sewerage, motor vehicle registration and public transport.

64 Other general welfare services comprise a varied group of services, such as homelessness services, prisoners' aid, care of refugees, pre-marital education and Indigenous welfare services. Homelessness services were the largest item of

expenditure amongst these other services, with net recurrent expenses of \$591 million in 2012-13.⁵

Concessions

- 65 Reflecting eligibility requirements, we have assessed concessions using the number of pensioner concession card plus health care card holder numbers in each State as a proportion of State population.
- 66 Eligibility for water, energy and rates concessions by State by Commonwealth pensioner concession card holders and Commonwealth health care card holders are set out in Table 12. Pensioner concession card holders in all States are eligible for concessions in all three areas. Health care card holder eligibility is somewhat more restricted, varying by State and by concession.

Table 12 State eligibility for water, energy and rates concessions

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
Water	PC	PC/HC	PC	PC	PC/HC	PC/HC	PC/HC	PC
Energy	PC/HC	PC/HC	PC	PC/HC (a)	PC/HC	PC/HC	PC/HC	PC
Rates	PC	PC	PC	PC/HC (b)	PC/HC	PC/HC	PC	PC

Note: PC = pensioner concession card, HC = health care card.

(a) Concessions available to cardholders who live in areas of the State that experience prolonged periods of heat discomfort.

(b) Concessions available to Commonwealth seniors health card holders.

Source: <http://australia.gov.au/services/service-task/apply-for/concessions-application> and State government websites, April 2014.

- 67 Table 13 shows the number of pensioner concession card and health care card holders as a proportion of State population in 2012-13.

Table 13 Pensioner concession card and health care card holders as a proportion of State population, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	%	%	%	%	%	%	%	%	%
Proportion	24.3	25.0	23.9	18.6	28.5	32.4	13.9	19.5	24.0

Source: Centrelink and Department of Veterans Affairs.

Other general welfare services

- 68 As welfare services are predominantly made available to people of low SES status, we have decided to assess other general welfare services using the relative proportion of people in the bottom quintile of the ABS's Socio-Economic Index for Individuals (SEIFI).

⁵ Productivity Commission, *Report on Government Services 2014*, Table 18A.1.

- 69 We use an Indigenous specific and a non-Indigenous specific SEIFA as our standard approach to measuring SES in most other categories where it is assessed. However, in general welfare, the data are not available to support a SEIFA-based approach. Using judgment, we consider that general welfare services are generally targeted at the 20% of the population with the lowest SES. This is not what SEIFA measures, and staff consider SEIFA a more appropriate measure. The relative State proportions of populations in the bottom SEIFA quintile are provided in Table 14.

Table 14 Relative State proportions of populations in the bottom SEIFA quintile

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Average
	%	%	%	%	%	%	%	%	%
Proportion	96	91	99	88	116	137	63	156	100

Source: Commission calculation, derived from ABS, 2006 Census data.

Location

- 70 We have recognised that differences in wage costs between States and in the cost of providing services to different areas within a State have a differential effect on the cost of providing concessions and other general welfare services across States. These influences are measured in a similar way for most assessment categories and the methods are described in Attachment 22 – Wages costs and Attachment 23 – Regional costs.

Data

- 71 Because States do not classify their various concessions to the same government purpose classification (GPC) codes, we will seek, via a State data request, total State concessions other than transport concessions and include them all in the general welfare component.
- 72 We have used pensioner concession card and health care card concession card holder data from Centrelink together with data on Commonwealth pension cards issued by the Department of Veterans Affairs.
- 73 We have obtained SEIFA data from the 2006 Census and will update it when the 2011 Census data become available.

Calculating the socio-demographic composition assessment

- 74 Concessions SDC assessed expenses were estimated using State shares of pensioner concession card and health care card concession card holder numbers. Other general welfare services were assessed using relative shares of State populations in the bottom SEIFA quintile.

Bringing the general welfare services component together

75 Table 15 shows the total assessed expenses.

Table 15 Illustrative assessed expenses, general welfare component, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
SDC assessed (\$m)									
Concessions	521	414	321	134	138	48	15	13	1 606
Other general welfare	177	130	115	55	48	18	6	9	558
Location factor	0.996	0.985	1.000	1.028	0.995	1.023	0.994	1.172	1.000
Total (\$m)	696	536	436	194	186	68	21	27	2 164
Total (\$pc)	95	94	95	78	112	132	56	112	94

Source: Commission calculation.

BRINGING THE ASSESSMENT TOGETHER

76 Table 16 brings the assessed expenses for each component together to derive the total assessed expenses for each State for the category.

Alternative presentation

77 Table 17 provides an alternative presentation using a factor approach. The table shows for each disability how the expenses per capita in each component and in total are affected by differences in State characteristics. Disability factors below one indicate a State is assessed to need to spend less than average. Disability factors above one indicate a State is assessed to need to spend more than average.

Table 16 Illustrative category assessment, Welfare, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Average
	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc
Family and child									
Equal per capita	190	190	190	190	190	190	190	190	190
SDC	5	-46	28	0	-7	49	-73	479	0
Location	-1	-3	0	5	-1	4	-1	33	0
SDS	0	-1	0	1	1	1	-1	11	0
Total	192	140	217	194	182	244	114	824	190
Aged care									
Total	47	47	47	47	47	47	47	47	47
Existing disability services									
Equal per capita	325	325	325	325	325	325	325	325	325
SDC	1	-12	9	-11	3	24	-14	137	0
Cross-border	-1	0	0	0	0	0	15	0	0
Location	-1	-5	0	9	-2	7	-2	56	0
Total	324	308	334	323	326	357	324	542	325
NDIS									
Total	0	0	0	0	0	0	0	0	0
Concessions									
Equal per capita	70	70	70	70	70	70	70	70	70
SDC	1	3	0	-16	13	24	-29	-14	0
Location	0	-1	0	2	0	2	0	12	0
Total	71	72	70	56	83	97	41	66	70
Other general welfare									
Equal per capita	24	24	24	24	24	24	24	24	24
SDC	0	-1	1	-2	5	10	-9	15	0
Location	0	0	0	1	0	1	0	4	0
Total	24	22	25	23	29	35	16	46	24
Category total	658	590	693	643	667	780	542	1 525	657

Note: Component disabilities do not add due to interactions.

Source: Commission calculation.

Table 17 Illustrative category factor, Welfare, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Average
Family and child (component weight = 29%)									
SDC	1.024	0.756	1.148	0.998	0.964	1.257	0.615	3.523	1.000
Location	0.996	0.985	1.000	1.028	0.995	1.023	0.994	1.172	1.000
SDS	0.998	0.995	1.002	1.006	1.006	1.005	0.992	1.059	1.000
Component factor	1.010	0.735	1.142	1.023	0.956	1.282	0.602	4.338	1.000
A. Weighted factor	1.003	0.923	1.041	1.007	0.987	1.082	0.885	1.965	1.000
Aged care (component weight = 7%)									
SDC	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Component factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
B. Weighted factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Existing disability services (component weight = 50%)									
SDC	1.003	0.963	1.027	0.968	1.009	1.074	0.958	1.422	1.000
Cross-border	0.998	1.000	1.000	1.000	1.000	1.000	1.047	1.000	1.000
Location	0.996	0.985	1.000	1.028	0.995	1.023	0.994	1.172	1.000
Component factor	0.996	0.948	1.027	0.993	1.003	1.098	0.996	1.665	1.000
C. Weighted factor	0.998	0.974	1.013	0.997	1.001	1.048	0.998	1.329	1.000
NDIS (component weight = 0%)									
SDC	1.003	0.963	1.027	0.968	1.009	1.074	0.958	1.422	1.000
Component factor	1.003	0.963	1.027	0.967	1.009	1.074	0.958	1.422	1.000
D. Weighted factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Concessions (component weight = 11%)									
SDC	1.012	1.040	0.993	0.773	1.186	1.349	0.583	0.807	1.000
Location	0.996	0.985	1.000	1.028	0.995	1.023	0.994	1.172	1.000
Component factor	1.009	1.025	0.995	0.795	1.181	1.381	0.580	0.946	1.000
E. Weighted factor	1.001	1.003	0.999	0.978	1.019	1.041	0.955	0.994	1.000
Other general welfare (component weight = 4%)									
SDC	0.990	0.939	1.021	0.908	1.197	1.413	0.650	1.609	1.000
Location	0.996	0.985	1.000	1.028	0.995	1.023	0.994	1.172	1.000
Component factor	0.985	0.923	1.020	0.932	1.189	1.444	0.645	1.884	1.000
F. Weighted factor	0.999	0.997	1.001	0.997	1.007	1.016	0.987	1.033	1.000
Category factor	1.002	0.898	1.055	0.979	1.015	1.187	0.825	2.322	1.000

Source: Commission calculation.

Influences not assessed in this category

A disability for where people live for family and child services

- 78 Most States indicated support for using the AIHW's child protection data to test the materiality of a disability reflecting where service users live. However, allowing for differences between use rates by remoteness was found not to be material.

- 79 The Northern Territory additionally supported using the data to not just account for differences in service use but also to better capture the claimed additional unit costs of child protection services in remote Indigenous communities. We have not done so in the absence of clear evidence pointing to higher unit costs associated with child protection cases in remote regions, over and above the impact of service delivery scale.

Service delivery scale for non-NDIS disability services

- 80 We did not recognise a service delivery scale disability for the existing disability services as disability services are generally provided in non-SDS areas. This issue is discussed further within Attachment 24 - Service delivery scale.

Service delivery scale for general welfare services

- 81 We did not recognise a service delivery scale disability for general welfare services because a disability is not appropriate for the concessions assessment nor for homelessness services, which would account for the bulk of other general welfare expenses. This issue is discussed further within Attachment 24 - Service delivery scale.

A disability for refugees for other general welfare services

- 82 We have not made allowances for refugees because any allowance would not materially affect the GST distribution given the relatively small numbers and, additionally, we have no reliable data to indicate where refugees actually live.

Fly-in fly-out workers

- 83 We did not assess the costs associated with fly-in fly-out workers. The issue of fly-in fly-out workers is dealt with in the Main report Chapter 5 — Priority issues.

Cost of living

- 84 We have not accepted State views that the impact of cost of living on the need for welfare services should be recognised in the assessment.
- 85 There is some evidence that higher costs of living may increase demand for State services. A higher cost of living could result in greater financial stress for people on low incomes. This greater financial stress may lead to higher rates of homelessness and child protection cases. However, there are no data to quantify this impact.
- 86 We conclude that, while the conceptual case is plausible, the absence of reliable data means we cannot reliably make an allowance for cost of living differentials.

CALD

- 87 We have not incorporated a cost adjustment for CALD. CALD is discussed in Attachment 28 – Other disabilities.

WHAT IS THE IMPACT ON THE GST DISTRIBUTION?

- 88 Table 18 shows the extent to which the assessment for this category moves the distribution of the GST away from an equal per capita distribution. It shows that GST revenue is redistributed to New South Wales, Queensland, South Australia, Tasmania and the Northern Territory and away from Victoria, Western Australia and the ACT.

Table 18 Illustrative GST impact, Welfare, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Redist
Dollars million	8	-383	166	-34	17	63	-43	207	460
Dollars per capita	1	-67	36	-14	10	123	-115	868	20

Source: Commission calculation.

- 89 The main reasons for these redistributions are the differences between States in the proportions of their populations in the groups that are high users of welfare services, along with differences between States in the cost of wage related inputs to welfare services. High or costly users of welfare services are Indigenous people and people living in areas of relative disadvantage (that is, with low SES).
- 90 Some of the main reasons for the redistributions for each State are:
- Victoria has a low share of Indigenous people. In addition, it has a relatively low share of the low SES population.
 - Queensland has a relatively high share of Indigenous people and also a greater than average proportion of children.
 - Western Australia has below average assessed service expenses because it has a relatively low share of the low SES population, but that is significantly offset by a relatively high Indigenous population and relatively high wage costs and costs associated with providing services to different areas within the State.
 - South Australia and Tasmania have above average assessed service expenses mainly due to their relatively high shares of the low SES population.
 - The ACT's below average assessed service expenses reflect its relatively low share of the low SES population. A small offset arises from its need to provide services to some residents of New South Wales.
 - The high assessed service expenses for the Northern Territory reflect its high share of the low SES Indigenous population, which draws disproportionately on welfare services. It also faces relatively high costs associated with providing services to different areas within the State and service delivery scale expenses.

91 Table 19 shows State proportions of Indigenous children and people from a low SES background.

Table 19 State proportions of selected population groups

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Average
	%	%	%	%	%	%	%	%	%
Indigenous share of population	2.9	0.9	4.2	3.8	2.3	4.7	1.7	29.8	3.0
0-14 share of population	18.9	18.3	19.9	19.3	17.7	18.8	18.2	22.8	19.0
Low SES share of population	43.4	37.5	39.6	31.4	50.0	55.1	8.3	32.9	40.0

Note: Low SES comprises people in the bottom two quintiles of the Indigenous specific SEIFA for the Indigenous population and non-Indigenous specific SEIFA for the non-Indigenous population.

Source: ABS ERP June 2012.

92 Table 20 provides a summary of the major reasons the assessment moves State GST revenue away from an equal per capita distribution.

Table 20 Major reasons for difference from EPC, Welfare services, illustrative, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Redist
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Family and child	14	-286	125	11	-14	27	-29	151	328
Existing disability services	-9	-96	41	-5	2	16	0	51	110
Concessions	5	10	-2	-36	21	14	-11	-1	49
Other general welfare	-3	-11	2	-4	8	6	-3	5	21
Total	8	-383	166	-34	17	63	-43	207	460

Source: Commission calculation.

CHANGES SINCE THE 2010 REVIEW

93 There are a number of category-specific method changes associated with this category since the 2010 Review.

Family and child services

94 The major change in the assessment of this component of welfare services stems from the availability for the first time of child protection unit record data. While data on the SES characteristics of families of children subject to child protection investigations are not directly available from this new collection, we have been able to derive SES breakdowns for both the Indigenous and non-Indigenous populations by assuming an individual family's SES can be proxied by the SES of all families living in their postcode area.

Welfare services for the aged

- 95 Since the 2010 Review, the Commonwealth has taken over State responsibilities in the areas of aged care services and disability services for older people. Needs relating to welfare-related aged care services are, including for Western Australia, assessed EPC.

Disability services

- 96 During the NDIS transition period, we are maintaining dual disability services assessments — one for the NDIS and one for State expenses associated with existing services delivered under the NDA. Both NDIS and existing disability services will be assessed using the population eligible for NDIS.

General welfare

- 97 For the 2015 Review, all concessions other than transport concessions are included in the general welfare component of the Welfare assessment. For the 2010 Review, in contrast, water and electricity concessions were included within the Services to communities category. Concessions are assessed using the number of concession card holders, similar to how water and electricity concessions were previously assessed. The remainder of general welfare services are assessed using the relative State proportions of people in the bottom quintile of the ABS's SEIFI.

ATTACHMENT 14

HOUSING

Summary of changes since the 2010 Review

- The category now covers public non-financial corporation (PNFC) expenses and revenue as well as general government expenses and revenues.
- Gross expenses and revenue are assessed separately instead of net expenses.
- Census data on households in social housing cross-classified by income, Indigeneity and location are used to estimate assessed users instead of Commonwealth pensioner numbers classified by Indigenous status.
- Assessed rents are calculated by applying average rents paid by the different household groups to assessed users.
- First home buyer grants, bonuses and stamp duty concessions are consolidated in the Housing services category and are assessed equal per capita (EPC).

WHAT IS INCLUDED IN THE HOUSING CATEGORY?

- 1 The Housing category includes expenses on all social housing services, including those provided through PNFCs and general government. More specifically, the category includes:
 - consolidated expenses on public housing provided by general government and PNFCs, and subsidies to community housing providers
 - home loans and other forms of home purchase assistance including interest rate assistance, grants and concessional stamp duty on conveyances to first home buyers
 - private rental assistance which assists low-income households with bonds and rent payments. This is a very small amount of spending in the category and has been included with public housing expenses.
- 2 The expenses exclude spending on:
 - the provision of accommodation to State employees, such as teachers and police officers in remote areas which is included and assessed in the relevant functional categories

- residential institutions mainly providing living quarters for people with special needs such as the young or the disabled
 - homeless persons assistance.
- 3 Spending on the last two targets different populations from spending on social housing. The drivers of the expenses are similar to the drivers of spending on welfare services. They are assessed in that category.
 - 4 Revenue from rents relevant to the category is separately identified and assessed.
 - 5 In this review, for the purposes of equalisation, the Commission has decided to treat housing services provided through PNFCs as a general government function. Unlike many services provided through PNFCs, housing services have few commercial features. They depend on government funds to meet operating deficits and pay for major investments and the services stem from social policy objectives.
 - 6 Housing PNFCs operate in most States except for Queensland, Tasmania and the Northern Territory. In these States social housing services are delivered by general government agencies.
 - 7 Table 1 shows that gross housing operating expenses net of depreciation were \$4.4 billion in 2012–13, and revenue was \$2.9 billion.

Table 1 Housing category expenses and revenue, 2012–13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Gross expenses	1 852	570	988	992	497	116	132	320	5 467
Depreciation	367	190	158	131	86	25	16	70	1 043
Gross expenses less depreciation	1 485	380	830	861	411	91	116	250	4 424
Revenue	-992	-429	-370	-567	-340	-77	-89	-56	-2 920
Net expenses	493	-50	460	294	71	14	28	194	1 505
First home buyer expenses	139	339	102	134	60	14	20	12	821
Category expenses (\$m) (a)	633	289	563	428	132	28	47	206	2 325
Category expenses (\$pc) (a)	86	51	122	173	79	54	125	866	101
Proportion of operating expenses (%)	1.0	0.7	1.3	1.7	0.9	0.6	1.1	4.5	1.2

(a) Net operating expenses excluding depreciation, plus FHOS.

Source: Staff calculation using State data.

- 8 Table 2 shows that the share of State expenses directed to housing was about 2.2% in 2009–10 and 2010–11 but fell to about 1.2% in 2012–13.

Table 2 Housing net expenses as a proportion of State operating expenses

	2009-10	2010-11	2011-12	2012-13
Total for category (\$m)	3 740	3 736	2 743	2 325
Total operating expenses (\$m)	172 788	181 377	190 502	201 171
Proportion of total operating expenses (%)	2.2	2.1	1.4	1.2

Source: Commission calculation using ABS Government Finance Statistics (GFS) data and State data.

How are services delivered?

9 There are four types of social housing.

- Public housing encompasses the public rental housing owned or leased by State governments. Most States provide public housing through public housing authorities, but Queensland, Tasmania and the Northern Territory provide it through State government departments.
- State-owned and managed Indigenous Housing (SOMIH).
- Indigenous community housing organisation (ICHO) dwellings.
- Mainstream community housing managed by not-for-profit organisations. It offers medium- or long-term tenure for low-income individuals and families.

10 Public housing is the dominant component of the social housing stock but community housing has been growing rapidly in recent years, albeit from a low base. Table 3 shows the distribution of social housing dwellings by program.

Table 3 Social housing dwellings by program

	June 2008	June 2013	Percentage growth	Dwellings as a share of total
	No.	No.	%	%
Public housing	337 866	328 340	-2.8	78.0
SOMIH	12 778	10 084	-21.1	2.4
Community housing	38 811	65 865	69.7	15.6
Indigenous community housing	19 583	16 773 (a)	-14.3	4.0
Total	409 038	421 062	2.9	100.0

(a) June 2012.

Source: Productivity Commission, 2014, *Report on Government Services 2014*, Table 17A.3.

11 In addition to social housing, States assist home buyers through grants, stamp duty concessions and other financial assistance. Eligibility for home purchase assistance is generally restricted to first home owners and low-income buyers, who apply directly to State governments for assistance.

COMMONWEALTH FUNDING

- 12 The Commonwealth provides funding to States to assist them in meeting their housing services expenses. In addition to the National Affordable Housing Agreement (NAHA) funding, the Commonwealth also provides States with National partnership payments (NPPs). The NAHA funding directly impacts on State fiscal capacities as it helps to fund social housing and remote Indigenous housing services. The expenses funded by these payments are assessed in the same way as State funded expenses and the actual revenue is treated as an offset to the assessed expenses.
- 13 The Remote Indigenous housing NPP was previously assessed as having no impact on the relativities. However, service delivery in this area has changed and States now have greater responsibility over the funded services. Payments under the Remote Indigenous housing NPP now have an impact on State GST shares.
- 14 The Stronger futures in the Northern Territory NPP does not impact on State GST shares as the Commission was previously directed in terms of reference to treat the payments in that way. The funding supports the provision of safe and healthy houses for Indigenous Australians. Service delivery has not changed under this NPP and so the payments continue to have no impact.
- 15 Table 4 details the major Commonwealth payments provided to States for housing services.

Table 4 Commonwealth payments to States for housing services, 2012–13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
National affordable housing agreement SPP	403	300	251	134	95	31	24	25	1 264
Remote Indigenous housing NPP	19	3	97	55	6	3	0	122	303
Stronger futures in the Northern Territory NPP – housing	0	0	0	0	0	0	0	27	27
Total	422	302	348	190	101	34	24	174	1 594

Source: Commonwealth of Australia's *Final Budget Outcome, 2012-13*.

- 16 A complete list of Commonwealth payments and their treatment is provided in Appendix 2.

CATEGORY STRUCTURE

- 17 The assessment of the Housing category is undertaken separately for each of the following components:
 - service expenses
 - revenue

- first home owners grants and concessions.

18 Table 5 shows the assessment structure for the category, the disabilities that are assessed and the size of each component, using 2012–13 data.

Table 5 Category structure, Housing, 2012–13

Component	Component expense	Disability	Influence measured by disability
	\$m		
Service expenses	4 424	Socio-demographic composition (SDC)	Recognises that income, Indigeneity and remoteness affect the use and cost of providing housing services. An Indigenous cost weight is applied.
		Location	Recognises the differences in wage costs between States and in the cost of providing services to different areas within a State.
Revenue	-2 920	SDC	Recognises that income, Indigeneity and remoteness affect the rent paid by households and the ability of States to raise revenue from households living in social housing.
First home owners grants	821	None	EPC assessment as there is no policy neutral reliable measure of first home owners.

Source: Commission calculation.

19 We have undertaken separate assessments of services expenses and revenue instead of netting revenue off expenses because separate assessments recognise more simply the impact of wage cost differences on assessed expenses.

SERVICE EXPENSES

Socio-demographic composition

20 The extent of social housing services provided by each State government is driven by the size of its population and the presence of those groups of people who use social housing more intensively, such as:

- persons on low income
- Indigenous people
- people in remote areas.

21 We have recognised the differential impact of households with these characteristics in this assessment. The assessment assumes that demand for housing is household based rather than individual based. In terms of demand, a household of one is the same as a household of four.

Income

- 22 Social housing in all States is designed to assist households with low incomes, and programs have eligibility limits for both household income and assets.
- 23 We have defined low-income households as those with an equivalised income of less than \$31 200 a year (\$600 per week).¹ An equivalised income of less than \$600 per week is similar to average income eligibility thresholds for access to public housing for a single person (Table 6). The threshold approximately equates to the bottom two income quintiles of the 2011 Census (the bottom 42% of households).

Table 6 Public housing weekly income eligibility limits, 2014

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
Single person (\$)	560	519	609	430 (a)	970	519	669	736
Couple, no dependants (\$)	775	899	755	580 (b)	1 268	899	836	955
Couple with two dependents (\$)	1 140	1 022 (c)	999	815 (d)	1 566	967	1 060	1 275
Public housing proportion of all dwellings (%) (e)	5.2	3.8	3.9	5.0	7.6	6.6	9.5	9.9

(a) \$610 for North West and remote areas.

(b) \$580 for single income, \$670 for dual income. Around 40% more for North West and remote areas.

(c) \$1 053 if at least one child is between 13 and 17 years.

(d) \$815 for single income, \$930 for dual income. Around 40% more for North West and remote areas.

(e) 2011 data.

Note: Eligibility criteria for access to SOMIH and community housing are generally consistent with those for public housing. Eligibility is also subject to meeting an assets test.

Source: State housing authority websites, Productivity Commission *Report on Government Services 2014* and 2011 Census.

- 24 The recognition of differences in the proportion of low-income households in the assessment was supported by most States. Western Australia did not support an income assessment in the absence of a cost of living assessment. This issue is addressed below.

Indigenous status

- 25 Data on users of social housing show that Indigenous households use social housing services more than non-Indigenous households, and involve higher operating costs per household than non-Indigenous households.
- 26 **Use.** The 2011 Census shows that Indigenous households make up 14.3% of households in social housing, compared with the 2.6% of Indigenous households in the general population. The 2011 Census also shows the average household with at

¹ Equivalised household income is derived as the amount of disposable cash income that a single-person household would require to maintain the same standard of living as the household in question, regardless of the size or composition of the latter.

least one Indigenous Australian had 3.3 people, whereas the average non-Indigenous household had 2.6 people.²

- 27 States provide specialist programs for Indigenous households, recognising the greater need in this community for such services. New South Wales, Queensland, South Australia and Tasmania have SOMIH, and all States have ICHOs delivering housing services to Indigenous households.
- 28 **Cost.** Table 7 shows that operating expenses per SOMIH dwelling are, on average, 43% higher than those for non-Indigenous households in public housing, over 2010-11 to 2012-13. While only four States still have SOMIH housing, the States that have them hold the majority of public housing dwellings.³
- 29 The 43% cost differential includes an adjustment to remove the expenses associated with Indigenous households in public housing from total public housing expenses. The Indigenous households in public housing were assumed to cost the same per dwelling as SOMIH households within the same State.
- 30 By not excluding Indigenous households in public housing, the cost differential would have been 38%.

² ABS Census 2011.

³ Productivity Commission, op.cit., Table A17.5, dwellings at 30 June 2013.

Table 7 Comparison of public housing (PH) and SOMIH recurrent expenses per dwelling, excluding Indigenous households living in PH (a)

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	\$	\$	\$	\$	\$	\$	\$	\$	\$
2010-11									
PH	6 977	5 658	8 255	8 191	6 929	8 777	8 167	12 769	7 227
PH (b)	6 918	..	8 003	..	6 719	8 851	..	..	7 014
SOMIH	7 630	..	10 572	..	11 670	7 777	..	..	9 410
2011-12									
PH	7 429	5 884	8 294	9 762	7 604	8 194	8 736	12 518	7 670
PH (b)	7 380	..	7 695	..	7 355	8 252	..	..	7 361
SOMIH	7 913	..	13 483	..	12 885	7 394	..	..	10 682
2012-13									
PH	7 751	6 087	7 905	10 152	7 667	7 951	9 058	14 314	7 835
PH (b)	7 675	..	7 006	..	7 458	8 004	..	..	7 479
SOMIH	8 478	..	14 958	..	11 909	7 238	..	..	11 236
Cost weights (c)									
2010-11	1.10	..	1.32	..	1.74	0.88	..	..	1.34
2011-12	1.07	..	1.75	..	1.75	0.90	..	..	1.45
2012-13	1.10	..	2.14	..	1.60	0.90	..	..	1.50
Average	1.09	..	1.74	..	1.70	0.89	..	..	1.43

(a) Expenses used by the Productivity Commission to derive per dwelling expenses are lower than the expenses from the ABS GFS used by the Commission.

(b) PH costs have been adjusted using the proportion of Indigenous households in PH to impute non-Indigenous dwelling expenditure, assuming that Indigenous households in PH cost the same per dwelling as households in SOMIH within the same State.

(c) Cost weights have been calculated by dividing SOMIH costs by the adjusted PH costs (a).

Note: .. means not applicable.

Source: Productivity Commission, 2014, *Report on Government Services 2014*, Tables 17A.1, 17A.3 and 17A.5 and Commission calculations.

- 31 These cost weights are supported by the data on maintenance and tenancy management expenses we collected from States during this review. The data showed higher costs for Indigenous households compared to non-Indigenous households. Table 8 shows maintenance and tenancy management costs per Indigenous and non-Indigenous household, averaged over the period 2010–11 to 2012–13.
- 32 Maintenance costs for Indigenous households were almost double that of non-Indigenous households, being 81% more. Tenancy management costs were 43% more than for non-Indigenous households. After summing the total costs of these expenses, the average Indigenous cost weight was calculated as 64%.

Table 8 Indigenous cost weights based on State maintenance and tenancy management expenses, average of expenses from 2010–11 to 2012–13

Expense	Indigenous cost per dwelling	Non-Indigenous cost per dwelling	Total cost (a)	Indigenous cost weight
	\$	\$	\$m	
Maintenance	5 457	3 015	847	1.81
Tenancy management	3 550	2 480	702	1.43
Total	9 008	5 495	1 549	1.64

(a) Average costs for six States, including only dwellings with cost data.

Source: State data returns and Commission calculations.

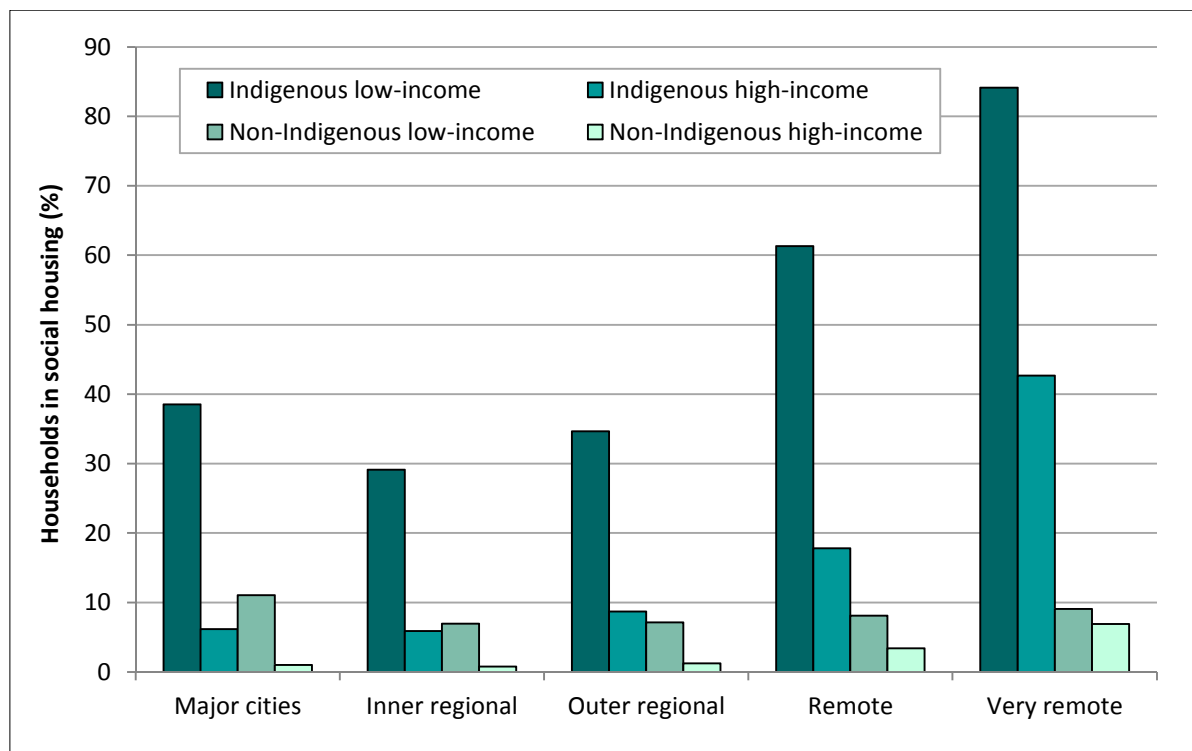
Note: Data excludes two States with incomplete Indigenous information.

- 33 As the maintenance and tenancy expenses do not represent all service expenses, could capture interstate and regional influences, and as the data are not complete for all States, we have decided to apply, as a placeholder, an Indigenous cost weight of 40% to all Indigenous households. Comparable data used in the 2010 Review showed a cost differential of 25%.
- 34 The Northern Territory argued for recognition of the costs related to Indigenous mobility, higher eviction rates and overcrowding. We consider most of these costs would be captured in the maintenance and tenancy management costs and so have been recognised.

Remoteness

- 35 The proportion of the population in social housing also varies significantly by region. Figure 1 shows households in social housing as a percentage of total households split by Indigeneity, income and location using data from the 2011 Census.

Figure 1 Proportion of households in social housing by Indigeneity, remoteness and income, 2011 Census



Note: Low-income households have a weekly equivalised gross income of less than \$600 and high-income households have a weekly equivalised gross income of \$600 or more.

Source: 2011 Census and Commission calculations.

- 36 Use rates of social housing, disaggregated by Indigeneity and income, are generally higher in remote and very remote regions compared to other regions. This is especially true for Indigenous households. In very remote areas, more than 84% of low-income Indigenous households live in social housing. This is mainly due to limited private rental alternatives in remote regions. Based on this evidence, we have decided to assess the impact of remoteness.
- 37 Most States supported recognising the higher use and cost of housing services for Indigenous households in different locations, although New South Wales opposed it. It said that low income was sufficient to capture differential needs across States and that including location and Indigeneity might introduce some double counting. We have avoided this by using cross-classified data to derive use rates.
- 38 As there may be some double counting between the Indigenous cost weight and our regional cost assessment discussed later, we have chosen to use an Indigenous cost weight at the lower end of weights indicated by the data. In addition, we note that 86% of SOMIH dwellings are located in non-remote areas and this should also

minimise any overlap because any higher costs of Indigenous housing in remote areas should not be captured in the calculated weight.⁴

Data

- 39 We have measured the different use made of housing services by households classified by their income, Indigeneity and remoteness status, using 2011 Census data. We have used household numbers by landlord type. The landlord type, 'State or Territory housing authority' provides a measure of public housing plus SOMIH while the landlord type, 'Housing co-operative/community/church group' provides a measure of mainstream community housing plus ICHO housing.
- 40 The main advantage of using Census data is that all social housing types can be disaggregated by all relevant socio-demographic characteristics.
- 41 We chose not to use the alternative Australian Institute of Health and Welfare (AIHW) data for the following reasons.
- The coverage of social housing is limited. Mainstream community housing and ICHO information is collected through surveys completed by community housing organisations and through administrative data from State housing authorities. Mainstream community housing survey data disaggregated by income, Indigeneity and remoteness are not available for all States. For ICHOs, the only data available are dwelling numbers by remoteness. We acknowledge, however, that the Census may under-count the number of households in social housing.
 - There are a significant number of households with unknown Indigenous status in the AIHW data. The Indigenous unknowns represent only 1% of Census social housing household data, and around 30% of the AIHW total public housing household data.
- 42 We do not consider that the annual availability of the AIHW dataset is a sufficient advantage for using it.

Calculating the socio-demographic composition assessment

- 43 The SDC assessment was undertaken using national average use rates of social housing for households disaggregated by income, Indigeneity and location (Table 9). The Indigenous use rates were then increased by the Indigenous cost weight of 40%.

⁴ Productivity Commission, op.cit., Table A17.6, dwellings at 30 June 2013.

Table 9 Social housing use rates by Indigeneity, income and remoteness, Census 2011

Remoteness	Indigenous		Non-Indigenous	
	Low-income	High-income	Low-income	High-income
	%	%	%	%
Major cities	38.5	6.2	11.0	1.0
Inner regional	29.1	5.9	6.9	0.8
Outer regional	34.7	8.7	7.1	1.2
Remote	61.3	17.8	8.1	3.4
Very remote	84.1	42.6	9.1	6.9

Source: 2011 Census and Commission calculations.

Note: The Indigenous cost weight has not yet been applied.

Low-income households have a weekly equivalised gross income of less than \$600 and high-income households have a weekly equivalised gross income of \$600 or more.

- 44 The cost-weighted national average use rates were multiplied by each State's total household numbers disaggregated by the same socio-demographic characteristics, to derive assessed social housing household numbers by State, income, Indigeneity and location. Total spending on housing was then allocated to each State and group on the basis of the proportion of cost-weighted users in each group, and then the amounts assessed by each household group in the State were summed. Table 10 shows national average per household housing expenses for each socio-demographic group. It shows that States spend on average some \$15 286 on every low-income Indigenous household in very remote areas, compared with \$128 on every high-income non-Indigenous household in major cities.
- 45 When we compare the implied Indigenous use and cost weights we calculated with those used by the Productivity Commission in its Indigenous Expenditure Report, we find that, when they are recalibrated to a per household basis, ours are of a similar order of magnitude. Table 10 suggests States spend 8.8 times more per Indigenous household than they spend on non-Indigenous households.

Table 10 Per household service expenses by socio-demographic characteristics, 2012–13

Remoteness	Indigenous			Non-Indigenous		
	Low-income	High-income	Total	Low-income	High-income	Total
	\$	\$	\$	\$	\$	\$
Major cities	6 999	1 119	3 921	1 432	128	567
Inner regional	5 290	1 066	3 542	901	103	459
Outer regional	6 296	1 577	4 389	925	159	500
Remote	11 135	3 236	7 657	1 051	441	649
Very remote	15 286	7 747	13 300	1 177	892	977
Total	7 407	1 583	4 796	1 250	133	543

Note: The data in the table show, for each population group, total housing expenses per household multiplied by the social housing relative use rates and Indigenous cost weight.

Source: Commission estimates.

Location

- 46 We have recognised that differences in wage costs between States and in the cost of providing services to different areas within a State have a differential effect on the cost of providing housing services across and within States. These influences are measured in a similar way for most assessment categories and the methods are described in Attachment 22 — Wages costs and Attachment 23 — Regional costs.
- 47 We have not included an additional housing specific weight due to higher construction costs because it is not clear that the general location factors materially understate State costs in relation to capital associated costs, such as maintenance.

Influences not assessed in this component

Cost of living

- 48 We have not accepted the view that the impact of the cost of living on the need for public housing should be recognised in the assessment.
- 49 As the Commission noted in the 2010 Review report, accepting this case requires evidence that above average costs of living lead to higher provision of State services and that States determine the quantity of services they provide and the geographic allocation of them according to where demand for public housing is high because of cost of living differences.
- 50 There is some evidence that higher costs of living may increase demand for State services. However, there is no clear evidence that States react to the higher demand by increasing the services provided. In fact, we observed that some States have reacted to the higher demand by imposing tighter eligibility criteria on their services. This takes the form of reducing income thresholds or periodically reassessing

eligibility. For example, Western Australia has tighter eligibility criteria than any other State even in remote areas, as shown in Table 6. In addition, it has only an average proportion of public housing.

Other possible impacts

- 51 We have not made assessments in relation to other disabilities, such as the age of the public housing stock and adjustments for culturally and linguistically diverse (CALD) households.
- 52 Any material differences in the age profile of the public housing stock across the States, assuming such differences exist, cannot be separated from State policy choice, and so any disability based on age of stock cannot be reliably calculated.
- 53 The assessment of the CALD disability is addressed in Attachment 28 — Other disabilities.

Bringing the service expenses component together

- 54 Table 11 shows the total assessed expenses.

Table 11 Illustrative assessed expenses, service expenses component, 2012–13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
SDC assessed (\$m)	1 416	974	930	473	344	100	47	140	4 424
Location factor	0.996	0.985	1.000	1.028	0.995	1.023	0.994	1.172	1.000
Total (\$m)	1 405	956	927	484	341	102	46	164	4 424
Total (\$pc)	191	168	201	195	205	198	123	688	193

Source: Commission calculation.

REVENUE

Socio-demographic composition

- 55 In this assessment, we have recognised that different types of households pay different rents but not that there are differences in rent collection rates. This is because we found that the socio-demographic characteristics of households influence the rent paid but were unable to observe material differences in rent collection rates.
- 56 2011 Census data were used to analyse rents paid, disaggregated by Indigeneity, income and location. Table 12 shows:
 - households on higher incomes paid more rent than those on lower incomes
 - rents paid decrease with remoteness

- Indigenous households in non-remote regions paid more rent than non-Indigenous households. However, on average, Indigenous households paid slightly less rent than non-Indigenous households.

Table 12 Average weekly rents paid by households in social housing, by Indigeneity, income and location, 2011 Census

Remoteness	Indigenous			Non-Indigenous		
	Low-income	High-income	Total	Low-income	High-income	Total
	\$ per week	\$ per week	\$ per week	\$ per week	\$ per week	\$ per week
Major cities	145	217	156	125	212	138
Inner regional	144	178	148	122	166	127
Outer regional	128	160	132	110	160	119
Remote	110	151	118	99	155	123
Very remote	75	93	78	85	95	90
Total	125	169	132	123	197	135

Source: Commission calculations based on 2011 Census.

- 57 As a result, we have developed an assessment of revenue that takes into account the average impact of the income, Indigeneity and remoteness status of households on rent raised in each State.
- 58 Queensland, Western Australia and the Northern Territory strongly questioned the finding that some Indigenous households pay more rent than non-Indigenous households. However, this is what the Census data show and is supported by data from the Productivity Commission's Report on Government Services 2014. The Productivity Commission data show higher average weekly rents for SOMIH dwellings compared with public housing. Around 86% of SOMIH dwellings are located in non-remote areas.⁵ This is consistent with Table 12, which shows that the higher rents paid by Indigenous households are mainly in non-remote areas.
- 59 In addition, it appears that rents paid are strongly influenced by the type and size of households as well as the nature of housing services eligibility criteria. For example, a 2008 report from the AIHW found that Indigenous households in SOMIH had a higher median weekly household income than households in public housing.⁶
- 60 In a report from the Australian Housing and Urban Research Institute, the authors said that it is clear that, in the majority of situations, SOMIH experiences higher average rents per dwelling than is the case for public housing.⁷ This is probably due to

⁵ Productivity Commission, op.cit., Table A17.6, dwellings at 30 June 2013.

⁶ Australian Institute of Health and Welfare: Storer J E & Wilson D A 2008, *Who receives priority housing and how long do they stay?* Bulletin series no. 63. Cat. no. AUS 105. Canberra: AIHW.

⁷ Dr Jon Hall and Professor Mike Berry, *Indigenous housing: assessing the long term costs and the optimal balance between recurrent and capital expenditure*, Australian Housing and Urban Research Institute, 2006.

the fact that the housing for Indigenous households is not as tightly targeted on income grounds as that for public housing in general.

- 61 We have not adjusted for differences in rent collection rates because Productivity Commission data show that rent collection rates are similar for Indigenous and non-Indigenous housing (Table 13). In any case, it is expected that the small gaps should decrease as State governments take over responsibility for Indigenous community housing. One of the expected outcomes of the National Partnership Agreement on Remote Indigenous Housing is ICHO rent reforms, leading to fair rent setting in line with that applying to public housing. This means generally rents will be a proportion of assessable income for a household and new rents will be collected regularly.

Table 13 Social housing rent collection rates

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	%	%	%	%	%	%	%	%	%
Public housing									
2010-11	99.2	98.7	100.9	100.7	100.0	99.0	99.5	102.7	99.6
2011-12	99.1	98.5	99.4	100.7	100.3	98.6	99.7	99.0	99.3
2012-13	99.0	98.7	100.0	100.7	100.0	98.4	99.5	98.7	99.4
SOMIH									
2010-11	104.0	..	99.3	..	99.9	99.0	..	..	101.7
2011-12	100.0	..	100.6	..	100.7	98.6	..	..	100.5
2012-13	101.0	..	99.8	..	101.5	98.4	..	..	99.6
Community housing									
2010-11	96.1	98.1	99.3	99.6	99.7	100.2	101.6	na	97.7
2011-12	96.5	99.2	101.6	99.1	98.1	na	99.1	na	97.9
2012-13	101.9	98.8	99.4	100.1	100.0	102.2	98.1	na	100.6
Indigenous community housing									
2009-10	90.3	92.3	83.5	84.7	na	97.0	na	93.6	88.1
2010-11	100.7	100.1	93.0	88.7	na	98.2	na	71.2	94.9
2011-12	98.6	101.6	94.6	78.8	na	100.5	na	81.3	94.9

Note: ‘..’ means not applicable and ‘na’ means not available.

Source: Productivity Commission, 2014, *Report on Government Services 2014*, Tables A17.30 to A17.33.

Data

- 62 As for the SDC for the expenses assessment, we have used the 2011 Census for the revenue assessment.

Calculating the socio-demographic composition assessment

- 63 The revenue SDC assessment was calculated using the same method as for the service expenses SDC assessment. Assessed social housing use for each State was calculated

using the national average use of social housing made by households classified by income, Indigeneity and remoteness status of households and the number of households in each group in each State. This use was multiplied by the average rent paid by each household group. Assessed revenue for each State was then calculated by summing the amounts assessed to be paid by each household group in the State. Table 14 shows national average per household revenue raised from different types of households.

Table 14 Per household revenue by socio-demographic characteristics, 2012-13

Remoteness	Indigenous			Non-Indigenous		
	Low-income	High-income	Total	Low-income	High-income	Total
Major cities	3 781	901	2 276	934	141	408
Inner regional	2 830	706	1 950	571	89	304
Outer regional	2 988	936	2 159	531	132	309
Remote	4 556	1 820	3 353	541	356	414
Very remote	4 248	2 685	3 833	523	441	460
Total	3 444	991	2 344	801	137	380

Note: The data in the table show, for each population group, total revenue from rent per household in the population multiplied by the social housing relative rent ratios (Table 12) and the social housing use rates (Table 9). The relative rent ratios were derived by dividing the average rent paid by each population group by the total average rent paid.

Source: Commission estimates.

Bringing the revenue component together

64 Table 15 shows the assessed revenue.

Table 15 Illustrative assessed revenue, revenue component, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
SDC assessed (\$m)	954	679	598	308	228	60	36	56	2 920
Total (\$m)	954	679	598	308	228	60	36	56	2 920
Total (\$pc)	130	120	130	124	137	118	94	235	127

Source: Commission calculation.

FIRST HOME OWNERS

65 We have decided to assess first home owner related expenses and tax expenditure on an EPC basis as a separate component of this category.

66 The changes to the First Home Owner Scheme (FHOS), which mainly became effective in 2012-13, mean that the 2010 Review actual per capita assessment is no longer appropriate. The *2008 Intergovernmental Agreement* gave States the capacity to

change the value and coverage of the FHOS grants from July 2009. As a result, States have modified the eligibility and caps for FHOS grants.

67 In addition to FHOS, States provide:

- additional grants to first home owners
- tax expenditure to first home owners to eliminate or reduce their stamp duty payments.

68 It appears that States are consolidating their FHOS and other bonus grants. We consider that all grants and concessions should be treated on a consistent basis and have included them all in this component of the category.⁸ We also observe that the distribution of first home owners which is the best measure of the expenses States will need to incur on first home owner schemes on a policy neutral basis is very different from the Stamp duty on conveyances tax base. As a result, this change will improve equalisation outcomes.

69 To make the change, we will need to obtain the amounts of the tax expenditure on first home owner exemptions and concessions from States annually. These amounts will be included in this category and also added back to States' stamp duty on conveyances revenues so gross stamp duties are reflected in that category.

70 In the 2014 Update, the FHOS scheme assessment was not material at \$30 per capita. If we were to add the additional grants to first home owners and the value of the tax expenditure, as shown in Table 16, the assessment becomes slightly material for the ACT.⁹

Table 16 First home owners assessment, illustrative GST impact

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Average
	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc
GST impact	1	4	-11	15	-11	-15	31	-13	4

Note: We used 2013 Update data because this was the last update where the data for all years were available on a comparable basis.

Source: Commission calculations.

71 As a result, we investigated an assessment of State expenses on first home owners grants and concessions using the ABS first home owner data, as suggested by Victoria and the ACT. As far as we are aware this is the only dataset available on first home owners that is independent of the FHOS and presumably policy neutral. However, the data are not comprehensive as they cover only first home owners with a mortgage. Nonetheless, we considered most first home owners would have a mortgage and that

⁸ In the 2010 Review, concessions were netted off revenue on conveyances.

⁹ We estimated the value of the additional grants at \$170 million and the tax expenditure at \$500 million.

the data should give a reliable indication of the differences in first home owner numbers in each State.

- 72 Table 17 compares the number of States' FHOS recipients with the ABS number of first home owners. The ABS first home owner numbers are about 15% lower than those collected under the FHOS and the differences vary between States. Queensland and Western Australia's data are reasonably similar while the ABS data for Tasmania and the ACT are lower by a third or more.
- 73 We know that the FHOS data were collected on the same basis and were comparable, when State policies were identical. As a result, we do not consider the ABS data to be comparable between States and, therefore, fit for purpose. As we have been unable to identify a reliable policy neutral measure of first home owners, we consider an EPC assessment the only option.

Table 17 Comparison of ABS numbers of dwellings financed by first home buyers

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
FHOS recipients (a)	No.	No.	No.	No.	No.	No.	No.	No.	No.
2008-09	59 488	42 265	34 464	20 362	12 523	3 951	2 845	1 375	177 273
2009-10	52 183	44 978	27 609	21 301	10 956	3 106	3 295	1 023	164 451
2010-11	32 512	27 958	15 870	12 400	6 567	2 016	2 557	743	100 623
2011-12	37 448	29 033	19 657	15 001	6 860	1 901	2 617	1 023	113 541
ABS first home buyers (b)									
2008-09	52 215	39 677	32 648	20 356	10 988	3 003	2 544	1 248	162 679
2009-10	40 062	39 253	23 743	18 939	8 628	2 169	2 216	832	135 842
2010-11	25 942	25 530	15 140	11 810	5 126	1 352	1 392	601	86 893
2011-12	29 590	26 374	19 350	15 205	5 407	1 250	1 426	827	99 429
Difference (%)	%	%	%	%	%	%	%	%	%
2008-09	-12.2	-6.1	-5.3	0.0	-12.3	-24.0	-10.6	-9.3	-8.2
2009-10	-23.2	-12.7	-14.0	-11.1	-21.2	-30.2	-32.7	-18.7	-17.4
2010-11	-20.2	-8.7	-4.6	-4.8	-21.9	-32.9	-45.6	-19.1	-13.6
2011-12	-21.0	-9.2	-1.6	1.4	-21.2	-34.2	-45.5	-19.2	-12.4

(a) Data exclude any first home owner grants provided by States in addition to the FHOS grants.

(b) ABS numbers of dwellings financed by first home buyers.

Source: Commission calculations using State data; ABS Housing Finance Statistics, cat. 5609.0.

74 Table 18 shows the assessed first home owner expenses.¹⁰

Table 18 Illustrative assessed expenses, first home owner component, 2012–13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Total (\$m)	263	203	165	89	60	18	14	9	821
Total (\$pc)	36	36	36	36	36	36	36	36	36

Source: Commission calculation.

TREATMENT OF THE REMOTE INDIGENOUS HOUSING NPP

- 75 We have decided that the Remote Indigenous Housing NPP should impact on the relativities because payments are for services usually provided by States and needs are assessed in this category and also in relation to housing infrastructure. We have also decided to phase-in the treatment of the NPP.
- 76 In the 2010 Review, the Commission decided that the NPP should not impact on the relativities because these payments funded improvements to assets not owned by State governments. These assets were mainly owned by ICHOs.
- 77 The National Partnership Agreement on Remote Indigenous Housing expects State housing authorities to become the major deliverer of housing for Indigenous people in remote areas of Australia. That process required the transfer of responsibility for ICHOs to State governments.
- 78 Most jurisdictions have chosen to bring their ICHOs into their State frameworks through a process of accreditation and registration, thereby ensuring that they are meeting appropriate performance standards and implementing rent reforms.¹¹ The Northern Territory has chosen to bring its remote housing within its public housing system. It has taken over the funding and management of about 4 000 dwellings, although it is not clear whether the ownership has been transferred to the government. Table 19 shows the number of permanent dwellings managed by registered ICHOs as at June 2008 and June 2012.

¹⁰ The total first home owner expenses are currently an estimate. We will seek State data for the final report.

¹¹ Department of Social Services, *National Partnership on Remote Indigenous Housing – Progress Review (2008-2013)*.

Table 19 **Number of permanent dwellings managed by registered ICHOs, at 30 June 2008 and 2012**

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
	No.	No.	No.	No.	No.	No.	No.	No.
June 2008	2 510	348 (a)	4 092 (a)	2 200	895	na (a)	23	6 326
June 2012	3 055	1 981	4 606	2 380	938	63	23	2 043

Note: 'na' means not available.

(a) The Australian government collected data from Victoria, Queensland, and Tasmania that could not be apportioned to those States.

Source: Productivity Commission, 2014, *Report on Government Services 2014*, Table 17A.8.

- 79 Victoria and the ACT supported a change to the treatment of this payment. Victoria said ICHO funding is similar to mainstream community housing funding. The ACT argued that ultimate ownership of the assets is not the key criterion, rather whether the expenditure is being carried out by or through State governments, as a normal State government function. Other States preferred the 'no impact' treatment of the payment or did not comment.
- 80 The changes since the 2010 Review mean that States have now greater control over the management of ICHO dwellings and it is clear they are a substitute for public housing. However, it is not certain when this change in responsibility occurred in each State. Our assessment recognises the full use made of public housing by different types of households and the high costs of providing housing for all Indigenous households. As a placeholder, we are phasing in the change to the treatment of the NPP by allowing it to have an impact for the first time in 2013-14. The 'no impact' treatment will continue for the first two assessment years which were part of the 2014 Update.
- 81 State views on this change are sought. Information on when the changes in responsibility occurred and how it has affected State spending on housing, housing investment and State holdings of housing assets would also be helpful.
- 82 Table 20 shows State actual expenses for the three assessment years of the 2015 Review.

Table 20 **Remote Indigenous Housing payments and proposed treatment**

	Treatment	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
		\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
2011-12	No impact	36	3	145	172	45	3	0	390	794
2012-13	No impact	19	3	97	55	6	3	0	122	303
2013-14	Impact	45	3	178	191	36	3	0	86	541

Source: Commonwealth of Australia's *Final Budget Outcome, 2012-13*; and *Budget Paper No. 3, 2014-15*.

BRINGING THE ASSESSMENT TOGETHER

83 Table 21 brings the assessed expenses and revenue for each component together to derive the total net assessed expenses for each State for the category.

Table 21 Illustrative category assessment, Housing, 2012–13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc
Service expenses									
Equal per capita	193	193	193	193	193	193	193	193	193
SDC	-1	-22	9	-2	14	1	-69	396	0
Location	-1	-3	0	5	-1	4	-1	33	0
Total	191	168	201	195	205	198	123	688	193
Revenue									
Equal per capita	-127	-127	-127	-127	-127	-127	-127	-127	-127
SDC	-2	8	-2	3	-10	10	33	-107	0
Total	-130	-120	-130	-124	-137	-118	-94	-235	-127
First home owners									
Equal per capita	36	36	36	36	36	36	36	36	36
Total	36	36	36	36	36	36	36	36	36
Category total	97	84	107	107	104	116	65	489	101

Note: Component disabilities may not add due to interactions.

Source: Commission calculation.

Alternative presentation

84 Table 22 provides an alternative presentation using a factor approach. The table shows for each disability how the expenses per capita in each component and in total are affected by differences in State characteristics. Disability factors below one indicate a State is assessed to need to spend less than average. Disability factors above one indicate a State is assessed to need to spend more than average.

Table 22 Illustrative category factor, Housing, 2012–13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Average
Service expenses (component weight = 84%)									
SDC	0.997	0.888	1.044	0.988	1.073	1.007	0.643	3.053	1.000
Location	0.996	0.985	1.000	1.028	0.995	1.023	0.994	1.172	1.000
Component factor	0.990	0.871	1.041	1.011	1.063	1.026	0.637	3.563	1.000
A. Weighted factor	0.991	0.891	1.034	1.009	1.053	1.022	0.694	3.162	1.000
First home owner grants and concessions (component weight = 16%)									
Component factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
B. Weighted factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Category expense factor	0.991	0.891	1.034	1.009	1.053	1.022	0.694	3.162	1.000
Revenue (component weight = 100%)									
Component factor	1.019	0.938	1.018	0.975	1.078	0.925	0.739	1.842	1.000
C. Weighted factor	1.019	0.938	1.018	0.975	1.078	0.925	0.739	1.842	1.000
Category revenue factor	1.019	0.938	1.018	0.975	1.078	0.925	0.739	1.842	1.000
Category net factor	0.957	0.833	1.055	1.053	1.022	1.145	0.637	4.820	1.000

Source: Commission calculation.

WHAT IS THE IMPACT ON THE GST DISTRIBUTION?

- 85 Table 23 shows the extent to which the assessment for this category moves the distribution of the GST away from an equal per capita distribution. It shows that GST revenue is redistributed to Queensland, Western Australia, South Australia, Tasmania and the Northern Territory, and away from the other States.

Table 23 Illustrative GST impact, Housing, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Redist
Dollars million	-32	-96	26	13	4	8	-14	92	142
Dollars per capita	-4	-17	6	5	2	15	-37	388	6

Source: Commission calculation.

- 86 The main reasons for these redistributions are the differences between States in the proportions of their households in the groups that are high or costly users of housing services, along with differences between States in the wage costs. High or costly users of housing services are Indigenous households, households in remote regions and low-income households. Those paying less rent are mainly households in remote areas.
- 87 Some of the main reasons for the redistributions for each State are the following.
- New South Wales has a lower than average proportion of Indigenous and population living in remote areas.

- Victoria has a lower than average proportion of Indigenous people and fewer than average people living in remote and very remote regions.
- Queensland and Western Australia have higher than average Indigenous populations and more people living in remote and very remote regions. This is offset in Western Australia by fewer than average households on low incomes. Queensland also has relatively low wage costs, while Western Australia has above average wage costs.
- South Australia and Tasmania have higher than average proportions of their populations with low incomes but South Australia has a lower than average Indigenous population.
- The ACT has a relatively high income population with fewer than average Indigenous households and no remote locations.
- The Northern Territory has a higher than average proportion of Indigenous households as well as a higher than average proportion of households in remote and very remote regions.

88 Table 24 provides a summary of the major reasons the assessment moves State GST revenue away from an equal per capita distribution.

Table 24 Major reasons for difference from EPC, Housing, illustrative, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Redist
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Service expenses	-15	-141	36	5	20	3	-26	118	182
First home owners	0	0	0	0	0	0	0	0	0
Revenue	-17	45	-11	8	-16	5	13	-26	70
Total	-32	-96	26	13	4	8	-14	92	142

Source: Commission calculation.

CHANGES SINCE THE 2010 REVIEW

- 89 There are a number of category-specific method changes associated with this category since the 2010 Review.
- The category now covers PNFC expenses and revenue as well as general government expenses and revenues.
 - Gross expenses and revenue are assessed separately instead of net expenses.
 - Census data on households in social housing cross-classified by income, Indigeneity and location are used to estimate assessed households instead of Commonwealth pensioner numbers classified by Indigenous status.
 - Assessed rents are calculated by applying average rents paid by the different household groups to assessed households.

- First home owners grants, bonuses and stamp duty concessions are consolidated in the Housing category and are assessed EPC.

ATTACHMENT 15

SERVICES TO COMMUNITIES

Summary of changes since the 2010 Review

- A utilities subsidies assessment has been introduced, distinguishing between water and electricity subsidies for uneconomic services in remote small communities and for uniform tariffs and special projects. The former is assessed using the proportion of population living in small remote and very remote communities. The latter is assessed equal per capita (EPC).
- Small communities now cover those with populations between 50 and 1 000 instead of 200 to 1 000.
- Needs associated with water availability and quality are no longer assessed.
- A new definition of discrete Indigenous communities has been adopted.

WHAT IS INCLUDED IN THE SERVICES TO COMMUNITIES CATEGORY?

- 1 The Services to communities category comprises recurrent expenses on:
 - subsidies for the provision of electricity, water and wastewater services (utilities subsidies)
 - administration and support of communities (including Indigenous communities)
 - expenses related to environmental protection services, planning and development.
- 2 The Commission has decided to consolidate the assessment of State concession expenses by reallocating those relating to water and electricity services to the Welfare category.
- 3 Expenses related to irrigation and other industrial uses of water are covered in the Services to industry category.
- 4 User charges relating to community development, community amenities and protection of the environment are assessed in the Other revenue category because the drivers of these user charges are not the same as the drivers of use and cost of the related services. User charges account for 19% of category expenses.

- 5 Table 1 shows the category expenses. Total services to communities expenses were \$6.3 billion in 2012-13.

Table 1 Services to communities category expenses, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Category expenses (\$m)	985	1 503	1 213	1 758	369	42	80	313	6 263
Category expenses (\$pc)	134	264	263	709	222	81	211	1 316	273
Proportion of operating expenses (%)	1.6	3.2	2.8	7.1	2.3	0.9	1.9	6.8	3.0

Source: Commission calculation using State data.

- 6 Table 2 shows the share of State expenses on services to communities was about 3% of total expenses.

Table 2 Services to communities expenses as a proportion of State operating expenses

	2009-10	2010-11	2011-12	2012-13
Total for category (\$m)	5 746	5 837	6 070	6 263
Total operating expenses (\$m)	172 788	181 377	190 502	201 171
Proportion of total operating expenses (%)	3.3	3.2	3.2	3.1

Source: Commission calculation using ABS Government Finance Statistics (GFS) data and State data.

How are services delivered?

- 7 **Utilities subsidies - water and sanitation.** Water and sanitation services are mostly owned and delivered by State governments, either directly or through public non-financial corporations (PNFCs). Services are also delivered by the private sector, as in South Australia, and by local governments, as is the case for smaller communities in New South Wales and Queensland.
- 8 All States except the ACT provide subsidies for water and wastewater services (Table 3). While the data New South Wales provided show virtually no recurrent subsidies, under the Country Towns Water Supply and Sewerage Program it contributed \$85 million in capital grants to water supply and sewerage projects in 2011-12.¹ Victoria provides limited subsidies to service providers. The subsidies in Tasmania support the reform of Tasmania's water and wastewater sector.
- 9 Queensland, Western Australia, South Australia and the Northern Territory provide substantial subsidies, mainly supporting uniform tariffs which are intended to ensure customers are all charged the same rate across the State. Subsidies in Queensland

¹ New South Wales has not classified this payment as a water subsidy to service provider in its data return to the Commission. Source: <http://www.water.nsw.gov.au/Urban-water/Country-town-water/default.aspx>.

have been decreasing as the State is moving toward greater cost recovery by phasing out the subsidy to its desalination plant.

Table 3 State subsidies on water and wastewater services

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
2009-10	18	5	330	399	174	7	0	29	961
2010-11	6	5	137	372	161	13	0	34	729
2011-12	3	5	87	341	129	7	0	38	609
2012-13	4	8	127	320	81	3	0	40	584
	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc
2009-10	2	1	76	176	108	14	0	125	44
2010-11	1	1	31	161	99	26	0	147	33
2011-12	0	1	19	143	78	13	0	162	27
2012-13	1	1	27	129	49	7	0	170	25

Source: State data provided for the 2014 Update.

- 10 States also provide significant subsidies for the provision of services in smaller, geographically isolated communities where full cost recovery is not feasible. The National Water Commission expects providers to generally cost recover in metropolitan, rural and regional areas but recognises that providers in small communities will often need to rely on Community Service Obligations because they cannot provide water services in an economically viable manner.
- 11 Evidence provided by States as part of the Data Working Party process shows that larger per capita subsidies are directed to smaller communities.
 - Table 4 shows per capita operating expenses for Queensland's communities. It shows higher operating expenses in smaller communities. Subsidy data could not be provided.
 - Table 5 shows Western Australia's per capita subsidy (operating and capital) and expense data by community size. Western Australia provides subsidies to all communities, including Perth. It too shows much greater per capita subsidies and expenses in smaller communities than in large ones.
 - Table 6 shows expenses and subsidies for the five administrative regions of South Australia. It shows a small per capita subsidy for Adelaide but increasing per capita subsidies as population size falls.
 - Table 7 shows data on per capita operating expenses and subsidies for five selected Northern Territory communities of different sizes, ranging from around 150 people (Pigeon Hole) to around 2 500 people (Wadeye). These communities were selected by the Northern Territory as being representative of communities of similar size. The data from the Northern Territory show that per capita operating expenses and subsidies increase as community population decreases.

Table 4 Operating expenses, Queensland, average of 2008-09 to 2010-11

	Operating expenses
	\$pc
Less than 1 000	399
1 000 to 9 999	480
10 000 and over	111
Total	115

Source: CGC special data collection, 2013.

Table 5 Expenses and subsidies, Western Australia, 2011-12

	Subsidies	Operating expenses
	\$pc	\$pc
Less than 1 000	1 630	1 910
1 000 to 9 999	516	765
10 000 and over	42	241

Source: CGC special data collection, 2013.

Table 6 Operating expenses and subsidies, South Australia, 2011-12

	Population	Subsidies	Operating expenses
	No.	\$pc	\$pc
Metro	1 182 788	7	245
Outer metro	165 266	153	695
North	122 513	197	1 017
South east	56 721	256	459
Eyre	29 588	1 427	1 681
Total	1 556 876	74	388

Source: CGC special data collection, 2013.

- 12 Table 6 also shows that the more remote areas of South Australia receive greater subsidies. This is supported by additional data for Western Australia, in Table 8. This shows that operating expenses are higher in remote areas for each community size, but that this is not always the case for subsidies. However, when all communities are included, expenses and subsidies are significantly higher in remote areas.

Table 7 Operating expenses and subsidies, Northern Territory, average 2008-09 to 2011-12

	Population	Subsidies	Operating expenses
	No.	\$pc	\$pc
Wadeye	2 461	409	450
Angurugu	963	622	662
Hermannsburg	725	733	490
Milyakburra	201	1 611	1 572
Pigeon Hole	145	1 161	1 166

Source: CGC special data collection, 2013.

Table 8 Expenses and subsidies by remoteness, Western Australia, 2011-12

	Expenses		Subsidies	
	Remote	Non-remote	Remote	Non-remote
	\$pc	\$pc	\$pc	\$pc
Less than 1 000	2 476	1 463	1 742	1 542
1 000 to 9 999	978	673	322	599
10 000 and over	562	230	174	38
Total	890	256	383	70

Source: CGC special data collection, 2013.

- 13 Overall, the available information on how this service is provided and evidence provided by States suggests that it is average policy for States to provide subsidies to support uniform tariffs and small communities in remote areas. The subsidies in small remote communities are larger than elsewhere, not only because uniform tariff policies apply, but because additional support must be provided because the services cannot be provided in an economically viable manner.
- 14 **Electricity.** The National Electricity Market (NEM) is a wholesale generation market and operates across New South Wales, Victoria, Queensland, South Australia, Tasmania and the ACT, although not all areas of Queensland, South Australia and Tasmania are covered. Communities in these 'off-grid' areas are serviced either by smaller non-interconnected networks or by isolated generators.
- 15 The NEM is characterised by significant State ownership of assets throughout the supply chain. In New South Wales, Queensland and Tasmania, the State governments own the transmission and distribution networks and most of the generator assets. The ACT Government partially owns the distribution network company, ActewAGL. The Tasmanian and ACT Governments also have direct ownership stakes in retailers. In contrast, in Victoria and South Australia, the generation, transmission and distribution networks, as well as the retailers, are all privately owned or leased.
- 16 Western Australia and the Northern Territory have independent systems, clustered around major users. Smaller and isolated communities are serviced by specialist

providers, such as through the Indigenous Essential Services program in the Northern Territory.

- 17 All States except Victoria have regulated retail electricity prices which, in some States, are subsidised.
- 18 Table 9 shows State subsidies for electricity services. The majority of the subsidies are provided by Queensland, Western Australia and the Northern Territory, mainly to support uniform tariffs. In Queensland, uniform tariffs are set at the full cost recovery price of south-east Queensland², which means that subsidies for uniform tariffs are only paid to providers outside south-east Queensland. In contrast, subsidies for uniform tariffs cover all providers in Western Australia and the Northern Territory because prices are set below full cost recovery across the States, including in their metropolitan areas. In other States, tariffs vary according to location.
- 19 These States also have the largest 'off-grid' populations. Subsidies are also provided in South Australia and Tasmania to providers for their off-grid communities, such as to providers in Marree and Cockburn in South Australia and to providers on the Bass Strait Islands in Tasmania.

Table 9 State expenses on electricity services

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
2009-10	0	3	252	301	8	7	0	115	685
2010-11	0	2	399	470	11	7	0	110	1 000
2011-12	0	1	422	547	16	8	0	118	1 112
2012-13	0	1	648	517	19	8	0	125	1 318
	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc
2009-10	0	1	58	133	5	14	0	504	31
2010-11	0	0	90	203	7	15	0	478	45
2011-12	0	0	93	229	10	16	0	509	49
2012-13	0	0	141	209	11	15	0	524	57

Source: State data provided for the 2014 Update.

- 20 As for water, subsidies tend to be provided to support uniform policy and to small off-grid providers in more remote areas.
- 21 **Community development.** Community development expenses cover a wide variety of State activity but can broadly be described as community related administration and planning including regulating land use, administering zoning laws and providing facilities for community health, recreation and culture.

² Uniform tariffs in south-east Queensland will cease from July 2015.

- 22 In addition, States provide additional support for the governance and management of discrete Indigenous communities, in recognition of their greater needs due to their remoteness and smaller populations with low incomes.
- 23 **Community amenities.** Expenses related to community amenities include design, installation, operation and maintenance of street lighting, provision of facilities such as public toilets, drinking fountains, bus shelters, cemeteries and crematoria.
- 24 There are no standard policies amongst States for the provision of these facilities. States provide these facilities either directly or by funding local governments.
- 25 **Protection of the environment.** States provide a diverse range of environmental protection services including developing and monitoring pollution and air quality standards, pollution abatement and control, control and prevention of erosion of beaches and foreshores, flood mitigation in urban areas and research into pollution abatement and control.

COMMONWEALTH FUNDING

- 26 The Commonwealth provides funding to States to assist them in meeting their services to communities expenses. Water for the Future is the major payment in this category. Payments to State governments impact on the relativities, while payments to local governments do not impact because they have been judged not to affect fiscal capacities.
- 27 The expenses funded by Water for the Future payments to States are assessed in the same way as State funded expenses and the actual revenue is treated as an offset to the assessed expenses.
- 28 In its 2014 Update report, the Commission said it would review the treatment of Water for the Future payments in the 2015 Review and ensure all similar programs are treated consistently. This will be done when details of the payments for 2013-14 are available later this year.
- 29 Payments for purposes outside State responsibilities, such as the Implementing Water Reform in the Murray-Darling Basin payment, have been treated as having no impact on State fiscal capacities. The Stronger Future payments have been quarantined by the terms of reference.
- 30 Table 10 details the major Commonwealth payments provided to States for services to communities.

Table 10 Commonwealth payments to States for services to communities, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Water for the future	172	56	13	10	69	42	1	14	377
Other payments	0	2	0	0	0	0	0	9	13
Total	172	58	13	10	69	42	1	23	390

Source: Commonwealth of Australia's *Final Budget Outcome, 2012-13*.

- 31 A complete list of Commonwealth payments and their treatment is provided in Appendix 2.

CATEGORY STRUCTURE

- 32 The assessment of the Services to communities category is undertaken in four components:
- utilities subsidies
 - community development
 - community amenities
 - protection of the environment.
- 33 Table 11 shows the assessment structure for the category, the disabilities that are assessed and the size of each component, using 2012-13 data.

Table 11 **Category structure, Services to communities, 2012-13**

Component	Component expenses	Disability	Influence measured by disability
	\$m		
Utilities subsidies	1 902	Uniform tariffs and special projects subsidies	This is an EPC assessment because such subsidies, in the States they are provided, are provided to all State residents.
		Small communities	Recognises the cost of providing electricity, water and wastewater services to small communities in remote and very remote regions.
		Location	Recognises the differences in wage costs between States
Community development	2 406	Community development	Recognises the higher cost of providing community development services in discrete Indigenous communities.
		Location	Recognises the differences in the cost of providing labour and non-labour resources between States and to different areas within a State.
Community amenities	153	Population	EPC assessment because there are no common policies in the provision and/or funding of these services across States.
		Location	Recognises the differences in the cost of providing labour and non-labour resources between States and to different areas within a State.
Protection of the environment	1 803	Population	EPC assessment because the expenses cover a wide variety of services and cost drivers could not be identified.
		Location	Recognises the differences in the cost of providing labour and non-labour resources between States.

Source: Commission decision.

UTILITIES SUBSIDIES

34 We have observed that States tend to subsidise the operations of water and electricity providers in different ways.

- Uniform tariffs ensure customers are all charged the same rate across the State (Queensland, Western Australia, South Australia and the Northern Territory have uniform tariff policies for water; Queensland, Western Australia and the Northern Territory have uniform tariff policies for electricity).
- The provision of water services in smaller, geographically isolated communities where cost recovery is not feasible is subsidised in most States. The provision of electricity services is subsidised in small off-grid communities, located mainly in remote areas.
- Special assistance is provided in a number of States for water reform (Tasmania), even in metropolitan areas where projects such as desalination plants have been supported (Queensland and South Australia).

- 35 We have decided to combine subsidies to water and electricity providers into one utilities assessment and assess them on the same basis.
- 36 We have decided to assess State utilities spending in two parts.
- We observe that when taking all States together that some part of State spending results in a uniform subsidy provided to all users. This could come from the operation of uniform tariff policies which provide a subsidy even in metropolitan areas or for specific projects in these areas. This part of State spending should be assessed equal per capita as it is provided to the vast bulk of State residents.
 - In addition, residents in smaller and isolated communities receive additional subsidies to meet the higher cost of water and electricity provision. This part of State spending should be assessed on the basis of a State's share of the population living in these communities.

Implementing the assessment for small remote communities

- 37 Decisions are required on the proportion of subsidies to uneconomic services and how we should define the population in small remote communities. Relevant expenses can then be shared among the States on the basis of their share of population living in those communities.

Apportioning expenses

- 38 Table 12 shows total water and electricity subsidies provided for small remote communities (uneconomic subsidies) and other subsidies, using data provided by States in response to a special data request. We estimate that some 40% of total utilities spending is provided as subsidies for smaller more remote communities. Where States provided data on total subsidies paid on behalf of small remote communities, conceptually we should remove that part of the subsidy which represents the common uniform tariff subsidy. We are not convinced that data quality would allow a reliable adjustment.

Table 12 **Proportion of subsidies for uneconomic services**

	Uneconomic subsidies	Other subsidies	Total	Proportion of uneconomic subsidies
	\$m	\$m	\$m	%
Water				
2010-11	453	547	1 000	45
2011-12	537	575	1 112	48
2012-13	548	770	1 318	42
Average	513	630	1 143	45
Electricity				
2010-11	289	440	729	40
2011-12	262	347	609	43
2012-13	223	360	584	38
Average	258	382	641	40

Source: State provided data.

Small remote communities

- 39 We have decided to use the population living in small remote and very remote communities as a policy neutral indicator of the people in each State requiring these subsidies.
- 40 We have defined small communities as those with a population between 50 and 1 000. This extends the previous definition (communities between 200 and 1 000) because data provided by Western Australia and Queensland, for example, showed that communities smaller than 200 received water subsidies for uneconomic services. We have not included people living on isolated farms and stations because they rely on their own water services and electricity production rather than subsidised community services.
- 41 We have developed a method for identifying communities with populations below 200 in remote and very remote regions of Australia based on ABS mesh blocks.³ The main criterion for identifying these communities was for them to have a population density of 100 persons per square kilometre, which is consistent with the ABS' approach to defining Urban Centres – Localities (UCLs) with populations greater than 200.
- 42 Table 13 shows the population residing in remote and very remote communities of 50 to 200 persons and 200 to 1 000 persons (using the ABS definition of UCL).

³ Mesh blocks are the smallest geographic region in the Australian Statistical Geography Standard and the smallest geographical unit for which Census data are available. In 2011, there were about 347 000 mesh blocks covering the whole of Australia without gaps or overlaps.

Including communities with populations between 50 and 200 is material only for the Northern Territory.

43 States supported this definition of small communities.

Table 13 Population in small communities in remote and very remote regions

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	persons	persons	persons	persons	persons	persons	persons	persons	persons
Communities 50-200 (CGC)	1 000	168	2 745	2 652	1 604	225	0	158	8 552
Communities 200-1000 (ABS)	4 911	1 732	27 303	25 562	12 552	4 640	0	21 691	98 391
Total	5 911	1 900	30 048	28 214	14 156	4 865	0	21 849	106 943
Shares (%)	6	2	28	26	13	5	0	20	100

Source: Staff calculations using ABS population data.

Influences not assessed in this component

- 44 **Water availability and quality.** We have decided not to assess needs relating to water availability and quality because we do not have the data to measure how those influences affect the State subsidies to service providers.
- 45 Most of the information readily available about water availability and quality in Australia covers broad geographical areas. It is difficult to link water quality and availability to individual communities. It is even more difficult to measure the impact of water quality and availability on the cost of providing water services.
- 46 For example, while water availability and quality in all areas of New South Wales and Victoria were classified as poor in the last review, providers mostly cost recovered. Queensland is moving towards cost recovery but its water availability and quality is not changing, as far as we are aware.
- 47 Data provided by Queensland and Western Australia for this review does not show a clear link between water availability and quality and per capita subsidies.
- 48 This decision has the general support of States. We note South Australia's views but it is not clear that greater costs of water provision due to poor water automatically translate into greater government subsidies, especially in larger cities where providers can cost recover because of economies of scale.
- 49 **Distance from water source and source of water.** We did not assess needs relating to distance from water source and source of water. Western Australia provided data to calculate per capita expenses and subsidies by distance of a community from its water source and by source of water (surface and ground). The results were mixed. They did not provide evidence one way or the other that

increasing distance from water source increased subsidies or that ground water was more costly to provide and required higher subsidies.

Location

- 50 We have decided to assess location influences for small communities related expenses but not for uniform tariffs and special projects subsidies. We have recognised that wage costs differences affect the subsidies to small remote communities. These influences are measured in a similar way for most assessment categories and the methods are described in Attachment 22 — Wage costs.
- 51 We have not assessed regional costs because the average subsidies already capture the higher costs associated with remoteness.

Bringing the utilities subsidies component together

- 52 Table 14 shows the assessed expenses for the utilities subsidies component.

Table 14 Illustrative assessed expenses, utilities subsidies component, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Uniform tariffs and special projects subsidies (\$m)	366	283	230	123	83	26	19	12	1 141
Small communities (\$m)	42	13	213	205	99	34	0	155	761
Location factor	1.003	0.993	0.993	1.022	0.993	0.986	1.017	1.025	1.000
Total (\$m)	407	296	440	331	180	58	19	169	1 902
Total (\$pc)	55	52	95	134	108	114	50	712	83

Source: Commission calculation.

COMMUNITY DEVELOPMENT

- 53 States spend more on providing community development services in Indigenous communities.
- 54 Table 15 shows Indigenous community development expenses per Indigenous person residing in discrete Indigenous communities and the other community development expenses per person not residing in discrete Indigenous communities. It shows a much greater per capita spending on Indigenous people residing in discrete Indigenous communities.
- 55 As a result, we consider an assessment should distinguish between services to discrete Indigenous communities and services to other communities. We based our assessment on the proportion of a State's population living in discrete Indigenous communities and the population living outside those communities. A weight of 27.7

was applied to the population living in discrete Indigenous communities in 2012-13. This is the ratio of per capita expenses on Indigenous communities (\$2 646) to per capita expenses on other communities (\$95).

Table 15 Illustrative per capita community development expenses, 2012-13

	Total
Indigenous communities (\$pc) (a)	2 646
Other communities (\$pc) (b)	95
Ratio (%)	27.7

(a) Community development expenses per person in discrete Indigenous communities.

(b) Community development expenses per person not living in discrete Indigenous communities.

Source: ABS.

56 We have defined discrete Indigenous communities as Statistical Area 1s (SA1s) with populations that are more than 50% Indigenous. This is the same definition we adopted in the 2014 Update.

57 States generally supported this approach.

Location

58 As with the previous component, we have recognised the differences in wage costs have a differential effect on the cost of providing community development related services across States.

59 We also consider that the costs of providing this service increase with increasing remoteness. Therefore, we have recognised the costs of providing services to different areas within a State in this assessment. These influences are measured in a similar way for categories where they apply. The assessment of regional costs is discussed in Attachment 23 — Regional costs.

Bringing the community development component together

60 Table 16 shows the total assessed expenses.

Table 16 Illustrative assessed expenses, community development component, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Community development expenses (\$m)	706	529	503	282	164	48	35	139	2 406
Location	0.984	0.967	1.019	1.065	0.995	1.004	0.978	1.307	1.000
Total (\$m)	683	503	504	295	161	47	34	179	2 406
Total (\$pc)	93	89	109	119	97	92	89	751	105

Source: Commission calculation.

COMMUNITY AMENITIES

- 61 We have assessed the use of community amenities services equal per capita because we consider State population shares the most suitable way of allocating expenses. States provide a very different range of services and differences in per capita spending seem policy driven. This was supported by States.
- 62 Table 17 shows total State expenses on community amenities. The majority of the subsidies are provided by Victoria, Western Australia and the ACT. These are not the 'mining States', a matter addressed further later.

Table 17 State expenses on community amenities

	\$ million	\$ per capita
2009-10	286	13
2010-11	230	10
2011-12	164	7
2012-13	153	7

Source: State data provided for the 2013 Update.

Location

- 63 As with the community development component, we have recognised that differences in wage costs and regional costs have differential effects on the cost of providing community amenities related services across States.

Bringing the community amenities component together

- 64 Table 18 shows the total assessed expenses.

Table 18 Illustrative assessed expenses, community amenities component, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Community amenities expenses (EPC) (\$m)	49	38	31	16	11	3	3	2	153
Location	0.997	0.985	1.000	1.029	0.994	1.022	0.995	1.174	1.000
Total (\$m)	49	37	31	17	11	3	3	2	153
Total (\$pc)	7	7	7	7	7	7	7	8	7

Source: Commission calculation.

PROTECTION OF THE ENVIRONMENT

- 65 We have assessed the use of protection of the environment services equal per capita because the expenses cover a wide variety of services and cost drivers could not be identified. This was supported by States. Relative needs would be impacted by a

variety of considerations, including physical features such as length of coastline, number of waterways, population size and distribution and industrial structure, but quantifying these impacts is not possible.

Location

- 66 As with previous components, we have recognised the differences in wage costs have a differential effect on the cost of providing protection of the environment related services across States.
- 67 We did not recognise differences in regional costs because it is not always clear where these services are provided.

Bringing the protection of the environment component together

- 68 Table 19 shows the total assessed expenses.

Table 19 Illustrative assessed expenses, protection of the environment component, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Protection of the environment expenses (EPC) (\$m)	579	447	363	195	131	40	30	19	1 803
Location	1.003	0.993	0.993	1.022	0.993	0.986	1.017	1.025	1.000
Total (\$m)	580	444	360	199	130	40	30	19	1 803
Total (\$pc)	79	78	78	80	78	78	80	81	79

Source: Commission calculation.

CONCESSIONS

- 69 We have reallocated State concession expenses on water and electricity subsidies to the Welfare services category. The nature of the assessment is described in the Welfare attachment. This was supported by States.

INFLUENCES NOT ASSESSED IN THIS CATEGORY

Mining related expenses

- 70 The terms of reference for this review ask the Commission to consider the impact of mining related expenses on State fiscal capacities. States have identified that mining related expenses include expenses on project approval, including environmental impact statements, and expenses on communities serving mining projects and their

related support infrastructure, all of which are contained in this category of State spending.

- 71 Western Australia and Queensland have suggested that the community development and community amenities assessments do not capture community related expense needs created by mining activities appropriately. Western Australia argued that the growth in mining activities has resulted in greater expenses to support the growth of communities. Examples of the types of expenses incurred in Western Australia include housing for workers and support for local government services and infrastructure.
- 72 Queensland said part of the additional expenses faced by States with mining industries are due to more comprehensive regulatory regimes required to protect and support communities, not necessary in other States. Queensland also noted the additional expenses incurred by States for environmental protection related to the mining industry.
- 73 In considering this issue, we sought to understand how mining related activities imposed additional community development expenses on States, including seeking details of actual expenses so that we could understand both the conceptual issues and the likely materiality of any adjustments that might be warranted.
- 74 **Community development.** While we understand that mining related development has seen significant regional population growth and that this has placed pressure on adjacent communities, we are not convinced that this is any different from other communities experiencing similar population growth. The conceptual case for mining related development placing greater per capita expense burdens on the relevant States has not been established.
- 75 We considered if part of State expenses on community development could better be assessed as if it were an investment, and so related to population growth, rather than assessed on the basis of population shares. This would give greater recognition to States with rapidly growing communities.
- 76 However, Table 20 below shows that capital grants, which could most readily be related to population growth are a very small part of State spending and we are not convinced that a separate assessment is warranted.

Table 20 Capital grants as a proportion of State expenses, community development and community amenities, 2010-11 to 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	%	%	%	%	%	%	%	%	%
2010-11	7.3	6.7	0.0	0.5	0.0	0.0	0.0	14.4	4.4
2011-12	0.4	1.4	27.3	0.5	-4.5	0.0	0.0	7.5	3.4
2012-13	1.6	1.0	51.2	2.8	0.0	0.0	0.0	9.5	7.6

Source: ABS GFS.

- 77 We consider that we already capture part of the impact that mining developments have on communities because we recognise that, as they grow, spending on them increases, and that we recognise that some of the expense occurs because those communities are usually in regional and remote areas which have higher service delivery costs.
- 78 **Planning and development expenses.** Table 21 shows estimates of State expenses of planning, development assessment and approvals based on State data. The ACT did not provide data. Other States' data may not be comparable because of possible differences in the recording of these expenses in State accounts. The data show total net expenses in the order of \$150 million.
- 79 On the basis of these data which cover all projects not only mining and mining related projects, we cannot justify an assessment in relation to regulation and planning costs of mining or related activities.

Table 21 Expenses relating to planning, development assessment and approvals

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Expenses									
2010-11	58	4	15	49	5	8		8	147
2011-12	54	3	22	45	5	8		9	146
2012-13	68	3	33	47	4	8		9	172
Revenue									
2010-11	15	(a)	(a)	20	5	0		1	41
2011-12	15	(a)	(a)	13	5	0		1	34
2012-13	15	(a)	(a)	16	5	0		1	37

Note: The ACT did not provide data. Western Australia provided additional data too late to be included in the analysis.

(a) The revenue could not be derived satisfactorily.

Source: State provided data.

- 80 **Environmental assessments and impacts.** States provided us with expenses relating to environmental impact assessments as shown in Table 22. Western Australia and the ACT did not provide data. Other States' data may not be

comparable. The table shows significant net expenses for Queensland, which may or may not be related to mining activities.

Table 22 Expenses relating to environmental impact assessments

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Expenses									
2010-11	63	15	83		1	13		1	176
2011-12	40	14	147		1	13		1	216
2012-13	70	12	146		1	13		1	243
Revenue									
2010-11	25	15	39		0	4		0	83
2011-12	36	14	36		0	4		0	90
2012-13	57	12	34		0	4		0	107
Net expenses									
2010-11	38	0	44		1	9		1	93
2011-12	3	0	111		1	10		1	126
2012-13	12	0	112		1	9		1	135

Note: The ACT did not provide data. Western Australia provided data too late to be included in the analysis.

Source: State provided data.

- 81 The table shows considerable variation across States, including in their cost recovery practices, and suggests that in the absence of data from Western Australia, an assessment of the impact of mining related environmental impact statements is unlikely to be material.
- 82 Queensland has proposed that different industries have different environmental management costs that States bear. As the structure of industry in a State changes, this would then change the per capita environmental management costs in that State. We have not been able to discover data which would enable us to discriminate between industries on the environmental costs they impose, and we suspect that any such analysis would be heavily influenced by both site specific considerations and State policy choices. As a consequence we have not incorporated a mining factor into our assessment of State spending on environmental protection.
- 83 Overall, we consider that without further data it is not appropriate to make mining related adjustments in the Services to communities category.

BRINGING THE ASSESSMENT TOGETHER

- 84 Table 23 brings the assessed expenses for each component together to derive the total assessed expenses for each State for the category.

Table 23 Illustrative category assessment, Services to communities, 2012–13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc
Utilities subsidies									
Uniform tariffs									
Equal per capita	50	50	50	50	50	50	50	50	50
Small communities									
Equal per capita	33	33	33	33	33	33	33	33	33
Small communities	-28	-31	13	49	26	32	-33	618	0
Location	0	0	0	1	0	0	1	1	0
Total	55	52	95	134	108	114	50	712	83
Community development									
Equal per capita	105	105	105	105	105	105	105	105	105
Community development	-9	-12	4	9	-6	-12	-12	479	0
Location	-2	-3	2	7	-1	0	-2	32	0
Total	93	89	109	119	97	92	89	751	105
Community amenities									
Equal per capita	7	7	7	7	7	7	7	7	7
Location	0	0	0	0	0	0	0	1	0
Total	7	7	7	7	7	7	7	8	7
Protection of the environment									
Equal per capita	79	79	79	79	79	79	79	79	79
Location	0	-1	-1	2	-1	-1	1	2	0
Total	79	78	78	80	78	78	80	81	79
Category total	234	225	289	340	290	290	226	1551	273

Note: Component disabilities do not add due to interactions.

Source: Commission calculation.

Alternative presentation

85 Table 24 provides an alternative presentation using a factor approach. The table shows for each disability how the expenses per capita in each component and in total are affected by differences in State characteristics. Disability factors below one indicate a State is assessed to need to spend less than average. Disability factors above one indicate a State is assessed to need to spend more than average.

Table 24 Illustrative category factor, Services to communities, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Average
Utilities subsidies (component weight = 30%)									
Uniform tariffs (weight 60%)	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Small communities (weight 40%)	0.170	0.072	1.394	2.490	1.793	1.976	0.000	19.617	1.000
Location	1.003	0.993	0.993	1.022	0.993	0.986	1.017	1.025	1.000
Component factor	0.668	0.628	1.154	1.618	1.312	1.380	0.600	8.639	1.000
A. Weighted factor	0.899	0.887	1.047	1.188	1.095	1.115	0.879	3.320	1.000
Community development (component weight = 38%)									
Community development	0.915	0.887	1.038	1.083	0.941	0.888	0.886	5.569	1.000
Location	0.984	0.967	1.019	1.065	0.995	1.004	0.978	1.307	1.000
Component factor	0.900	0.857	1.058	1.153	0.936	0.891	0.866	7.277	1.000
B. Weighted factor	0.962	0.945	1.022	1.059	0.975	0.958	0.949	3.411	1.000
Community amenities (component weight = 2%)									
Community amenities	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Location	0.997	0.985	1.000	1.029	0.994	1.022	0.995	1.174	1.000
Component factor	0.997	0.985	1.000	1.029	0.994	1.022	0.995	1.174	1.000
C. Weighted factor	1.000	1.000	1.000	1.001	1.000	1.001	1.000	1.004	1.000
Protection of the environment (component weight = 29%)									
Protection of the environment	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Location	1.003	0.993	0.993	1.022	0.993	0.986	1.017	1.025	1.000
Component factor	1.003	0.993	0.993	1.022	0.993	0.986	1.017	1.025	1.000
D. Weighted factor	1.001	0.998	0.998	1.006	0.998	0.996	1.005	1.007	1.000
Category factor	0.856	0.825	1.059	1.244	1.060	1.063	0.826	5.678	1.000

Source: Commission calculation.

WHAT IS THE IMPACT ON THE GST DISTRIBUTION?

- 86 Table 25 shows the extent to which the assessment for this category moves the distribution of the GST away from an equal per capita distribution. It shows that GST revenue is redistributed to Queensland, Western Australia, South Australia, Tasmania and the Northern Territory and away from New South Wales, Victoria and the ACT.

Table 25 Illustrative GST impact, Services to communities, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Redist
Dollars million	-290	-272	75	165	27	9	-18	304	580
Dollars per capita	-39	-48	16	67	17	17	-47	1 278	25

Source: Commission calculation.

87 The main reasons for these redistributions are the differences between States in the proportions of their populations living in small communities in remote and very remote areas, along with the proportion of State populations living in discrete Indigenous communities.

88 Some of the main reasons for the redistributions for each State are:

- New South Wales, Victoria, Tasmania and the ACT have below average proportions of their populations living in small communities in remote and very remote areas, along with below average proportions of their populations living in discrete Indigenous communities.
- Queensland, Western Australia and the Northern Territory have above average proportions of their populations living in small communities in remote and very remote areas, along with above average proportions of their populations living in discrete Indigenous communities.
- South Australia has an above average proportion of its population living in small communities in remote and very remote areas, but a below average proportion of its population living in discrete Indigenous communities.

89 Table 26 provides a summary of the major reasons the assessment moves State GST revenue away from an equal per capita distribution.

Table 26 Major reasons for difference from EPC, Services to communities, illustrative 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Redist
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Utilities subsidies	-203	-175	57	125	42	16	-13	150	391
Community development	-89	-93	20	35	-14	-7	-6	154	209
Community amenities	0	-1	0	0	0	0	0	0	1
Protection of the environment	2	-3	-2	4	-1	-1	1	0	7
Total	-290	-272	75	165	27	9	-18	304	580

Source: Commission calculation.

CHANGES SINCE THE 2010 REVIEW

- 90 There are a number of category-specific method changes associated with this category since the 2010 Review.
- 91 For water and electricity subsidies, we have distinguished between those provided for uneconomic services in small communities and those for uniform tariffs and special projects. The former was assessed using the proportion of population living in small remote communities. The latter was assessed EPC.
- 92 Small communities now cover those with population between 50 and 1 000 instead of 200 to 1 000.
- 93 We have not recognised needs associated with water availability and quality.
- 94 We have changed our definition of discrete Indigenous communities.

ATTACHMENT 16

JUSTICE

Summary of changes since the 2010 Review

- The assessment method is unchanged.
- There may be changes due to the new approach to measuring Indigenous and non-Indigenous socio-economic status and if new police offender data become available.

WHAT IS INCLUDED IN THE JUSTICE CATEGORY?

- 1 The Justice category comprises expenses on police services, law courts and legal services, and prisons and corrective services.
- 2 Revenues from user charges, such as court fees and fines, are not netted off expenses in the category. This is because the revenue collected does not reflect the drivers of justice expenses. We consider that the characteristics of the people coming into contact with the justice system are different to those of people paying user charges. It is because different disabilities apply that the user charges are not offset. The revenues (\$1.4 billion in 2012-13) are assessed equal per capita in the Other revenue category because they are policy influenced.
- 3 Table 1 shows expenses in this category were \$16.8 billion in 2012-13.

Table 1 Justice category expenses, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Police (\$m)	2 718	2 189	1 846	988	688	190	183	272	9 073
Courts (\$m)	1 097	1 034	652	742	253	86	101	105	4 071
Prisons (\$m)	1 130	709	558	710	244	61	66	133	3 609
Total (\$m)	4 945	3 932	3 055	2 439	1 185	337	350	510	16 754
Total (\$pc)	672	692	662	984	713	658	926	2 142	731
Proportion of operating expenses (%)	7.9	9.1	7.2	9.9	8.0	7.1	8.3	11.1	8.3

Source: Commission calculation using ABS Government Financial Statistics (GFS) and State data.

- 4 Table 2 shows the category as a share of State operating expenses. It shows that Justice expenses have risen, from 8.1% of total expenses in 2009-10 to 8.3% of total expenses in 2012-13.

Table 2 Justice expenses as a proportion of State operating expenses

	2009-10	2010-11	2011-12	2012-13
Total for category (\$m)	13 997	14 920	16 011	16 754
Total operating expenses (\$m)	172 788	181 377	190 502	201 171
Proportion of total operating expenses (%)	8.1	8.2	8.4	8.3

Source: Commission calculation using ABS Government Finance Statistics (GFS) data and State data.

How are services delivered?

- 5 States have policy and delivery responsibility for most justice services.

Policing services

- 6 Police services can be broadly divided into four service delivery areas.
- Community safety and support — which includes crime prevention programs, responding to emergencies and major incidents and calls for assistance.
 - Road safety and traffic management — which includes the provision of speed cameras, random breath testing, attendance at accidents and crash investigations.
 - Crime investigation — which covers arresting/apprehending criminals including interviews, evidence collection, forensic analysis and the provision of crime squads such as for gangs, organised crime, drug squad and special operations.
 - Services to the judicial process — which include attending and preparing for court hearings and the transportation of defendants to court.
- 7 Police services are generally provided by general policing and more specialised units. General policing, which includes the work of general duties officers and traffic police, is provided throughout the State. The more specialised units, such as the major crime squads and forensics, while provided for the entire State, are usually located in major cities or large regional centres. When a major crime is committed in remote areas, specialised units are transferred to those locations by road or air for the duration of the investigation.
- 8 In the ACT, police services are provided by the Australian Federal Police (AFP) under an arrangement between the ACT Government and the Commonwealth. All other States have their own police forces.

Court services

- 9 Court services are provided in each State and are hierarchical in nature. Each level deals with criminal and civil matters but the seriousness and complexity of cases heard in each court level varies across States. They generally consist of:
- Magistrates (or Local) Courts, that deal with summary offences and small civil claims
 - District (or County) Courts¹, which is an intermediate court that generally hears serious indictable offences except murder and treason and
 - a Supreme Court, which hears disputes more serious than those heard in the other courts, such as murder or treason and unlimited civil claims.
- 10 Children's courts are also provided by States and deal with matters involving young people.
- 11 District and Supreme courts are generally provided in the major cities. Magistrates courts are in the major cities and regional centres. Offenders in remote regions are usually transported to a regional centre for trial. However, given the geographic nature of Australia, it is not always possible for people to attend a permanent court. Consequently, circuit courts travel to the more remote regions. Alternatively, video and audio conferencing facilities are provided to enable defendants or witnesses to be involved in a hearing from a remote location.

Corrective services

- 12 Corrective services include the administration, support and operation of prisons and other places of secure detention, both Government administered and privately run, for convicted persons and alleged offenders. The facilities offer varying levels of security from maximum through to low level prison farms, sometimes as separate entities and sometimes as combined multi-level secure facilities. Further segregation of inmates occurs on the basis of age and gender to promote a safe environment for rehabilitation. Juvenile detention services are also provided by States for young offenders.
- 13 Prisons and juvenile detention centres are located taking into account the ability of family and community ties to be maintained, so as to reduce the difficulty of re-entering the community and to reduce the incidence of recidivism. Prisons (and hence prisoners) tend to be located disproportionately more in inner regional, outer regional and remote areas, compared with the distribution of the general population.²

¹ District courts do not operate in Tasmania, the ACT or the Northern Territory.

² Derived from ABS, 45170Do002_2013 *Prisoners in Australia, 2013*, Table 34.

- 14 Community-based corrective services are also offered by the States to provide a non-custodial sentencing alternative, designed to release offenders into the community while subjecting them to corrective services supervision. This service is provided in a more dispersed manner.

User charges

- 15 User charges include court fees (a large majority of which relate to civil court lodgements) and legal service fees, such as property title charges and registrations of births, deaths and marriages. They also include traffic fines. They are influenced by State policies on the level of fines imposed and the extent to which civil court costs are recovered from users.

COMMONWEALTH FUNDING

- 16 Table 3 details the Commonwealth payments provided to States for justice services in 2012-13. The Legal assistance services NPP is a purchase of services by the Commonwealth Government and so is treated as having no impact on the relativities. The Stronger Futures NPP is a continuation of the Northern Territory Emergency Response and Closing the Gap programs and is likewise treated as having no impact on the relativities, in line with the terms of reference

Table 3 Commonwealth payments to States for justice services, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Legal assistance services	63	44	41	20	16	6	4	4	198
Stronger futures in the NT - community safety and justice	0	0	0	0	0	0	0	21	21
Total	63	44	41	20	16	6	4	25	220

Source: Commonwealth of Australia, *Final Budget Outcome, 2012-13*.

CATEGORY STRUCTURE

- 17 The assessment of the Justice category is in three components:
- police
 - courts
 - prisons.
- 18 Table 4 shows the assessment structure for the category, the disabilities that are assessed and the size of each component, using 2012-13 data.

Table 4 **Category structure, Justice, 2012-13**

Component	Component expense	Disability	Influences measured by disability
	\$m		
Police	9 073	Community policing	Population shares
		Specialised policing – socio-demographic composition	Recognises that certain population characteristics affect the use and cost of providing services, for example Indigeneity, males aged 15-34 and people from low socio-economic status (SES) areas.
		Service delivery scale	Recognises the additional costs of providing services from police stations in sparsely populated areas.
Courts	4 071	National capital	Recognises the additional costs incurred by the ACT as a result of its reliance on the AFP as the provider of its policing services.
		Criminal courts – socio-demographic composition	Recognises that certain population characteristics affect the use and cost of criminal court services, for example Indigeneity, males aged 15-34 and people from low SES areas.
		Service delivery scale	Recognises the additional costs of providing Magistrates Courts services in sparsely populated areas.
Prisons	3 609	Socio-demographic composition	Recognises that certain population characteristics affect the use and cost of providing services, for example Indigeneity, males aged 15-34 and people from low SES areas.

Note: Wages costs and regional costs factors are applied to all components.

Source: Commission calculation.

POLICE

Socio-demographic composition

General policing versus specialised policing

- 19 As for the 2010 Review, we have divided police expenses (net of National capital expenses) equally between ‘community policing’ and ‘specialised policing’. Specialised policing encompasses the work of more specialised units (such as major crime squads and forensics). While these services are provided for the entire State, they are usually located in major cities or large regional areas. When a major crime is committed in remote areas, specialised units relocate to those locations for the duration of their investigation.
- 20 We have decided to assess community policing on the basis of State population (that is, equal per capita) and specialised policing on the basis of population adjusted for

socio-demographic differences between the States (recognising that the incidence of crime is associated with certain population groups more than others).

- 21 Splitting police expenses between community and specialised policing expenses was a difficult issue in the last review. There were contradictory views from States and no national data on which to derive a split. We have therefore examined recent State budget papers and Police service annual reports to identify new information on the allocation of police resources to different activities. We have found that different types of police activities and their level of resourcing varied across States. Where information about types of policing was available, we made judgments as to whether the type of policing was specialised or community based. The information suggested that the breakdown between community and specialised types of policing ranged from about 30:70 (community: specialised) in Western Australia, to about 70:30 in Tasmania, with an average of 55% community policing versus 45% specialised policing.
- 22 Table 5 shows that in 2012-13, apart from the Northern Territory, police to population ratios are similar across States, ranging from 22.2 per 10 000 population in the ACT to 31.6 in South Australia. The staffing ratios across States have remained stable over time, with the Northern Territory showing the largest increase.

Table 5 Operational police staff per 10 000 population by State, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Staffing ratio	24	26	29	28	32	24	22	70	27

Note: Data are FTE staff except in the Northern Territory where data are based on a headcount at 30 June.

Source: Productivity Commission, *Report on Government Services 2014*, Table 6.1.

- 23 We infer from this that States provide a relatively large base level of resources to service the population as a whole, with additional resources being provided in those States with higher Indigenous, low socio-economic status (SES) and young male proportions in their populations. In other words, we believe State Government spending on police forces is not driven by rates of crime directly, but are aimed at providing adequate resources across the State to ensure public safety and to enhance the public's perception of their safety. So, even if 75% of police time is spent responding to crime, this may not necessarily translate into materially more police resources above this base level.
- 24 For us to recalculate the share of expenses applicable to community policing versus specialised policing, we would require agreement among the States about what constitutes community policing and information on the level of resources spent in the two areas.
- 25 All States with the exception of Western Australia and the Northern Territory were supportive of this 50:50 split of expenses. Western Australia and the Northern

Territory remain of the view that only a small proportion of community policing expenses are directed at the population as a whole and that in general the majority of community policing is targeted at selected populations likely to commit crimes.

26 States generally agreed that there was a conceptual case, supported by data, for adjusting State populations to recognise the over-representation of certain population segments in specialised policing work, namely:

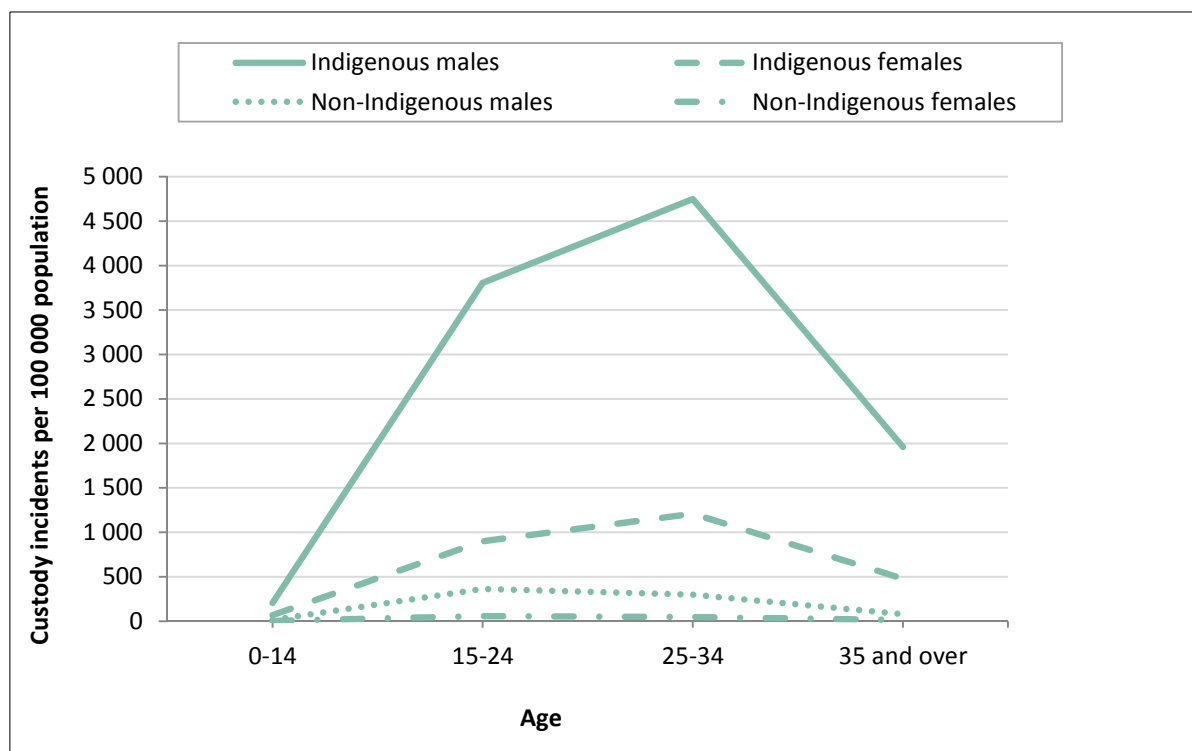
- young males
- Indigenous people and
- people from low SES backgrounds.

Age, sex and Indigenous status

27 Figure 1 shows the number of custody incidents per 100 000 persons derived from Australian Institute of Criminology (AIC) data. It shows Indigenous people are substantially over-represented in police custody incidents and the number of police custody incidents involving males aged 15 to 34 is substantially higher than that of other age and gender groups.

28 Based on the above evidence, we have included disabilities for Indigeneity, sex and age (0-14, 15-34 and 35 and over).

Figure 1 National average custody incidents per 100 000 population, 2009-10



Source: AIC, 2007 National Police Custody Survey, special data request; ABS ERP June 2010.

Socio-economic status

- 29 Many studies, including those by the AIC and the New South Wales Bureau of Crime Statistics and Research, show a positive relationship between higher crime rates and low income, or high levels of socio-economic disadvantage.
- 30 We have decided to use State supplied offender data by postcode/suburb as the basis for our SES weights. As a placeholder, we have applied the same weights used in the 2010 Review, based upon an SES distribution using the Socio-Economic Index for Areas (SEIFA). These weights were 1.5 (for people in the most disadvantaged SES quintile), 1.0 (for people in the middle three quintiles) and 0.7 (for people in the least disadvantaged quintile), as shown in Table 6.
- 31 We intend to update these weights and calculate separate Indigenous and non-Indigenous SES weights using the recently supplied State data for the 2010-11 to 2012-13 years, prior to the final report. The SES distribution we intend to use for Indigenous people is the Indigenous Relative Socio-Economic Outcomes (IRSEO) Index, while for non-Indigenous people the SES distribution we intend to use is the non-Indigenous Socio-Economic Index for Areas (NISEIFA).

Table 6 SES weights applied in the 2010 Review

SES Status	Calculated Weight	Rounded weights used
Bottom quintile	1.48	1.50
Middle three quintiles	1.00	1.00
Top quintile	0.65	0.70

Source: Commission calculation.

Data

- 32 We have obtained our socio-demographic composition (SDC) splits using AIC *National Police Custody Survey 2007* point-in-time data (obtained by special data request) on custody incidents by Indigeneity by sex by age, together with the SES weights in Table 6.
- 33 Placeholder weights for SES are based upon the 2005-06 offenders by location State provided data, as used in the 2010 Review. The recalculated SES weights will be based upon the offender by Indigeneity by location data provided by States for the years 2010-11 to 2012-13.
- 34 As with the 2010 Review, we have applied a 25% discount to the socio-demographic composition use weights given the uncertainty relating to how well police custody incidents measured relative police workloads. The discount is justified on the basis that:

- the data do not adequately capture differences in the complexity of police investigations, which may vary depending on the type of crime alleged to have been committed
 - the Indigeneity by sex by age data were drawn from a survey of police custody incidents over just a one month period
 - some police activities do not involve taking people into custody.
- 35 Most States were supportive of retaining the 25% discount. Western Australia and the Northern Territory were of the view that the current use weights did not overstate the disabilities being measured. Victoria, on the other hand, considered that custodial incident data are not a good approximation of the use of specialised police time.
- 36 The AIC's new police custody survey, which may be available over the coming 12 months, might provide a better basis for information on the relative level of resources needed for different types of police investigations. The survey will provide data covering a 12 month period. The survey should also provide information on the rank of the police officer and the time involved for each custody incident. This type of data has the potential to allow estimation of the level of resourcing involved for different types of police custody incidents and hence enable the 25% discount to be reconsidered.
- 37 States were generally supportive of seeing if the new survey results would enable the current data to be updated and the reconsideration of the level of discount which should be applied.
- 38 We consider that without supporting data, a change to the discount is unwarranted. We will however review the discount when new AIC police custody survey data become available.

Calculating the socio-demographic composition assessment

- 39 Police expenses data, net of national capital expenses, have been split 50:50 between community policing and specialised policing. Community policing expenses have been assessed EPC. Specialised policing expenses have been assessed by applying the age (0-14, 15-34 and 35 and over), sex and Indigeneity disabilities together with the SES disabilities. For data quality reasons, the general policing use weights have been discounted by 25%.
- 40 Table 7 gives an example of the national spending per capita on providing specialised policing services to people with different characteristics.

Table 7 **Sample matrix of national per capita spending for providing specialised policing services, Indigenous males, 2012-13**

Gender	Age	High SES	Middle SES	Low SES
		\$pc	\$pc	\$pc
Males	0-14	197	260	365
	15-34	3 097	4 403	6 579
	35+	1 452	2 053	3 054

Note: The sample matrix shows the per capita costs for Indigenous males. The female and non-Indigenous disaggregation is the same as that for Indigenous people.

Source: Commission calculation.

Location

- 41 We have recognised wage costs have a differential effect on the cost of providing police services across States. These influences are measured in a similar way for most assessment categories and the methods are described in Attachment 22 — Wages costs.
- 42 We have also recognised that police services are provided within communities of all levels of remoteness and that the costs of delivering services can vary between regions. More information is provided in Attachment 23 — Regional costs.

Service delivery scale

- 43 We have recognised that a State will face higher service delivery costs in certain parts of the State where the small size and dispersed nature of many communities leads to above average police staffing levels. The rationale and details of the approach taken are outlined in Attachment 24 — Service delivery scale.

National capital

- 44 We have recognised the additional costs incurred by the ACT as a result of it having no practical alternative but to use the Australian Federal Police (AFP) as the provider of its policing services. This leads to higher costs because the AFP pays above average salaries to its employees. More information is provided in Attachment 28 – Other disabilities, National capital.

Bringing the police component together

Table 8 Illustrative assessed expenses, police component, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
SDC assessed									
Community policing (\$m)	1 454	1 124	912	490	329	101	75	47	4 532
Specialised policing (\$m)	1 435	940	986	513	318	115	62	162	4 532
Location factor	0.993	0.966	1.006	1.062	0.990	1.020	0.995	1.319	1.000
Service delivery scale factor	0.998	0.995	1.002	1.006	1.006	1.005	0.992	1.059	1.000
National capital (\$m)	0	0	0	0	0	0	9	0	9
Total (\$m)	2 843	1 971	1 902	1 064	639	221	143	290	9 073
Total (\$pc)	386	347	412	430	385	431	380	1 216	396

Source: Commission calculation.

COURTS

Socio-demographic composition

- 45 Different drivers affect the use of civil and criminal courts, so we have split courts services into two sub-components, one for civil courts and one for criminal courts. The split between civil and criminal courts expenses was 38:62 in 2012-13 (Table 9). The ratio has not changed much over recent years and therefore we have adopted a 40:60 split of court expenses, which we intend to retain over the review period.

Table 9 State recurrent expenditure, criminal and civil courts, 2012-13

	Criminal courts	Civil courts
	\$m	\$m
State expenditure	799	491

Note: Data exclude payroll tax.

Source: Productivity Commission, Report on Government Services 2014, Table 7.1.

Civil courts

- 46 The main users of civil courts are the general public and businesses. In the absence of data indicating differential use rates by different groups, we consider civil courts should be treated as though they are provided for the total population and so we have assessed civil court expenses on an equal per capita basis.

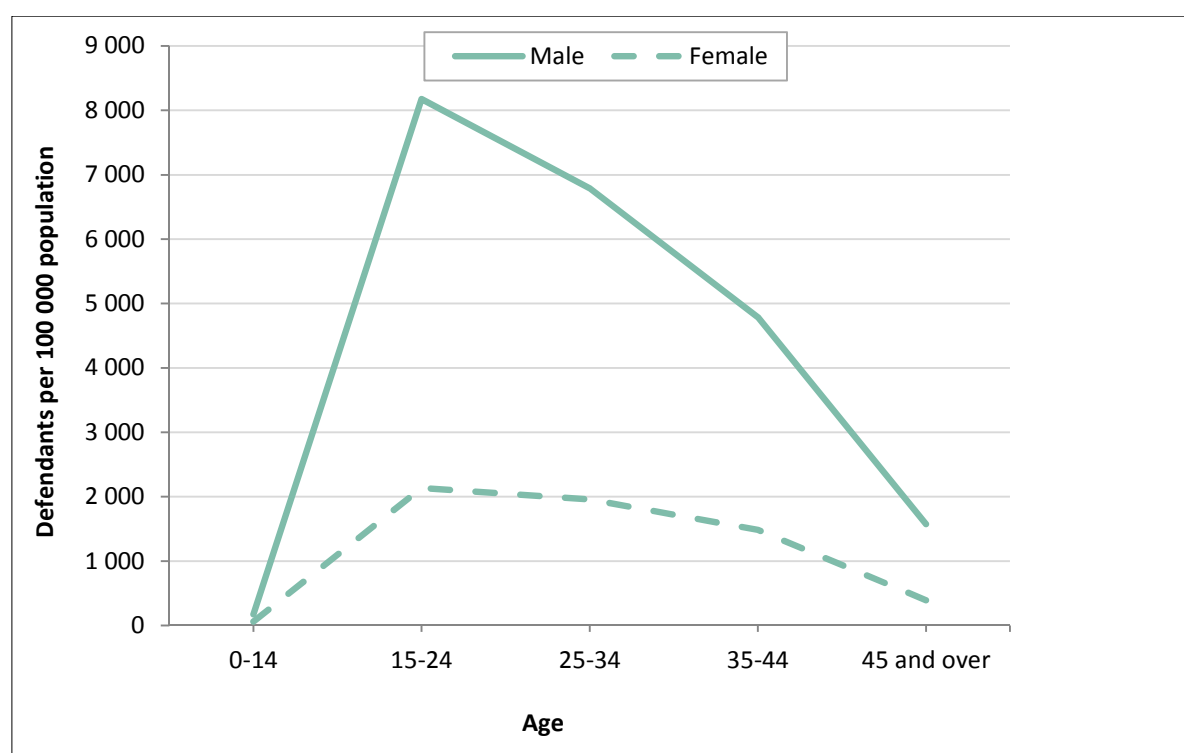
Criminal courts

- 47 We consider that the level of criminal court services required in each State is due to the level of crime and hence the size of population groups more likely to be involved

in crime. As with police, we have incorporated Indigeneity, age, sex and SES disabilities into the assessment.

- 48 **Age and sex.** For the age disability, we have chosen the following age groupings: 0-14, 15-34 and 35 and over. Based on 2011-12 data, males are around 3.7 times more likely to appear in court than females (Figure 2). People aged 15-44 account for almost 70% of defendant numbers.

Figure 2 Childrens Courts, Magistrates Courts and Higher Courts defendants with adjudicated outcomes, by age and sex, 2011-12



Source: ABS, 4513.0, *Criminal Courts, Australia, 2011-12*, special data request.

- 49 **Indigeneity.** Indigenous people are around eight times more likely to appear in court compared to non-Indigenous people (Table 10).

Table 10 Criminal court appearances per 100 000 population by Indigeneity, 2008-09

	No. per 100 000
Indigenous	20 839
Non-Indigenous	2 577

Note: Criminal court appearances in 2008-09 applied to ABS ERP June 2010.

Source: ABS, State provided data.

- 50 **Socio-economic status.** As for police services, we have decided to use State supplied defendant data by postcode/ suburb as the basis for our SES weights. As a placeholder, we have applied the same weights used in the 2010 Review, based upon an SES distribution using SEIFA. These weights were 1.5 (for people in the most

disadvantaged SES quintile), 1.0 (for people in the middle three quintiles) and 0.7 (for people in the least disadvantaged quintile).

- 51 We intend to update these weights and calculate separate Indigenous and non-Indigenous SES weights using the recently supplied State data for the 2010-11 to 2012-13 years, prior to the final Report. The SES distribution we intend to use for Indigenous people is the IRSEO index, while for non-Indigenous people the SES distribution we intend to use is NISEIFA.
- 52 **Data.** The criminal courts SDC factor is based on ABS and State-provided data. The age by sex breakdown utilises annual ABS defendants with adjudicated outcomes data, aggregated across children's courts, magistrate's courts and higher courts.
- 53 The further breakdown of these defendants' data by Indigeneity has been obtained using State-provided data for 2008-09 on criminal court appearances by age by sex by Indigeneity. This breakdown will be updated based upon more recent State provided data, for the years 2010-11 to 2012-13. As with police services, the placeholder SES weights are based upon data used in the 2010 Review and will be recalculated using the more recent data on defendants by Indigeneity by location provided by States.
- 54 As for the 2010 Review, we have not applied a discount to the use rates derived from ABS criminal courts data along the lines of the discount applied to the specialised police services custody data. The defendants data used are a direct measure of cases before the courts, although no allowance for differences in complexity of charges heard or level of Indigenous workloads has been made. We consider the data to be a better measure of Indigenous workloads however than the custody data we used for the specialised police component, because fewer Indigenous people who have undertaken less serious crimes, such as public drunkenness, are taken to court.
- 55 We will investigate whether any new AIC police custody survey data can be used as a basis for introducing a discount and/or cost weights to criminal court data. However, we recognise that police custody data may not be a reliable representation of criminal court workloads and a number of States also shared this concern.

Calculating the socio-demographic composition assessment

- 56 We have made separate assessments for civil courts and criminal courts. State spending on courts has been split between civil courts and criminal courts based upon Productivity Commission data.
- 57 Criminal courts service expenses have been allocated across SDC groups based on the ABS defendants with adjudicated outcomes data by age and sex, and State-provided court appearances data further broken down by Indigeneity, together with the SES weights we have adopted. National average use rates have then been derived by dividing these data by population data for the corresponding SDC cohorts. State assessed criminal court expenses by cohort have then been derived by multiplying

these use rates by State populations in the corresponding cohorts. Adding the assessed expenses across the various cohorts gives us total assessed service expenses for each State.

- 58 Civil courts service expenses have been assessed equal per capita. That is, use rates across the various population cohorts are taken to be the same.

Table 11 Sample matrix of national per capita spending for providing criminal court services, low SES males, 2012 13

SES	Age	Indigenous males	Non-Indigenous males
		\$pc	\$pc
Low SES	0-14	96	7
	15-34	2 097	471
	35+	1 242	156

Note: The sample matrix shows the per capita costs for Indigenous and non-Indigenous males for those of low SES. The other SES groupings are middle and high. The female disaggregation is same as that for males.

Source: Commission calculation.

Location

- 59 We have recognised wage costs have a differential effect on the cost of providing court services across States.
- 60 We have also recognised that courts services can be provided within communities of all levels of remoteness and that the costs of delivering services can vary between regions. We have applied the police regional cost weights by ABS Remoteness Area to each State's assessed courts user population, based on its socio-demographic characteristics.

Service delivery scale

- 61 We have recognised that a State will face higher service delivery costs for Magistrates courts in certain parts of the State where the small size and dispersed nature of many communities leads to above average staffing levels. We do not think that service delivery scale disabilities are relevant to higher courts (supreme and district courts) because these cases tend to be heard in major cities and regional centres.

Bringing the courts component together

Table 12 Illustrative assessed expenses, courts component, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
SDC assessed									
Civil courts (\$m)	523	404	328	176	118	36	27	17	1 628
Criminal courts (\$m)	779	541	516	268	177	61	33	67	2 443
Service delivery scale factor (a)	0.998	0.995	1.002	1.006	1.006	1.005	0.992	1.059	1.000
Location factor	0.993	0.966	1.006	1.062	0.990	1.020	0.995	1.319	1.000
Total (\$m)	1284	905	846	472	291	99	59	115	4071
Total (\$pc)	174	159	183	190	175	193	157	483	178

(a) Service delivery scale only applies to the criminal courts component.

Source: Commission calculation.

PRISONS

Socio-demographic composition

62 We consider that all prisons expenses are influenced by population groups with a higher risk of offending. As a result, they are assessed differentially using prisoner and juvenile detention data.

Age, sex and Indigeneity

63 The ABS publication *Prisoners in Australia, 2013* details the number of prisoners in each State disaggregated by age, sex and Indigeneity. Indigenous prisoners represented 27% of the total prisoner population in Australia. Table 13 shows that in 2013 Indigenous people were, on average, 15 times more likely to be in prison than non-Indigenous people.

Table 13 Prisoner custody rates per 100 000 population by State, 2013

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Indigenous rate	1 916	1 482	1 522	3 315	2 226	462	1 696	2 348	1 977
Non-Indigenous rate	142	116	125	159	152	128	92	144	131
Over-representation (a)	14	13	12	21	15	4	18	16	15

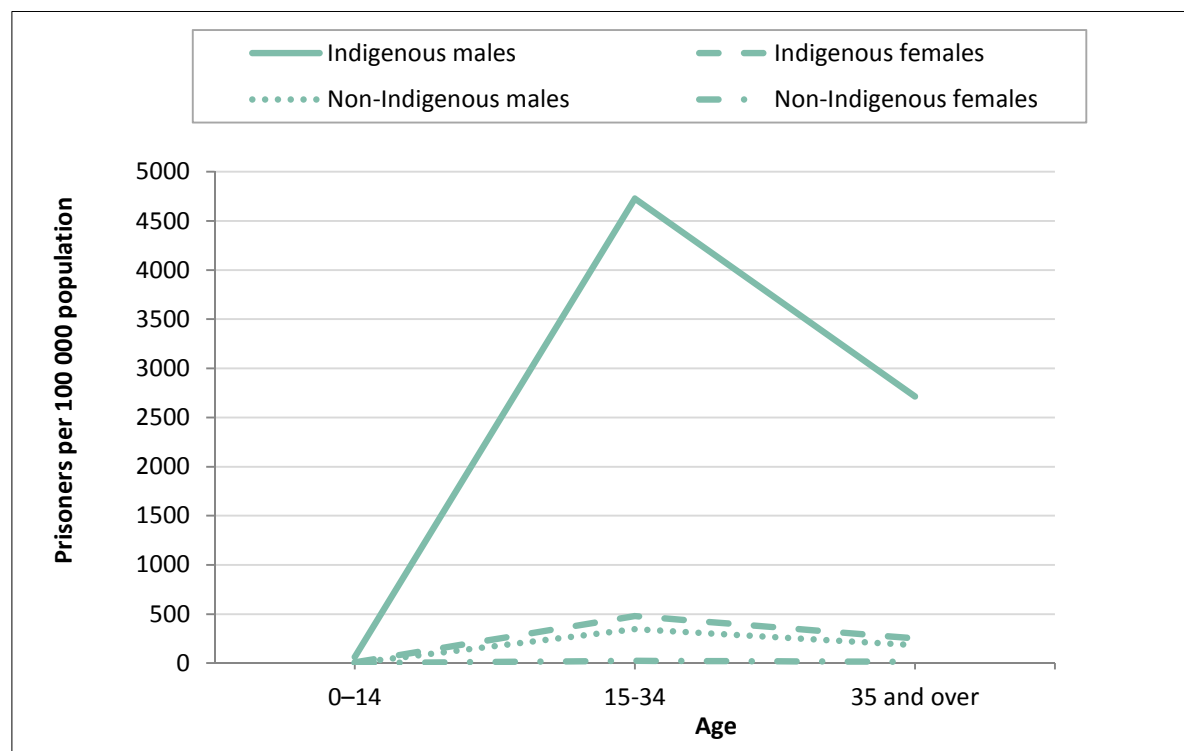
(a) Indigenous over-representation is calculated by dividing Indigenous use rates (Indigenous prisoners divided by adult Indigenous population) by non-Indigenous use rates (non-Indigenous prisoners divided by adult non-Indigenous population).

Source: ABS, Cat. No. 4517.0, *Prisoners in Australia, 2013*, Table 18.

64 Figure 3 shows the number of prisoners in Australia by age and sex, including those in juvenile detention. The data show that prisoner rates are higher for males aged 20-34 than for other age groups, or for females of any age.

- 65 We have accordingly included disabilities for Indigeneity, sex and age (0-14, 15-34 and 35 and over).

Figure 3 National prisoner numbers per 100 000 persons, 2012-13



Source: ABS, Cat. No. 4517.0, *Prisoners in Australia 2013*, Table 3.

Socio-economic status

- 66 Since people who become prisoners are from the same pool of people who come into contact with police services and are defendants in court actions, we have adopted the placeholder weights of 1.5 for the bottom SES quintile, 1.0 for the middle three quintiles and 0.7 for the top quintile, based upon the SEIFA distribution.
- 67 We will also apply the recalculated Indigenous and non-Indigenous SES weights, based upon the IRSEO distribution for Indigenous people and the NISEIFA distribution for non-Indigenous people, in the prisons component.

Data

- 68 The prison and corrective services SDC factor is based on juvenile detention and prisoner data. We have used annual ABS data on prisoners by Indigeneity by sex by age. We have combined these data with annual data published by the Australian Institute of Health and Welfare (AIHW) on persons in juvenile detention by Indigeneity by sex by age.

- 69 As for the police and court services components, the further placeholder split by SES is based on State postcode and offender data supplied for the 2010 Review. It will be updated using the recalculated SES weights for police and courts services.

Calculating the socio-demographic composition assessment

- 70 Prison and corrective services expenses have been allocated across SDC groups based on the ABS prisoners and AIHW persons in juvenile detention data by Indigeneity by sex by age, together with the SES weights we have adopted. National average use rates have then been derived by dividing these data by population data for the corresponding SDC cohorts. State assessed prisons and corrective services expenses by cohort have then been derived by multiplying these use rates by State populations in the corresponding cohorts. Adding the assessed expenses across the various cohorts gives us total assessed service expenses for each State.

Location

- 71 We have recognised wage costs have a differential effect on the cost of providing prison services across States.
- 72 We have also recognised that prisons tend to be located throughout a State and that the costs of delivering services can vary between regions. We have applied the police regional cost weights by ABS Remoteness Area to each State's assessed prisoner population, based on its socio-demographic characteristics.

Bringing the prisons component together

Table 14 Illustrative assessed expenses, prisons component, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
SDC assessed (\$m)	1 145	722	794	408	255	96	46	144	3 609
Location factor	0.993	0.966	1.006	1.062	0.990	1.020	0.995	1.319	1.000
Total (\$m)	1 123	689	790	428	250	97	45	188	3 609
Total (\$pc)	153	121	171	173	150	189	118	789	157

Source: Commission calculation.

BRINGING THE ASSESSMENT TOGETHER

- 73 Table 15 brings the assessed expenses for each component together to derive the total assessed expenses for each State for the category.

Table 15 Illustrative category assessment, Justice, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Average
	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc
Police									
Equal per capita	396	396	396	396	396	396	396	396	396
SDC - community policing	0	0	0	0	0	0	0	0	
SDC - specialised policing	-5	-65	32	18	-13	55	-67	970	
Service delivery scale	-1	-2	1	2	2	2	-3	23	
Location	-3	-14	2	25	-4	8	-2	126	
National capital	0	0	0	0	0	0	13	0	
Total	386	347	412	430	385	431	380	1 216	396
Courts									
Equal per capita	178	178	178	178	178	178	178	178	178
SDC - civil courts	0	0	0	0	0	0	0	0	
SDC - criminal courts	-1	-19	9	3	-1	20	-31	291	
Service delivery scale (a)	0	-1	0	1	1	1	-1	6	
Location	-1	-6	1	11	-2	4	-1	57	
Total	174	159	183	190	175	193	157	483	178
Prisons									
Equal per capita	157	157	157	157	157	157	157	157	157
SDC assessed	-2	-31	15	7	-4	30	-37	447	
Location	-1	-5	1	10	-2	3	-1	50	
Total	153	121	171	173	150	189	118	789	157
Category total	714	627	767	793	710	813	655	2 487	731

(a) Service delivery scale is only applied to criminal courts component.

Note: Component disabilities do not add due to interactions

Source: Commission calculation.

Alternative presentation

74 Table 16 provides an alternative presentation using a factor approach. The table shows for each disability how the expenses per capita in each component and in total are affected by differences in State characteristics. Disability factors below one indicate a State is assessed to need to spend less than average. Disability factors above one indicate a State is assessed to need to spend more than average.

Table 16 Illustrative category factors, Justice, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Average
Police (component weight = 54%)									
SDC - community policing	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
SDC - specialised policing	0.987	0.837	1.081	1.046	0.966	1.139	0.830	3.449	1.000
Location	0.993	0.966	1.006	1.062	0.990	1.020	0.995	1.319	1.000
Service delivery scale	0.998	0.995	1.002	1.006	1.006	1.005	0.992	1.059	1.000
National capital	0.999	0.999	0.999	0.999	0.999	0.999	1.033	0.999	1.000
Component factor	0.976	0.876	1.042	1.085	0.972	1.088	0.959	3.072	1.000
A. Weighted factor	0.987	0.933	1.023	1.046	0.985	1.048	0.978	2.122	1.000
Courts (component weight = 24%)									
SDC - civil courts	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
SDC - criminal courts	0.994	0.894	1.050	1.017	0.997	1.115	0.825	2.636	1.000
Location	0.993	0.966	1.006	1.062	0.990	1.020	0.995	1.319	1.000
Service delivery scale (a)	0.998	0.995	1.002	1.006	1.006	1.005	0.992	1.059	1.000
Component factor	0.982	0.897	1.033	1.071	0.986	1.089	0.883	2.717	1.000
B. Weighted factor	0.996	0.975	1.008	1.017	0.997	1.022	0.972	1.417	1.000
Prisons (component weight = 22%)									
SDC assessed	0.988	0.806	1.093	1.045	0.976	1.192	0.765	3.842	1.000
Location	0.993	0.966	1.006	1.062	0.990	1.020	0.995	1.319	1.000
Component factor	0.970	0.770	1.087	1.097	0.955	1.202	0.752	5.007	1.000
C. Weighted factor	0.993	0.950	1.019	1.021	0.990	1.044	0.947	1.863	1.000
Category factor	0.976	0.858	1.049	1.084	0.972	1.113	0.896	3.403	1.000

(a) Service delivery scale is only applied to the criminal courts component.

Source: Commission calculation.

Influences not assessed in this category

Indigenous cost weights

- 75 As with the 2010 Review, cost weights for Indigeneity have not been incorporated in the assessments. We note the Northern Territory's view that the need to provide English language services and culturally appropriate services and programs for Indigenous people constituted a strong argument for introducing an Indigenous cost weight. However, there are insufficient reliable data on which to base weights. Any new AIC police custody survey data may provide some indication of the extra costs required for processing Indigenous versus non-Indigenous offenders. We will investigate if these data can be used as a basis for introducing Indigenous cost weights when they become available.

Public transport policing

- 76 We have not incorporated a disability to reflect costs associated with deploying personnel to patrol urban transit networks, as argued by Victoria. While Victoria is in the process of establishing a sizeable security force for this purpose, other States' operations are on a significantly smaller scale.

WHAT IS THE IMPACT ON THE GST DISTRIBUTION?

- 77 Table 17 shows the extent to which the assessment for this category moves the distribution of the GST away from an equal per capita distribution. It shows that GST revenue is redistributed to Queensland, Western Australia, Tasmania and the Northern Territory.

Table 17 Illustrative GST impact, Justice, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Dollars million	-127	-589	166	153	-34	42	-29	418	779
Dollars per capita	-17	-104	36	62	-21	83	-76	1 756	34

Source: Commission calculation.

- 78 The main reasons for these redistributions are the differences in the proportions of State populations in the groups that are high users of justice services, along with differences between States in the cost of wage related inputs. The high or costly users of justice services are Indigenous people, males aged 15-34 and people living in areas of relative disadvantage (that is, with low SES).
- 79 Some of the main reasons for the redistributions for each State are:
- Victoria and the ACT have a lower than average proportion of Indigenous people and fewer than average people with low SES, along with fewer than average people living in remote and very remote regions
 - Queensland, Western Australia and the Northern Territory have above average Indigenous populations and more people living in remote and very remote regions
 - Tasmania has a higher than average proportion of people with low SES.
- 80 Table 18 shows State proportions of Indigenous people, males aged 15-34 and people from a low SES background.

Table 18 State proportions of selected population groups

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Average
	%	%	%	%	%	%	%	%	%
Indigenous population	2.9	0.9	4.2	3.8	2.3	4.7	1.7	29.8	3.0
Males aged 15-34	13.9	14.5	14.1	15.0	13.6	12.4	16.6	17.5	14.2
Low SES population	23.4	17.4	19.2	13.3	24.3	32.3	2.1	30.2	20.0

Note: Low SES comprises people in the bottom quintile.

Source: ABS ERP June 2012.

81 Table 19 provides a summary of the major reasons the assessment moves State GST revenue away from an equal per capita distribution.

Table 19 Major reasons for difference from EPC, Justice, illustrative, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Police	-69	-279	76	83	-19	18	-6	195	373
Courts	-23	-104	27	31	-4	8	-8	73	139
Prisons	-35	-206	63	38	-12	16	-15	150	268
Total	-127	-589	166	153	-34	42	-29	418	779

Source: Commission calculation.

CHANGES SINCE THE 2010 REVIEW

82 There have been no method changes in this category.

83 However, once the Commission's new approach to recognising Indigenous and non-Indigenous socio-economic status is applied in this category, the GST redistribution may change considerably. There could also be further changes if new police custody data become available from the AIC, which could change use rates of specialised police services.

ATTACHMENT 17

ROADS

Summary of changes since the 2010 Review

- The assessment method is unchanged but ABS Urban Centres and Localities are used instead of Significant Urban Areas to distinguish between areas served by urban and rural roads.

WHAT IS INCLUDED IN THE ROADS CATEGORY?

- 1 The Roads category comprises recurrent expenses on:
 - the maintenance and rehabilitation of roads, bridges and tunnels
 - road safety, traffic management and other transport activities (such as driver licensing, motor vehicle registration, heavy vehicle regulation and road transport planning administration).
- 2 Roads construction expenses are not included as they are assessed in the Infrastructure category.
- 3 All revenues generated from user charges (\$1.8 billion in 2012-13) are assessed in the Other revenue category. The reasons are discussed later in the attachment.
- 4 Table 1 shows State recurrent expenditure on roads were \$7.3 billion in 2012-13. The share of roads expenses to State budgets varied from 0.8% in the ACT to 6.1% in Queensland. The average was 3.6% for all States.

Table 1 Roads category expenses, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Category expenses (\$m)	1 673	1 732	2 581	832	171	126	36	122	7 272
Category expenses (\$pc)	227	305	559	336	103	245	95	511	317
Proportion of operating expense (%)	2.7	4.0	6.1	3.4	1.2	2.7	0.8	2.6	3.6

Source: Commission calculation using State data.

- 5 Table 2 shows the share of State expenses directed to roads rose from 3.3% in 2009-10 to 3.6% in 2012-13.

Table 2 Roads expenses as a proportion of State operating expenses

	2009-10	2010-11	2011-12	2012-13
Total for category (\$m)	5 773	6 247	6 503	7 272
Total operating expenses (\$m)	172 788	181 377	190 502	201 171
Proportion of operating expenses (%)	3.3	3.4	3.4	3.6

Source: Commission calculation using ABS Government Finance Statistics (GFS) data and State data.

How are services delivered?

- 6 States build and maintain roads for the purpose of moving people and goods within and between States. States own and are responsible for managing major roads (including highways), which connect localities within the State and connect the State to other States. Roads of lesser significance in both urban and rural areas are typically the responsibility of local governments. However, States decide which roads are State roads and which are local roads and those decisions differ between States. In some areas (usually sparsely populated ones), States manage roads that would normally be classified as local roads. This is typically because a local government does not exist or because it does not have the financial capacity to support those roads.
- 7 Differences between States in the length of their road networks reflect their different geography and settlement patterns. For example, the ACT's network comprises mostly roads within the Canberra urban area. By contrast, Queensland has a large road network. It has a large network of urban roads because of its many urban population centres. Since these centres are scattered across a large land area, it also has a large network of rural roads connecting them.
- 8 State policy choices on the number of alternate routes between urban centres and the degree to which States give responsibility for roads to local government may also affect the length of State roads.
- 9 Population density also affects the cost of roads. Roads in densely populated urban areas carry large volumes of traffic, including heavy vehicles, which are mostly moving within the urban area itself. Hence, the cost of maintaining urban roads is likely to differ from that of maintaining rural roads — the latter may span large distances but carry smaller traffic volumes.

COMMONWEALTH FUNDING

- 10 The Commonwealth provides funding to States to assist them in meeting their road maintenance services expenses. The Commonwealth provides States with some National partnership payments (NPPs) that directly impact on State fiscal capacities as it assists to fund road services. The expenses funded by these payments are

assessed in the same way as State funded expenses and the actual revenue is treated as an offset to the assessed expenses.

- 11 Some NPPs related to this category, however, have an effect on State fiscal capacities and others do not. Payments for purposes outside State responsibilities, such as those to local governments, have been treated as having no impact on State fiscal capacities.
- 12 Table 3 details the major Commonwealth payments provided to States for road maintenance services. Commonwealth payments for road construction are assessed in the Infrastructure category.

Table 3 Commonwealth payments to States for road services, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Nation building program NPP (former Auslink)	123	50	103	64	45	7	1	21	414
Untied local roads grants	196	140	127	104	37	36	22	16	677
Nation Building Program - Black spot projects	19	16	13	9	5	1	1	1	64
Other NPPs	0	0	15	0	19	0	2	3	40
Total	339	205	257	177	106	44	25	41	1 194

Note: Commonwealth payments for road construction are assessed in the Infrastructure category.

Source: Commonwealth of Australia's *Final Budget Outcome, 2012-13*.

- 13 A complete list of Commonwealth payments and their treatment is provided in Appendix 2.

CATEGORY STRUCTURE

- 14 The assessment of the Roads category is undertaken separately for each of the following components:
 - rural roads
 - urban roads
 - local roads
 - bridges
 - other services.
- 15 Table 4 shows the assessment structure for the category, the disabilities that are assessed and the size of each component, using 2012-13 data.

Table 4 **Category structure, Roads, 2012-13**

Component	Component expense	Disability	Influence measured by disability
	\$m		
Rural roads	2 816	Length and use	This component recognises that the length of the rural road network, traffic volume and heavy vehicle use influence the cost of providing roads maintenance services in rural areas.
Urban roads	1 943	Length and use	Identifies the length of the urban road network, traffic volume and heavy vehicle use as having impact on the cost of providing roads maintenance services in urban areas.
Local roads	543	Length	Recognises the differences between States in the cost of maintaining local roads managed by State governments.
Bridges	308	Equal per capita	Recognises that different drivers affect bridges expenses, but the Commission was not able to define them. This is an equal per capita assessment.
Other services	1 663	Equal per capita	Recognises other unmeasured factors that may influence the cost of providing roads maintenance services. This is an equal per capita assessment.

Note: The wages costs factor is applied to all components.
 The component expenses and the division of rural and urban roads into length and use is calculated based on data from the National Transport Commission.

Source: Commission calculation.

Component expenses

- 16 The Commission divides total road maintenance expenditure into the five components and their sub-components based on State spending provided by the National Transport Commission (NTC).
- 17 Each component and sub-component is weighted by the proportion of the service delivery expenses it affects. We derive the weights applied to each component from work done by the NTC in estimating heavy vehicle road use charges.
- 18 The NTC makes determinations of heavy vehicle registration charges, designed to offset the damage done to roads by these vehicles. To do this, it gathers data from States on what they spend on roads and decides what proportion relates to heavy vehicles and the volume of traffic. The residual, we assign to length by assumption. These data are also split by urban and rural roads.
- 19 We are able to split the NTC expense data into State spending on local roads, bridges and other services, as shown in Table 5. For more information on the NTC categories, please see the appendix to this attachment.

Table 5 Composition of roads expenses, 2009-10 to 2012-13

	2009-10	2010-11	2011-12	2012-13
	\$m	\$m	\$m	\$m
Rural roads				
Road length	516	608	604	848
Traffic volume	1 235	1 112	1 072	970
Heavy vehicle use	701	774	751	998
Rural total	2 452	2 494	2 427	2 816
Urban roads				
Road length	192	199	297	264
Traffic volume	1 180	1 337	1 438	1 324
Heavy vehicle use	271	297	398	355
Urban total	1 643	1 833	2 134	1 943
Local roads	332	376	416	543
Bridges	247	297	281	308
Other services	1 100	1 248	1 245	1 663
Total	5 773	6 247	6 503	7 272

Note: These data have been rescaled to match total GFS expenses.

Source: Commission calculation using NTC data.

RURAL ROADS

- 20 The assessment of rural roads recognises that the length of the rural road network, traffic volume and heavy vehicle use influence the cost of providing roads maintenance services in rural areas.

Road length

- 21 A certain amount of road deterioration occurs because of factors such as the impact of weather and sunlight on the road surface and substrate, even if the road is not used. Therefore, a proportion of road maintenance and replacement costs are attributable to the length of roads a State needs to maintain.
- 22 However, there are long-standing difficulties relating to the reliability and comparability of State road length data, because they are affected by differences between the way States classify their roads, State policies on where roads are built and State policies on the allocation of responsibility for roads between the State and local governments.
- 23 A measure of rural road lengths was developed using a mapping algorithm. The algorithm applies a uniform policy on where States build roads and the State-local government division of responsibility. State-managed roads are defined as existing roads connecting neighbouring localities larger than 400 people by the fastest route,

using the ABS's Urban Centres and Localities (UCLs) to define those localities. A State's rural road length is the sum of its mapped roads.

Adjustment for sealed roads

- 24 State policies vary on when to seal a road. While there is a relationship with traffic volume, other factors may also influence this decision (for example, roads that are subject to high rainfall are more likely to be sealed).
- 25 Unsealed roads have lower per kilometre maintenance cost than sealed roads. In the 2010 Review, Western Australia provided data suggesting the average maintenance cost per kilometre of unsealed roads was 44% that of sealed roads. However, this comparison was affected by higher urban road use, which is separately assessed. The Commission has exercised its judgment to set the cost of maintaining a kilometre of unsealed roads to be half that of a sealed road.
- 26 State data on unsealed road lengths suffer from the same comparability issues as their road length data. The Commission has treated minor rural roads identified in the mapping approach as unsealed roads. All other mapped roads (such as freeways, highways or main roads) are treated as sealed roads. Table 6 shows States' illustrative rural road length.

Table 6 Illustrative rural road length, 2015 Review

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Mapped length									
Sealed (km)	24 376	13 941	23 391	17 145	9 570	2 515	6	7 556	98 501
Unsealed (km)	1 724	1 346	4 766	3 589	1 711	37	0	3 153	16 325
Weighted length (a)	25 238	14 615	25 774	18 940	10 425	2 534	6	9 132	106 663

(a) Sealed roads receive a weight of 1.0, unsealed roads receive a weight of 0.5.

Source: The mapped road lengths were sourced from a consultant's report.

- 27 Table 7 shows the illustrative rural road length expenses for 2012-13.

Table 7 Illustrative assessed expenses, rural road length, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Weighted length (km)	25 238	14 615	25 774	18 940	10 425	2 534	6	9 132	106 663
Location factor	0.975	0.906	1.053	1.189	1.008	0.914	0.969	1.290	1.000
Expense (\$m)									848
Total (\$m)	201	116	205	151	83	20	0	73	848
Total (\$pc)	27	20	44	61	50	39	0	305	37

Note: The location factor combines the wages costs and regional costs factors.

Source: Commission calculation.

Road use

28 Road use affects State expenses in two main ways.

- High traffic volumes require States to install and maintain traffic control and safety measures (such as signage and traffic lights). Failure to provide and support such 'road furniture' would have unacceptable consequences for road safety.
- Heavy vehicles cause pavement wear and tear, which require minor and major maintenance to restore the pavement to acceptable service standards. Road engineers say light vehicles cause little pavement damage.

Traffic volume

29 Assessment of road use is based on traffic volume data from the Bureau of Infrastructure, Transport and Regional Economics (BITRE). Total vehicle kilometres travelled (VKT) measures the total distance travelled by all vehicles.¹ This measure treats a kilometre travelled by a car the same as a kilometre travelled by a heavy truck.

30 The traffic volume data from BITRE are based on the ABS' *Survey of Motor Vehicle Usage (SMVU)*.² BITRE adjust the SMVU data³ and smooth it using averages from several survey years. BITRE also make adjustments to remove data relating to travel on local roads and to split the data between travel on urban and rural roads.

31 Table 8 shows the illustrative rural traffic volume expenses for 2012-13.

Table 8 Illustrative assessed expenses, rural traffic volumes, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Rural VKT (billion km)	12	10	9	5	4	1	0	1	40
Location factor	1.005	0.988	0.989	1.036	0.988	0.977	1.028	1.041	1.000
Expense (\$m)									970
Total (\$m)	282	234	209	112	93	26	0	15	970
Total (\$pc)	38	41	45	45	56	50	0	61	42

Source: Commission calculation using BITRE traffic volume data.

Heavy vehicles

32 Assessment of heavy vehicle use is also based on data from BITRE. Average gross mass-kilometres (AGM-km) measures the gross tonne-kilometres for a group of

¹ Calculated as the number of vehicles multiplied by the distance travelled.

² It uses the SMVU dataset 'Total distance travelled by area of operation'. This ensures that the traffic data reflects all travel in a State, not just travel by vehicles registered in that State.

³ BITRE adjusts the SMVU data using data such as fuel sales, off-road use, fleet fuel use modelling and traffic data from monitored networks in cities.

vehicles based on the NTC trend data on total mass of different heavy vehicle types and kilometres travelled.

- 33 AGM-km for each State is estimated by applying Australian average AGMs for each BITRE vehicle class (derived from NTC trend data⁴) to the kilometres travelled by each class of heavy vehicle in each State. As with the traffic volume measure, the heavy vehicle travel data have been adjusted to remove travel on local roads and to split the data between urban and rural roads.

- 34 Table 9 shows the illustrative rural heavy vehicle use expenses for 2012-13.

Table 9 Illustrative assessed expenses, rural heavy vehicle use, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Rural AGM (billion km)	47	35	37	23	18	4	0	3	167
Location factor	1.005	0.988	0.989	1.036	0.988	0.977	1.028	1.041	1.000
Expense (\$m)									998
Total (\$m)	281	211	219	137	110	24	0	16	998
Total (\$pc)	38	37	47	55	66	46	0	69	44

Source: Commission calculation using BITRE heavy vehicle data.

Bringing the rural roads component together

- 35 Table 10 shows the total assessed expenses on rural roads.

Table 10 Illustrative assessed expenses, rural roads component, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Road length	201	116	205	151	83	20	0	73	848
Traffic volume	282	234	209	112	93	26	0	15	970
Heavy vehicle use	281	211	219	137	110	24	0	16	998
Total (\$m)	764	560	633	400	286	70	0	104	2 816
Total (\$pc)	102	95	136	173	168	128	0	511	123

Source: Commission calculation.

URBAN ROADS

- 36 The assessment of urban roads recognises that the length of the urban road network, (based on urban populations), traffic volume and heavy vehicle use influence the cost of providing roads maintenance services in urban areas.

⁴ The NTC calculated trend data from the SMVUs for 2001 to 2007. We used the trend data to derive trend AGMs for the vehicle classes in the BITRE data.

Road length

- 37 Similar to the assessment of road length in the rural roads component, a certain amount of road deterioration occurs even if the road is not used. Therefore, a proportion of road maintenance and replacement costs are attributable to the length of roads a State needs to maintain.
- 38 However, State data on the length of urban roads are not comparable because of differences in road classifications, the allocation of responsibilities between State and local governments and definitions of urban areas.
- 39 As a result, the Commission is using State urban populations as its proxy for urban road lengths. This measure is consistent with the principal purpose of urban roads, which is to transport people and goods around the urban centre. Urban centres are defined as localities of 40 000 or more using the ABS's UCLs to define those localities.
- 40 Table 11 shows the illustrative urban road length expenses for 2012-13.

Table 11 Illustrative assessed expenses, urban road length, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Urban population (million)	5.6	4.6	3.7	1.9	1.3	0.3	0.4	0.1	17.9
Location factor	1.005	0.988	0.989	1.036	0.988	0.977	1.028	1.041	1.000
Expense (\$m)									264
Total (\$m)	83	68	54	28	18	4	6	2	264
Total (\$pc)	11	12	12	11	11	8	15	7	12

Source: Commission calculation using ABS population data.

Road use

- 41 Similar to the assessment of road use in the rural roads component, road use in urban areas affects State expenses through high traffic volumes and heavy vehicles. Our assessment uses the same data from BITRE but only includes data collected on vehicle use in urban areas.
- 42 Table 12 shows the illustrative urban traffic volume expenses for 2012-13.

Table 12 Illustrative assessed expenses, urban traffic volumes, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Urban VKT (billion km)	34	30	24	13	7	2	2	1	113
Location factor	1.005	0.988	0.989	1.036	0.988	0.977	1.028	1.041	1.000
Expense (\$m)									1 324
Total (\$m)	404	349	283	147	78	27	28	9	1 324
Total (\$pc)	55	61	61	59	47	53	75	37	58

Source: Commission calculation using BITRE traffic volume data.

43 Table 13 shows the illustrative urban heavy vehicle use expenses for 2012-13.

Table 13 Illustrative assessed expenses, urban heavy vehicle use, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Urban AGM (billion km)	80	58	58	27	14	5	2	2	245
Location factor	1.005	0.988	0.989	1.036	0.988	0.977	1.028	1.041	1.000
Expense (\$m)									355
Total (\$m)	116	84	84	38	20	7	3	3	355
Total (\$pc)	16	15	18	16	12	14	7	12	15

Source: Commission calculation using BITRE heavy vehicle data.

Bringing the urban roads component together

44 Table 14 shows the total assessed expenses on urban roads.

Table 14 Illustrative assessed expenses, urban roads component, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Road length	83	68	54	28	18	4	6	2	264
Traffic volume	404	349	283	147	78	27	28	9	1 324
Heavy vehicle use	116	84	84	38	20	7	3	3	355
Total	603	501	421	214	116	38	36	13	1 943
Total (\$pc)	82	87	90	89	69	73	99	59	85

Source: Commission calculation.

LOCAL ROADS

- 45 In areas of States where there is no local government (unincorporated areas) or where there is insufficient population to support road maintenance, State governments step in and manage roads that would otherwise be managed by a local government.
- 46 The drivers of these costs are normally State geography and population settlement patterns. The local roads assessment recognises the differences between States in the cost of maintaining local roads managed by State governments.
- 47 The Commission measures the local road task using the length of minor roads in sparsely settled areas — defined as remote and very remote regions with a population density of less than 1 person per 100 square kilometres. We exclude those roads that are already included in the rural mapped roads to ensure there is no double counting between this measure and the rural road length measure.

48 Table 15 shows the total assessed expenses attributable to State managed local roads.

Table 15 Illustrative assessed expenses, local roads component, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Local road length (km)	9 841	1 416	35 192	38 077	14 745	0	0	10 999	110 271
Location factor	1.005	0.988	0.989	1.036	0.988	0.977	1.028	1.041	1.000
Expense (\$m)									543
Total (\$m)	48	7	169	192	71	0	0	56	543
Total (\$pc)	7	1	37	77	43	0	0	234	24

Source: Local road length was measured in a consultancy for the Commission.

BRIDGES

49 This component recognises that different drivers affect bridges and tunnel expenses. However, because no reliable data can be found to support a differential assessment, the Commission has assessed bridge and tunnel maintenance expenses equal per capita.

50 Table 16 shows total assessed expenses for bridges for 2012-13.

Table 16 Illustrative assessed expenses, bridges component, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Population (million)	7.4	5.7	4.6	2.5	1.7	0.5	0.4	0.2	22.9
Location factor	1.005	0.988	0.989	1.036	0.988	0.977	1.028	1.041	1.000
Expense (\$m)									308
Total (\$m)	99	75	61	35	22	7	5	3	308
Total (\$pc)	14	13	13	14	13	13	14	14	13

Source: Commission calculation using ABS population data.

OTHER SERVICES

51 The Roads assessment recognises other unmeasured factors that may influence the cost of providing roads maintenance services. The category includes expenses associated with corporate services, driver licensing and vehicle registration. These expenses may be driven by a number of factors including road length, population in the driving age groups, total population and number of registered vehicles.

52 However, as there is no clear correlation between the expenses and road length, the Commission has decided, for reasons of simplicity, to assess them on an equal per capita basis — implying they are primarily driven by total population.

53 Table 17 shows the total assessed expenses for other road services for 2012-13.

Table 17 Illustrative assessed expenses, other road services component, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Population (million)	7.4	5.7	4.6	2.5	1.7	0.5	0.4	0.2	22.9
Location factor	1.005	0.988	0.989	1.036	0.988	0.977	1.028	1.041	1.000
Expense (\$m)									1 663
Total (\$m)	536	407	331	186	119	36	28	18	1 663
Total (\$pc)	73	72	72	75	72	71	75	76	73

Source: Commission calculation using ABS population data.

LOCATION

- 54 We recognise the differences in wage costs between States in this assessment. These influences are measured in a similar way for most expense categories and the methods are described in Attachment 22 - Wages costs.
- 55 We also consider that the costs of providing rural roads increase with increasing remoteness. Therefore, we have recognised the costs of providing services to different areas within a State in this component only. These influences are measured in a similar way for most expense categories and the methods are described in Attachment 23 - Regional costs. We have no data on the sub-State distribution of rural road use, and consider it to be very different from the distribution of population. We therefore, have only applied regional location to the rural road length sub-component.

BRINGING THE ASSESSMENT TOGETHER

- 56 Table 18 brings the assessed expenses for each component together to derive the total expenses for each State for the category.

Table 18 Illustrative category assessment, Roads, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc
Rural roads									
Equal per capita	123	123	123	123	123	123	123	123	123
Road length	-10	-17	7	24	13	2	-37	268	0
Traffic volume	-4	-1	3	3	13	8	-42	19	0
Heavy vehicle use	-5	-6	4	12	23	2	-44	25	0
Location	-3	-12	6	23	1	-11	-4	36	0
Total	102	95	136	173	168	128	0	511	123
Urban roads									
Equal per capita	85	85	85	85	85	85	85	85	85
Road length	0	1	0	0	0	-3	3	-4	0
Traffic volume	-3	4	3	2	-11	-5	17	-21	0
Heavy vehicle use	0	-1	3	0	-3	-2	-8	-3	0
Location	0	-1	-1	3	-1	-2	2	4	0
Total	82	87	90	89	69	73	99	59	85
Local roads									
Equal per capita	24	24	24	24	24	24	24	24	24
Road length	-17	-22	14	52	20	-24	-24	204	0
Location	0	0	0	1	0	-1	1	1	0
Total	7	1	37	77	43	0	0	234	24
Bridges									
Equal per capita	13	13	13	13	13	13	13	13	13
Location	0	0	0	0	0	0	0	1	0
Total	14	13	13	14	13	13	14	14	13
Other services									
Equal per capita	73	73	73	73	73	73	73	73	73
Location	0	-1	-1	3	-1	-2	2	3	0
Total	73	72	72	75	72	71	75	76	73
Category total	278	268	348	429	365	285	188	894	317

Source: Commission calculation.

Alternative presentation

- 57 Table 19 provides an alternative presentation using a factor approach. The table shows for each disability how the expenses per capita in each component and in total are affected by differences in State characteristics. Disability factors below one indicate a State is assessed to need to spend less than average. Disability factors above one indicate a State is assessed to need to spend more than average.

Table 19 Illustrative category factors, Roads, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Rural roads (component weight = 38.7%)									
Road length	0.737	0.553	1.201	1.642	1.348	1.063	0.003	8.243	1.000
Traffic volume	0.906	0.971	1.071	1.070	1.318	1.191	0.000	1.448	1.000
Heavy vehicle use	0.878	0.851	1.089	1.272	1.522	1.057	0.000	1.585	1.000
Location	0.975	0.906	1.053	1.189	1.008	0.914	0.969	1.290	1.000
Component factor	0.832	0.772	1.109	1.409	1.371	1.045	0.001	4.162	1.000
A. Weighted factor	0.935	0.912	1.042	1.158	1.144	1.017	0.613	2.224	1.000
Urban roads (component weight = 26.7%)									
Road length	0.983	1.046	1.017	0.986	0.965	0.730	1.269	0.626	1.000
Traffic volume	0.951	1.062	1.060	1.027	0.811	0.915	1.290	0.644	1.000
Heavy vehicle use	1.018	0.950	1.180	1.002	0.778	0.873	0.478	0.782	1.000
Location	1.005	0.988	0.989	1.036	0.988	0.977	1.028	1.041	1.000
Component factor	0.973	1.027	1.065	1.054	0.816	0.862	1.171	0.695	1.000
B. Weighted factor	0.993	1.007	1.017	1.014	0.951	0.963	1.046	0.919	1.000
Local roads (component weight = 7.5%)									
Road length	0.278	0.052	1.586	3.194	1.844	0.000	0.000	9.603	1.000
Location	1.005	0.988	0.989	1.036	0.988	0.977	1.028	1.041	1.000
Component factor	0.276	0.051	1.550	3.271	1.801	0.000	0.000	9.882	1.000
C. Weighted factor	0.946	0.929	1.041	1.170	1.060	0.925	0.925	1.666	1.000
Bridges (component weight = 4.2%)									
Bridges	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Location	1.005	0.988	0.989	1.036	0.988	0.977	1.028	1.041	1.000
D. Weighted factor	1.000	1.000	1.000	1.002	1.000	0.999	1.001	1.002	1.000
Other services (component weight = 22.9%)									
Other services	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Location	1.005	0.988	0.989	1.036	0.988	0.977	1.028	1.041	1.000
E. Weighted factor	1.001	0.997	0.997	1.008	0.997	0.995	1.007	1.009	1.000
Category total	0.875	0.845	1.098	1.353	1.151	0.899	0.592	2.820	1.000

Source: Commission calculation.

INFLUENCES NOT ASSESSED IN THIS CATEGORY

Adjustment for road width

- 58 The size of the road maintenance task would more accurately be measured on the basis of lane-kilometres, because this would take account of differences in the width of roads. However, the mapping approach was only able to measure rural roads on the basis of road length. The Commission did not make an adjustment for road width

because it observed that the average number of lanes on rural roads was similar for all States.

- 59 Materiality testing for duplicating lanes on some significant rural roads and the inclusion of additional lengths in the current rural road length calculations indicated that even with extreme assumptions it would be immaterial for any State.

User charges

- 60 States raise roads user charges from various sources such as road tolls and driver's licence fees. The capacity to raise these user charges is not the same as the disabilities used to assess road expenses. Given the degree of policy variation between States in use of toll roads and the broad demographic from which driver's licence fees are derived, we do not consider a net assessment of user charges appropriate in this category. As such, roads user charges are assessed in the Other revenue category.

INFLUENCES YET TO BE ADDRESSED

Mining related expenditure

- 61 Queensland and Western Australia have stated that there are unrecognised road maintenance costs resulting from road networks between mines, associated infrastructure and mining communities that connect localities of less than 400 people (which are therefore not recognised in the rural road length algorithm).
- 62 The Commission has requested information from States that would enable us to develop an adjustment to the Roads assessment. At this stage, we have not analysed the data provided by the States. This issue will be addressed as part of the final report in February 2015, although we will consult with the States in developing an assessment.

WHAT IS THE IMPACT ON THE GST DISTRIBUTION?

- 63 Table 20 shows the extent to which the assessment for this category moves the distribution of the GST away from an equal per capita distribution. It shows that GST revenue is redistributed to, Queensland, Western Australia, South Australia and the Northern Territory and away from New South Wales, Victoria, Tasmania and the ACT.

Table 20 Illustrative GST Impact, Roads, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Redist
Dollars million	-283	-253	151	240	87	-12	-50	119	597
Dollars per capita	-38	-44	33	97	52	-23	-132	498	26

Source: Commission calculation.

64 The main reasons for these redistributions are explained below.

- New South Wales and Victoria have, in per capita terms, relatively small rural networks, lower rural traffic volume and rural heavy vehicle use and relatively few State-managed local roads. These disabilities were not outweighed by Victoria's above average urban network and urban traffic volume nor by the above average urban heavy vehicle use in New South Wales. Consequently, both States are assessed to be able to provide road maintenance services at below average cost.
- Queensland, Western Australia, South Australia and the Northern Territory have above average rural networks, rural traffic volume, rural heavy vehicle use and State managed local roads, leading to their above average assessed needs for delivering roads services.
- While it has above average rural disabilities, Tasmania has no assessed State managed local roads and below average urban disabilities, leading to an assessment that it can deliver road services at below average cost.
- The ACT has no assessed rural network, as well as no State-managed local roads. Consequently, it is assessed to be able to deliver roads services at below average cost.

65 Table 21 provides a summary of the major reasons the assessment moves State GST revenue away from an equal per capita distribution.

Table 21 Major reasons for difference from EPC, Roads, illustrative, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Redist
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Rural roads	-140	-138	66	95	82	7	-46	74	324
Urban roads	-20	19	30	4	-25	-5	4	-7	57
Local roads	-126	-128	60	133	32	-12	-9	50	275
Bridges	1	-1	-1	1	0	0	0	0	2
Other services	3	-5	-4	7	-1	-1	1	1	11
Total	-283	-253	151	240	87	-12	-50	119	597

Source: Commission calculation.

CHANGES SINCE THE 2010 REVIEW

66 There have only been minor changes to the Roads assessment in this review.

Geography

- 67 The Commission will use the ABS's Urban Centres and Localities (UCLs) to define geographical areas in the Roads category. This is because they capture less of the surrounding hinterland of urban areas, which is more appropriate for determining urban boundaries for the urban and rural road length factors. It means that the rural road length algorithm and the urban population used in these factors would be recalculated using UCLs.
- 68 Previously, we used the ABS's Significant Urban Areas (SUAs) to define urban areas and determine urban populations in this category.
- 69 While we propose to use UCLs where possible in the Roads assessment, the SMVU data used by BITRE is loosely based on ABS's old Statistical Districts and Greater Capital City Statistical Areas. As there are no other comparable data appropriate for our purposes, the urban and rural road use factors would not be based on UCLs. This would be inconsistent with the road length factors, but we believe the effect will be minor.
- 70 Most States supported this change in the definition of the geography.

Mining related roads

- 71 We have not yet developed an adjustment to the rural roads network to capture missing disabilities associated with roads to economic activity. If we are able to make such an adjustment, it will represent a further change to this category.

APPENDIX: ALIGNING ROAD EXPENSES AND DISABILITIES

The Commission divides total road expenditure into its components and sub-components based on the work of the National Transport Commission (NTC), on which all States were represented. The NTC classifies expenses into 14 categories, and by urban and rural roads. It attributes costs to the type of road use that drives the need for different categories of expenditure. Where road use does not account for all need for expenditure on roads, the Commission has attributed that need for expenditure to road length.

Some categories of expenditure do not relate to the CGC's road expenditure category, but are classified to other categories, such as Investment, costs of borrowing, or support for local governments. These expenses are not included in our calculations.

We use this model to attribute NTC costs to our roads components, and then scale those expenses to reflect the total category expenditure.

The model can be seen in Table 22.

Table 22 Calculating expense proportions applicable to roads components and disabilities

NTC Category		Rural			Urban			Local roads	Bridges	Other services	Total category
		Road length	Traffic volume	Heavy vehicle use	Road length	Traffic volume	Heavy vehicle use				
		\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
A	Servicing and Operating	-	370	-	-	532	-	-	-	-	901
B1	Routine maintenance	123	195	195	37	58	58	-	-	-	668
B2	Periodic surface maintenance	82	27	164	36	12	71	-	-	-	392
C	Bridge Maintenance/Rehab	-	-	-	-	-	-	-	264	-	264
D	Road Rehabilitation	522	-	427	154	-	126	-	-	-	1 228
E	Low-cost Safety/Traffic	-	240	-	-	533	-	-	-	-	773
G1	Corporate services	-	-	-	-	-	-	-	-	806	806
G2	Enforcement of HV regulations	-	-	70	-	-	49	-	-	-	118
G3	Vehicle registration	-	-	-	-	-	-	-	-	393	393
G4	Driver licensing	-	-	-	-	-	-	-	-	226	226
H3-H5	Spending on local access roads	-	-	-	-	-	-	465	-	-	465
Total		727	832	856	227	1 135	304	465	264	1 425	6 234
Roads category expenses		848	970	998	264	1 324	355	543	308	1 663	7 272

Source: Commission calculation based on a special data request from the NTC.

ATTACHMENT 18

TRANSPORT

Summary of changes since the 2010 Review

- The category now covers public non-financial corporation (PNFC) expenses and revenue as well as general government expenses and revenues, resulting in an increase in total expenses.
- We refined the regression model underpinning the urban net expenses assessment and used new data in the regression.
- A regional cost assessment has been added to the non-urban expenses assessment, which is otherwise unchanged.

WHAT IS INCLUDED IN THE TRANSPORT CATEGORY?

- 1 The Transport category comprises net expenses relating to bus, rail (passenger and freight), and ferry services, ports and other maritime related services, and air transport. The expenses also include passenger concessions and State government administration expenses.
- 2 It comprises:
 - net urban operating expenses, including:
 - consolidated operating expenses (including depreciation expenses) for the general government and PNFC sectors on passenger transport within urban centres, net of revenues
 - subsidies to private providers
 - non-urban subsidies – includes capital and operating subsidies for passenger and freight transport between urban centres.
- 3 This is because the Commission has decided to treat the provision of transport services, including those provided through PNFCs, as a general government function. Unlike many services provided through PNFCs, transport services have fewer commercial features. They depend on government funds to meet operating costs and pay for major investments; the services stem from social policy objectives; and government departments make the policy on service delivery and charges.

- 4 However, expenses and revenues of other PNFCs (such as ports corporations) remain out of scope and hence not included in the category. Most student transport services are included in the Schools education category.
- 5 Table 1 shows transport expenses were \$9.5 billion in 2012-13. The use of net expenses instead of subsidies means that the category expenses are now greater than those of the 2010 Review.

Table 1 Transport category expenses, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Category expenses (\$m)	4 200	2 131	1 863	767	357	58	72	66	9 513
Category expenses (\$pc)	571	375	404	309	215	113	190	276	415
Proportion of operating expenses (%)	6.7	4.9	4.4	3.1	2.4	1.2	1.7	1.4	4.7

Source: Commission calculation using State data.

- 6 Table 2 shows the share of State expenses on transport declined slightly from 4.9% in 2009-10 to 4.7% in 2012-13.

Table 2 Transport expenses as a proportion of State operating expenses

	2009-10	2010-11	2011-12	2012-13
Total for category (\$m)	8 420	8 419	8 806	9 513
Total operating expenses (\$m)	172 788	181 377	190 502	201 171
Proportion of total operating expenses (%)	4.9	4.6	4.6	4.7

Source: Commission calculation using ABS Government Finance Statistics (GFS) data and State data.

How are services delivered?

- 7 Urban transport services are provided by State governments and private providers. States differ considerably in the way they provide these services. In capital cities, States use a mix of direct general government provision, service delivery through PNFCs or contracting with private providers to deliver services. In Queensland, the Brisbane City Council operates bus services. In large regional centres, services are provided through PNFCs or private providers. In smaller centres, States generally provide services by contracting with private providers.
- 8 At the time of the 2010 Review, States predominantly delivered urban passenger transport services through PNFCs or through contracts with private providers. Since then, some States have shifted towards providing urban passenger transport services (or at least some of the functions related to these services, such as integrated ticketing systems, timetabling and multi-modal interchanges and passenger safety) directly through the general government sector. New South Wales, Queensland and South Australia have recently transferred functions and associated staff from PNFCs

into their existing general government transport departments. New South Wales and South Australia still contract out some services to the private sector.

- 9 The remaining States use a combination of PNFCs and private service providers to provide services. However, the level of private provision is only significant in New South Wales and Victoria.
- 10 State governments are responsible for the public transport network and strategic planning. State governments control what services are delivered through public transport policies, legislation and the management of service delivery through contracts with, and funding for, service providers. All the services are delivered within the models/frameworks defined by State governments.
- 11 Concessions to certain groups of users, via reduced fares, are subsidised by States.
- 12 Non-urban services such as bus and rail passenger transport, rail freight and ports are operated by a mix of private providers and PNFCs.

COMMONWEALTH FUNDING

- 13 The Commonwealth provides funding to States to assist them in meeting their transport expenses. There are two transport related payments, other than those to fund capital expenditure which are captured in the Investment assessment.
 - The National reciprocal transport concessions payment impacts on the relativities. The payments will cease from July 2014.
 - The Seamless national economy — National Rail Transport Safety Regulator payment does not impact on the relativities because it is meant to help the States achieve the Commonwealth objective of setting up a National Rail Safety Regulator. Final payments were made in 2013-14.
- 14 A complete list of Commonwealth payments and their treatment is provided in Appendix 2.

CATEGORY STRUCTURE

- 15 The Transport category is assessed in two components:
 - net urban operating expenses
 - non-urban subsidies.
- 16 Table 3 shows the assessment structure for the category, the disabilities that are assessed and the size of each component, using 2012-13 data.

Table 3 Category structure, Transport, 2012-13

Component	Component expenses	Disability	Influence measured by disability
	\$m		
Urban transport	8 046	Urban centre size	Recognises that the cost of State provided urban passenger transport services increases with urban centre population size.
		Location	Recognises the differences in wage costs between States.
Non-urban transport	1 467	Non-urban population	Recognises the costs of providing passenger and freight transport services between urban centres.
		Location	Recognises the differences in wage costs between States and in the cost of providing services to different areas within a State.

Source: Commission calculation.

NET URBAN OPERATING EXPENSES

- 17 Evidence shows that the transport task increases with population size and, as a result, State governments spend more per capita in larger cities than in smaller ones. This is after fares and other revenues have been taken into account. Table 4 shows per capita net expenses for cities of different sizes. It also shows that, of the population living in urban centres with populations over 20 000, 73% live in cities with a population over 1 million (Sydney, Melbourne, Brisbane, Perth and Adelaide). This is where per capita net expenses are the highest.

Table 4 Per capita net expenses by city size, 2011-12

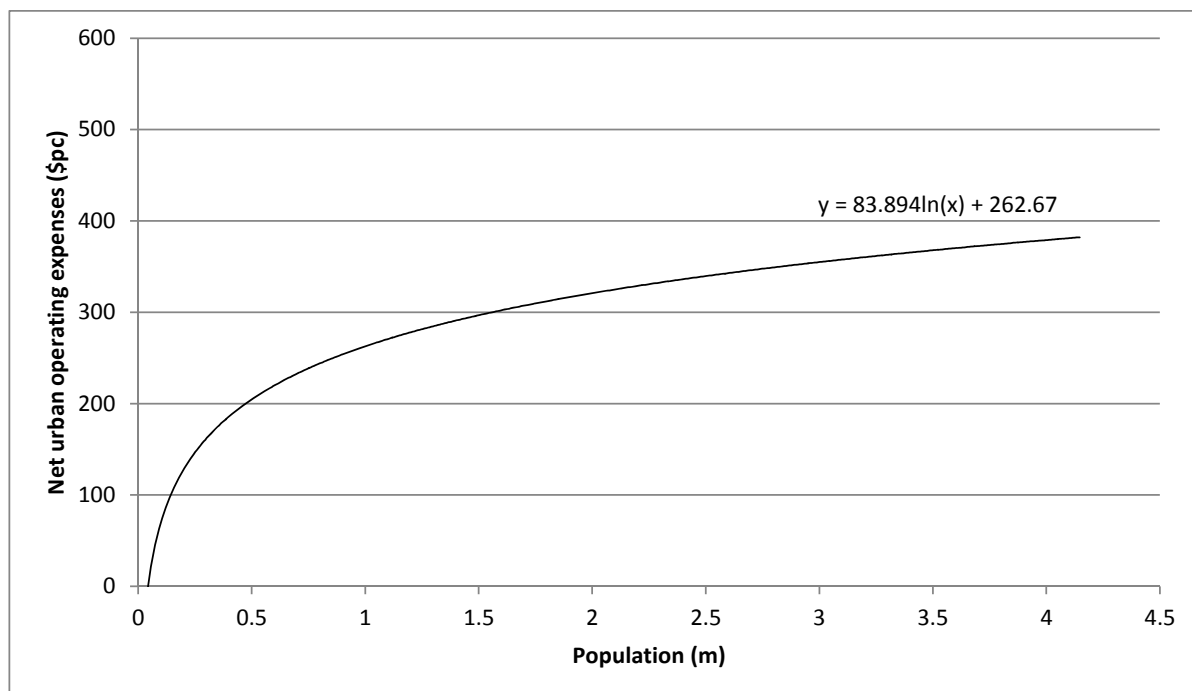
	20 000 to 50 000	50 000 to 100 000	100 000 to 250 000	250 000 to 1 000 000	1 000 000 to 2 500 000	2 500 000 and over	Total
Population (million)	1	1	1	2	5	8	18
Per capita net expenses (\$)	20	52	98	120	303	374	275

Source: Commission estimates based on State data.

- 18 We have used this evidence to develop an assessment based on the relationship between urban size and subsidy. This is the same approach recommended by the consultants¹ engaged in the last review. Figure 1 shows that net urban operating expenses increase with urban centre population.

¹ 2010 Review of State Government Subsidised Urban Public Transport Services: Consultant Advice, Institute for Sustainable Systems and Technologies, University of South Australia, April 2009.

**Figure 1 Net urban operating expenses by urban population size, average
2008-09 to 2011-12**



Note: City data are not shown for confidentiality purposes.

Source: Special data request, State transport departments.

- 19 We do not share Queensland and Western Australia's concerns about using population as the sole driver of net urban operating expenses. The approach we have adopted is meant to capture needs broadly and was recommended by transport experts. They found that, in general, the main reason public transport operating subsidies per capita rise as city size increases is the greater per capita use of public transport. This necessitates the provision of more public transport services and more complex services. The shape of the curve suggests the revenue raised reduces the slopes as city size increases but does not offset the higher expenses.
- 20 In this review, we have tested a number of additional influences, such as the presence of rail and topography. While we have found the presence of rail to be a significant variable, we have retained the 2010 Review model, updated with the most recent data because it is simpler and more policy neutral. While the size of the task influences whether rail is a viable mode, State policy on when it is introduced has an influence.
- 21 We do not regard Sydney as an outlier as suggested by Queensland. We have no reference point to say whether Sydney's per capita spending is unusual for a city in Australia of this size. It could be that Melbourne, for which per capita spending is significantly lower, is the outlier.
- 22 We have treated Newcastle, Wollongong and the Central Coast, the Sunshine Coast and the Gold Coast as separate cities, rather than amalgamating them with their

principal cities because the demand for travel by public transport between these satellite areas and the principal city was low relative to public transport travel within each satellite area. This approach was supported by the consultants in the 2010 Review.

- 23 Victoria supported the model but, like South Australia, believed that revenues and expenses should be assessed separately. However, general government subsidies to private providers are usually paid on a net basis. Therefore, a gross assessment of revenues and expenses would mean that subsidies to PNFCs and private providers would be treated inconsistently.

Calculating the urban centre size assessment

- 24 We have used a regression analysis to estimate a relationship between per capita spending in cities with population over 20 000 and the logarithm of those cities' populations. The expenses were averaged over 2008-09 to 2011-12 to remove some volatility. The cities included and their populations are defined using ABS Urban Centres/Localities (UCLs) contained within Significant Urban Areas (SUAs). While the definition of urban centres may not capture perfectly the population serviced by the urban transport networks, we have adopted it because it is policy neutral.
- 25 Urban centres that do not have State provided or subsidised urban transport services were given a net operating expenses value of zero. We consider it better reflects what States do.
- 26 We have also weighted observations according to their populations, so that larger weights are given to urban centres with larger populations. This gives the same weight in the regression to individuals, regardless of which urban centre they reside in.
- 27 The assessed net expenses are calculated by:
- deriving assessed net expenses for each city with a population over 20 000, calculated using the city populations and the regression coefficients
 - summing the city assessed net expenses for each State.
- 28 The assessed expenses were then rescaled to match the ABS GFS urban transport net expenses.
- 29 We did not discount the assessment because we believe that the data and method used are reliable and fit for our purposes.

Location

- 30 We have recognised the differences in wage costs between States in this assessment. The factor was applied to net expenses rather than gross expenses because the extent to which higher fares can be charged because of higher wages is offset against

gross expenses. The remaining net expenses would still be affected by high wage costs that are not cost recovered.

- 31 These influences are measured in a similar way for most expense categories and the methods are described in Attachment 22 — Wages costs.
- 32 We did not recognise differences in regional costs because we consider that they are already captured in the regression model.

Bringing the net urban operating expenses component together

- 33 Table 5 shows the total assessed expenses.

Table 5 Illustrative assessed expenses, net urban operating expenses component, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Net expenses assessment (\$m)	2 768	2 400	1 315	872	530	44	103	14	8 046
Location	1.004	0.987	0.988	1.041	0.988	0.982	1.029	1.060	1.000
Total (\$m)	2 782	2 372	1 301	903	523	43	106	15	8 046
Total (\$pc)	378	417	282	364	315	85	281	63	351

Source: Commission calculation.

NON-URBAN SUBSIDIES

- 34 We have assessed non-urban operating subsidies based on the proportion of State populations that live outside capital cities. This broadly captures the size of the task faced by each State. This assessment was supported by States.

Location

- 35 As with previous components, we have recognised that differences in wage costs have a differential effect on the cost of providing non-urban transport across States.
- 36 We have also applied a regional cost disability to recognise that distance between population centres increases costs. This responds to the concerns of some States. Western Australia noted that it provided, along with Victoria, Queensland, Tasmania and the Northern Territory, subsidised services to populations in remote areas. Western Australia argued that compared to Victoria and Tasmania, it needed to cover a much larger area to service a similar level of population in remote areas. This increased costs.
- 37 These influences are measured in a similar way for most expense categories and the methods are described in Attachment 23 — Regional costs.

Bringing the non-urban subsidies component together

38 Table 6 shows the total assessed expenses.

Table 6 Illustrative assessed expenses, non-urban subsidies component, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Population outside capital cities (million)	3.125	1.643	2.564	0.670	0.430	0.320	0.004	0.125	8.881
Total State population (million)	7.356	5.684	4.613	2.478	1.662	0.512	0.378	0.238	22.922
Population outside capital cities as a proportion of total population (%)	42	29	56	27	26	62	1	52	39
Non-urban transport assessed expenses (\$m)	520	269	426	106	72	54	0	21	1 467
Location	1.005	0.988	0.989	1.036	0.988	0.977	1.028	1.041	1.000
Total (\$m)	514	264	421	116	73	53	0	26	1 467
Total (\$pc)	70	46	91	47	44	104	0	109	64

Source: Commission calculation.

BRINGING THE ASSESSMENT TOGETHER

39 Table 7 brings the assessed expenses and revenue for each component together to derive the total assessed expenses for each State for the category.

Table 7 Illustrative category assessment, Transport, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc
Urban transport									
Equal per capita	351	351	351	351	351	351	351	351	351
Urban centre size	25	71	-66	1	-32	-264	-78	-291	0
Location	2	-4	-4	13	-4	-8	10	15	0
Total	378	417	282	364	315	85	281	63	351
Non-urban transport									
Equal per capita	64	64	64	64	64	64	64	64	64
Non-urban population	7	-17	28	-21	-21	42	-64	23	0
Location	-1	-1	-1	6	1	-1	0	16	0
Total	70	46	91	47	44	104	0	109	64
Category total	448	464	373	411	359	189	281	171	415

Note: Component disabilities may not add due to interactions.

Source: Commission calculation.

Alternative presentation

- 40 Table 8 provides an alternative presentation using a factor approach. The table shows for each disability how the expenses per capita in each component and in total are affected by differences in State characteristics. Disability factors below one indicate a State is assessed to need to spend less than average. Disability factors above one indicate a State is assessed to need to spend more than average.

Table 8 Illustrative category factor, Transport, 2012–13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Average
Urban transport (component weight = 85%)									
Urban centre size	1.072	1.203	0.812	1.002	0.908	0.247	0.777	0.171	1.000
Location	1.005	0.988	0.989	1.036	0.988	0.977	1.028	1.041	1.000
Component factor	1.078	1.189	0.803	1.038	0.897	0.241	0.799	0.178	1.000
A. Weighted factor	1.066	1.160	0.834	1.032	0.913	0.358	0.830	0.305	1.000
Non-urban transport (component weight = 15%)									
Non-urban population	1.104	0.739	1.443	0.666	0.675	1.652	0.007	1.354	1.000
Location	1.005	0.988	0.989	1.036	0.988	0.977	1.028	1.041	1.000
Component factor	1.092	0.725	1.425	0.729	0.688	1.630	0.007	1.700	1.000
B. Weighted factor	1.014	0.958	1.066	0.958	0.952	1.097	0.847	1.108	1.000
Category factor	1.080	1.117	0.899	0.991	0.865	0.455	0.677	0.413	1.000

Source: Commission calculation.

WHAT IS THE IMPACT ON THE GST DISTRIBUTION?

- 41 Table 9 shows the extent to which the assessment for this category moves the distribution of the GST away from an equal per capita distribution. It shows that GST revenue is redistributed to New South Wales and Victoria, and away from the other States.

Table 9 Illustrative GST impact, Transport, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Redist
Dollars million	244	277	-193	-10	-93	-116	-51	-58	520
Dollars per capita	33	49	-42	-4	-56	-226	-134	-244	23

Source: Commission calculation.

- 42 The urban transport assessment has a greater impact on the GST distribution than the non-urban transport assessment. New South Wales and Victoria receive an above average redistribution due to the size of their capital cities and the consequent high per capita spending. States with large populations outside capital cities (captured in the non-urban assessment), most notably Queensland, need an above average

amount of GST. Location influences provide a smaller redistribution towards New South Wales, Western Australia, the ACT and the Northern Territory.

43 Some of the main reasons for the redistributions for each State are:

- New South Wales and Victoria have large capital cities which cost more per capita to service than any other cities. They have below average proportions of population living outside capital cities.
- Relative to New South Wales and Victoria, all other States have with relatively lower per capita net expenses on urban transport.
- Queensland, Tasmania and the Northern Territory have above average shares of their populations living outside capital cities.

44 Table 10 shows the proportion of State populations living in population centres of various sizes.

Table 10 State and national average population proportions in non-urban and urban areas

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Average
	%	%	%	%	%	%	%	%	%
Urban > 3 million	58	71	0	0	0	0	0	0	36
Urban 1 to 3 million	0	0	44	73	74	0	0	0	22
Urban < 1 million	24	11	34	9	4	64	98	60	22
Non-capital city population	42	28	55	26	26	62	0	52	38

Note: Non-capital city population includes all urban areas outside capital cities, so the columns do not add to 100 %.

Source: Commission calculation using ABS population data.

45 Table 11 provides a summary of the major reasons the assessment moves State GST revenue away from an equal per capita (EPC) distribution.

Table 11 Major reasons for difference from EPC, Transport, illustrative 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Redist
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Urban transport	186	405	-304	2	-54	-136	-30	-69	592
Non-urban transport	49	-95	131	-53	-35	21	-24	5	206
Location	6	-31	-22	46	-5	-5	4	7	64
Total	244	277	-193	-10	-93	-116	-51	-58	520

Source: Commission calculation.

CHANGES SINCE THE 2010 REVIEW

- 47 The category now covers PNFC expenses and revenue as well as general government expenses and revenues.
- 48 We refined the regression model underpinning the urban net expenses assessment by including all cities with population over 20 000 regardless of whether States were funding transport services or not. We have weighted the per capita net expenses for each city by the city's population size. We have also used new data in the regression.
- 49 We have also applied a regional cost assessment to the non-urban expenses.

ATTACHMENT 19

SERVICES TO INDUSTRY

Summary of changes since the 2010 Review

- No discount is applied in this category.
- The assessment now includes a separate assessment of regulatory expenses for the mining industry.
- Vocational education and training expenses previously included in this category are now in Post-secondary education.

WHAT IS INCLUDED IN THE SERVICES TO INDUSTRY CATEGORY?

- 1 The Services to industry category comprises State expenses on the regulation, support and development of businesses and industries as well as other economic affairs. Some spending relates to specific industries including agriculture, forestry, mining, manufacturing, tourism and construction. Other spending relates to all businesses, or consumers.
 - Examples of regulatory functions include business registration, licensing of tradespeople, livestock identification schemes, chemical and pesticide regulation, building codes, energy market regulation, food and health standards, occupational health and safety, consumer protection, mine safety, employment conditions and shop trading hours.
 - Examples of business development activities include geological mapping, tourism promotion, marketing and industry research and development.
- 2 While this category includes expenses related to a number of the regulatory functions performed by States, it does not include all State regulatory expenses. For example, most building approval and environmental protection expenses are included in the Services to communities category.
- 3 Similarly, the business development expenses in this category do not include all State economic development expenses, or all mining related expenditure identified by States. These costs are spread across a number of expense categories including Investment and the revenue categories (for example, through tax and royalty concessions). Net mining industry expenses were \$340 million in 2012-13, of which we estimate about 50% or \$112 million were for mining business development. The

broader issue of mining related expenditure is discussed in the Main Report Chapter 5 — Priority Issues.

- 4 The category no longer includes vocational education and training (VET) expenses attributable to private training organisations. These expenses are included in the Post-secondary education category. This removes about \$1.0 billion from the category in 2012-13.
- 5 User charges for the category were around \$1.5 billion in 2012-13. Mining user charges are offset against mining industry expenses but agricultural and other user charges are not netted off expenses. The reasons for these decisions are discussed in paragraph 36.
- 6 Table 1 shows services to industry expenses (net of mining user charges) were \$5.8 billion in 2012-13. The share of services to industry expenses to State budgets varied from 2.4% in New South Wales to 3.6% in Western Australia. The average was 2.9% for all States.

Table 1 Services to industry category expenses, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Agriculture, forestry, fishing (\$m)	556	417	750	385	172	127	3	54	2 464
Mining, minerals and fuel (\$m)	32	22	122	102	41	5	0	15	340
Other industries (\$m)	919	972	256	411	207	19	126	92	3 002
Total (\$m)	1 507	1 411	1 128	899	420	151	129	161	5 806
Total (\$pc)	205	248	245	363	253	294	342	676	253
Proportion of operating expenses (%)	2.4	3.3	2.7	3.6	2.8	3.2	3.1	3.5	2.9

Note: Expenses are shown net of mining user charges.

Source: Commission calculation using State data.

- 7 Table 2 shows the share of State expenses on services to industry fell from 3.2% in 2009-10 to 2.9% in 2012-13.

Table 2 Services to industry expenses as a proportion of State operating expenses

	2009-10	2010-11	2011-12	2012-13
Total for category (\$m)	5 597	5 803	5 553	5 806
Total operating expenses (\$m)	172 788	181 377	190 502	201 171
Proportion of total operating expenses (%)	3.2	3.2	2.9	2.9

Note: Expenses are shown net of mining user charges.

Source: Commission calculation using ABS Government Finance Statistics (GFS) and State data.

How are services delivered?

- 8 Regulatory expenses account for about 40% of category expenses.¹ There are a number of reasons for regulation including to address sources of market failure, help markets to work efficiently, reduce risks to people's health and safety and protect the environment from overuse or degradation. Many regulations apply directly to businesses (for example, business registration). Others apply indirectly to businesses (for example, environmental protection), or to consumers (for example, consumer protection).
- 9 Business development expenses account for about 60% of category expenses. All States provide assistance to support and develop the industries they have or would like to have. Business development can take many forms including marketing, tourism promotion and industry research and development.
- 10 Services are delivered from a central office location or 'on the ground' where businesses operate. For example, some agriculture and mining regulatory functions require on-site inspections or a regional presence. State provided data for the 2010 Review indicated that about 20% of services are provided outside metropolitan areas.

COMMONWEALTH FUNDING

- 11 The Commonwealth provides funding to States for services to industry programs through national partnership project (NPP) payments. Most expenses funded by the Commonwealth are assessed in the same way as State funded expenses and the actual payment is treated as an offset to the assessed expenses. There are a small number of Commonwealth payments that fund State services to industry expenses which do not have an effect on State fiscal capacities.
- 12 Table 3 details the major Commonwealth payments provided to States for services to industry.

¹ This proportion is based on State provided data for the 2010 Review. We have used the State data to split total category expenses into regulation and business development expenses because GFS are not sufficiently detailed to allow a split of service to industry expenses by broad purpose.

Table 3 Commonwealth payments to States for services to industry, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Caring for our country NPP	35	28	23	24	17	12	1	4	145
Seamless national economy NPP	27	7	17	3	6	2	2	1	64
Other NPPs	8	2	19	8	2	41	0	0	80
Total	70	37	59	35	25	55	3	5	289

Source: Commonwealth of Australia's *Final Budget Outcome, 2012-13*.

- 13 A complete list of Commonwealth payments and their treatment is provided in Appendix 2.
- 14 Apart from payments to the States, the Commonwealth also provides direct assistance to industries. In principle, if these payments affect a State's fiscal capacity by relieving the State of a need to provide assistance they should be included in our assessments. In practice, the interstate distribution of these payments is unknown and it would be difficult to determine how they affect State fiscal capacities. For these reasons, the Commission does not take these third party payments into account in the equalisation process.

CATEGORY STRUCTURE

- 15 The assessment of the Services to industry category is undertaken separately in each of the following components:
 - agriculture regulation
 - mining regulation
 - other industries regulation
 - business development expenses (all industries).
- 16 Table 4 shows the assessment structure for the category, the disabilities that are assessed and the size of each component, using 2012-13 data.

Table 4 **Category structure, Services to industry, 2012-13**

Component	Component expense	Disability	Influences measured by disability
	\$m		
Agriculture regulation	1 220	Economic environment	Recognises the additional cost of providing regulatory services to the agricultural sector is determined by the number of businesses, size of the sector and population.
Mining regulation	227	Economic environment	Recognises the additional cost of providing regulatory services to the mining sector is determined by the number of operating mines, size of the sector and population.
Other industries regulation	881	Economic environment	Recognises the additional costs of providing regulatory services to other industries are determined by the level of activity in the manufacturing and services sectors and population.
Business development	3 478	EPC	Business development expenses for all industries are assessed on an equal per capita (EPC) basis.

Note: The location factor is applied to all components. It recognises differences in wage costs between States and in the cost of providing services to different areas within a State. Regional cost differences only affects 20% of category expenses.

Source: Commission calculation.

Component expenses

- 17 The Commission divides services to industry expenses into four components and their sub-components based on GFS data and State provided data for the 2010 Review.
- 18 Expenses are allocated to components and sub-components in three steps.
 - Total category expenses are allocated to industries using GFS data. We have used three industry groups:
 - agriculture, forestry and fishing²
 - mining
 - other industries.
 - Industry expenses are classified as regulatory or business development expenses based on State provided data.
 - Regulatory expenses for each industry are split into a number of sub-components based on the extent to which the component expenses are affected by:
 - the level of activity for the industry or sector
 - the number of businesses

² Hereafter, referred to simply as agriculture.

- size of the population.

19 The expenses for each component and sub-component for 2012-13 are shown in Table 5.

Table 5 Composition of services to industry expenses, 2012-13

Expense	Agriculture	Mining	Other Industries	Total
	\$m	\$m	\$m	\$m
Regulation				
Size of industry/sector	409	75	157	640
Number of businesses	414	49	313	776
Population	398	103	411	912
Business development (EPC)	1 244	112	2 122	3 478
Total	2 464	340	3 002	5 806

Source: Commission calculation based on State survey results for the 2010 Review and GFS data.

20 Most States had concerns about the reliability of the 2010 Review survey results which have been used to calculate the component and sub-component expenses. South Australia, Tasmania, ACT and the Northern Territory said the Commission should continue to use the survey data. The ACT said a better assessment should be pursued outside the timeframe for this review. New South Wales, Queensland and Western Australia said the survey data are unreliable, subjective and out-of-date, and Queensland said the Commission should pursue a more data driven approach. Given the short timeframe for this review we have decided to continue to use the survey results. We consider the alternative, an EPC assessment of all expenses in the category, would not provide a better equalisation outcome.

REGULATORY EXPENSES

- 21 Regulatory expenses account for about 40% of total category expenses. We have made separate assessments of regulation for agriculture, mining and other industries. The assessments measure the extent to which the component expenses are affected by the level of activity, the number of businesses and size of the population.
- 22 We decided to separately assess regulation for the agricultural industry because it is more heavily regulated than other industries and we observe that States spend disproportionately more on regulation for agriculture to ensure food safety and appropriate environmental protection measures are in place. Agriculture regulation accounted for around 50% of regulatory expenses. We consider a better equalisation outcome would be achieved by separately assessing agricultural regulation.
- 23 We have considered if a separate assessment should be made for mining industry regulation which accounts for around 10% of regulatory expenses. In 2012-13, a

separate assessment for net mining industry regulation is not material, moving \$20 per capita to Western Australia. Nevertheless we have included a separate assessment on the assumption that in aggregate, mining related expenditure assessments across all categories may be material. We will review the materiality of all mining related expenditure assessments for the final report. Most States agreed mining regulation expenses should be separately assessed but some States said the assessment should only be made if it is material. Queensland said the GFS data for the mining industry are unreliable.

Data

- 24 The assessments of regulatory expenses are based on ABS, Geoscience Australia and State data.
- 25 **Level of activity.** The assessment of level of activity for agriculture and other industries is based on factor income estimates, sourced from ABS State accounts. Because factor income includes off-shore oil and gas, we consider it is less appropriate for mining, as we understand the regulatory task for off-shore oil and gas sits primarily with the Commonwealth, rather than the States. We have used value of mining production from the Mining revenue assessment to measure the size of the mining industry.
- 26 **Number of businesses.** Data on the number of agricultural businesses are sourced from the ABS publication *7121.0 Agricultural Commodities Australia*. Data on the number of operating mines are sourced from Geoscience Australia's *Australian Mines Atlas*. There are no reliable business count data for other industries. Population is used to proxy the number of businesses for this other industries.

Calculating the assessed regulatory expenses

- 27 Table 6 shows how assessed expenses have been calculated for agriculture regulation. It recognises differences between States in the number of agricultural establishments, level of agricultural activity and population.

Table 6 Illustrative assessed expenses, agriculture regulation component, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Expenses influenced by number of establishments									
Expense (\$m)									414
Establishments (No.)	43 971	32 529	28 171	12 498	13 861	4 080	70	511	135 691
Establishments (%)	32.4	24.0	20.8	9.2	10.2	3.0	0.1	0.4	100
Assessed (\$m)	134	99	86	38	42	12	0	2	414
Expenses influenced by agricultural activity									
Expense (\$m)									409
Sector size (\$b)	7	8	8	3	5	2	0	0	33
Sector size (%)	21.6	24.3	23.2	9.3	15.0	5.5	0.0	1.1	100
Assessed (\$m)	88	99	95	38	61	22	0	5	409
Expenses influenced by population (\$m)	128	99	80	43	29	9	7	4	398
Total (\$m)	350	297	261	119	132	44	7	10	1 220

Source: Commission calculation.

28 Table 7 shows how assessed expenses have been calculated for mining regulation expenses. It recognises differences between States in the number of operating mines, level of mining activity and population.

Table 7 Illustrative assessed expenses, mining regulation component, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Expenses influenced by number of mines									
Expense (\$m)									49
Operating mines (No.)	89	16	87	205	23	12	0	14	446
Operating mines (%)	20.0	3.6	19.5	46.0	5.2	2.7	0.0	3.1	100
Assessed (\$m)	10	2	10	23	3	1	0	2	49
Expenses influenced by mining activity									
Expense (\$m)									75
Sector size (\$b)	20	2	31	74	5	1	0	2	135
Sector size (%)	14.7	1.1	23.0	55.1	3.8	0.7	0.0	1.5	100
Assessed (\$m)	11	1	17	41	3	1	0	1	75
Expenses influenced by population (\$m)	33	26	21	11	7	2	2	1	103
Total (\$m)	54	28	48	75	13	4	2	4	227

Source: Commission calculation.

29 Table 8 shows how assessed expenses have been calculated for other industry regulation expenses. It recognises differences between States in the level in the economic activity sector and population.

Table 8 Illustrative assessed expenses, other industries regulation component, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Expenses influenced by level of economic activity									
Expense (\$m)									157
Sector size (\$b)	342	246	193	131	64	17	20	12	1 023
Sector size (%)	33.4	24.0	18.9	12.8	6.2	1.6	1.9	1.2	100
Assessed (\$m)	52	38	30	20	10	3	3	2	157
Expenses influenced by population (\$m)									
	232	180	146	78	53	16	12	8	724
Total (\$m)	285	217	175	98	62	19	15	9	881

Source: Commission calculation.

BUSINESS DEVELOPMENT EXPENSES

- 30 Business development expenses for all industries are assessed on an equal per capita (EPC) basis. They account for about 60% of category expenses. We based our estimate of total State spending on business development using data collected from the States for the 2010 Review.
- 31 All States provide assistance to support and develop the industries they have or would like to have. Business development can take many forms including marketing, tourism promotion and industry research and development. We observe that there is no common policy on why States provide support for industries, when it is provided or how it is provided, and there is no agreement on what drives spending in this area. Queensland said mining industry development expenses are different because they are only incurred by States with mineral resources and should be differentially assessed. We consider that all States support industries in a way that reflects their economy. So while States with more mineral resources may provide more developmental support to the mining industry, States with other economic strengths support their industries. Since there are no identifiable drivers of State spending on business development we have assessed these expenses EPC. Because this is a deliberative EPC assessment any Commonwealth payments that fund State business development expenses are assessed so they impact the GST distribution. Most States supported this assessment and said there is no basis for changing the current assessment.
- 32 Table 9 shows assessed business development expenses for all industries. These expenses are assessed EPC.

Table 9 Illustrative assessed expenses, business development expenses, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
EPC (\$m)	1 116	862	700	376	252	78	57	36	3 478

Source: Commission calculation.

Location

- 33 The location assessment recognises differences in wage costs between States. It also recognises differences in the cost of providing services to different areas within a State, but these differences only affect 20% of expenses in this category. The assessments of Wages costs and Regional costs are discussed in Attachments 22 and 23 respectively.
- 34 Most States supported a regional costs assessment, but some did not. Victoria said evidence for such an assessment had not been presented. The 2010 Review survey of expenses indicated that on average about 20% of services to industry were delivered outside metropolitan areas. We consider there is a conceptual case for recognising higher costs for States with more businesses located outside major metropolitan areas. We have decided to apply the regional cost factor to 20% of category expenses. In the absence of any readily available data on the geographic distribution of businesses we have assumed the distribution of people is the best available proxy.
- 35 Table 10 shows the total assessed expenses for the category.

Table 10 Illustrative assessed expenses, Services to industry, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Regulation									
Agriculture (\$m)	350	297	261	119	132	44	7	10	1 220
Mining (\$m)	54	28	48	75	13	4	2	4	227
Other industries (\$m)	285	217	175	98	62	19	15	9	881
Business development (\$m)	1 116	862	700	376	252	78	57	36	3 478
Total (\$m)	1 805	1 405	1 184	669	460	144	81	59	5 806
Location factor	1.003	0.988	0.992	1.034	0.990	0.986	1.021	1.067	1.000
Total (\$m)	1 810	1 388	1 173	691	455	142	83	63	5 806
Total (\$pc)	246	244	254	279	274	278	218	267	253

Source: Commission calculation.

User charges

- 36 User charges for this category were about \$1.5 billion in 2010-11. Where we have reliable data and the drivers of revenue and expenses are the same, user charges are deducted from expenses before making an assessment. Only mining regulation user charges have been deducted from expenses. These charges include mine safety and

inspection levies which fund regulatory services. The capacity of States to raise revenue from mining user charges is affected by the same factors as mining regulation expenses. In reaching this decision we have assumed mine safety levies account for the majority of mining user charges.

- 37 We have not netted off user charges for agriculture which account for about one third of the revenue in the category. They include agricultural levies to fund research and development (R&D), marketing and promotion, plant and animal health programs and other activities that benefit the industry. Most of the activities funded by agricultural levies are related to business development, which are assessed EPC. The current EPC assessment of agricultural levies in the Other revenue category is consistent with the treatment of the expenses they fund. It is simpler to leave them in the Other revenue category. We have assumed agricultural levies account for the majority of agriculture user charges.
- 38 User charges for other industries in the category are significant (50% of the total) but we have not deducted them from expenses because we consider they primarily relate to expenses which are assessed EPC. As with agriculture, it is simpler to leave these expenses in the Other revenue category.

BRINGING THE ASSESSMENT TOGETHER

- 39 Table 11 brings the assessed expenses for each component together to derive the total assessed expenses per capita for each State for the category.

Table 11 Illustrative category assessment, Services to industry, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Average
	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc
Regulation of agriculture									
Equal per capita	53	53	53	53	53	53	53	53	53
Size of sector	-6	0	3	-2	19	26	-18	1	0
No. of businesses	0	-1	1	-3	7	6	-17	-12	0
Population	0	0	0	0	0	0	0	0	0
Location	0	-1	0	2	-1	-1	1	4	0
Total	48	52	57	48	80	85	18	43	53
Regulation of mining									
Equal per capita	10	10	10	10	10	10	10	10	10
Size of sector	-2	-3	0	13	-2	-2	-3	2	0
No. of businesses	-1	-2	0	7	-1	0	-2	4	0
Population	0	0	0	0	0	0	0	0	0
Location	0	0	0	0	0	0	0	1	0
Total	7	5	10	30	8	8	4	16	10
Regulation of other industries									
Equal per capita	38	38	38	38	38	38	38	38	38
Size of sector	0	0	0	1	-1	-2	1	1	0
No. of businesses (EPC)	0	0	0	0	0	0	0	0	0
Population	0	0	0	0	0	0	0	0	0
Location	0	0	0	1	0	-1	1	3	0
Total	39	38	38	40	37	37	40	39	38
Business development (EPC)									
Equal per capita	152	152	152	152	152	152	152	152	152
Location	0	-2	-1	5	-2	-2	3	10	0
Total	152	150	150	157	150	150	155	162	152
Category total	246	244	254	279	274	278	218	267	253

Source: Commission calculation.

Alternative presentation

- 40 Table 12 provides an alternative presentation using a factor approach. The table shows for each disability how the expenses per capita in each component and in total are affected by differences in State characteristics. Disability factors below one indicate a State is assessed to need to spend less than average. Disability factors above one indicate a State is assessed to need to spend more than average.

Table 12 Illustrative category factors, Services to industry, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Average
Agriculture regulation (component weight = 21%)									
Economic environment	0.894	0.981	1.062	0.904	1.495	1.604	0.340	0.809	1.000
Location	1.003	0.988	0.992	1.034	0.990	0.986	1.021	1.067	1.000
Component factor	0.898	0.971	1.054	0.936	1.482	1.584	0.347	0.864	1.000
A. Weighted factor	0.979	0.994	1.011	0.987	1.101	1.123	0.863	0.972	1.000
Mining regulation (component weight = 4%)									
Economic environment	0.739	0.499	1.040	3.057	0.781	0.817	0.453	1.600	1.000
Location	1.003	0.988	0.992	1.034	0.990	0.986	1.021	1.067	1.000
Component factor	0.735	0.489	1.022	3.132	0.766	0.799	0.458	1.692	1.000
B. Weighted factor	0.990	0.980	1.001	1.083	0.991	0.992	0.979	1.027	1.000
Other industries regulation (component weight = 15%)									
Economic environment	1.007	0.994	0.989	1.033	0.975	0.951	1.031	1.021	1.000
Location	1.003	0.988	0.992	1.034	0.990	0.986	1.021	1.067	1.000
Component factor	1.010	0.982	0.980	1.068	0.965	0.938	1.052	1.089	1.000
C. Weighted factor	1.002	0.997	0.997	1.010	0.995	0.991	1.008	1.014	1.000
Business development (component weight = 60%)									
Economic environment	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Location	1.003	0.988	0.992	1.034	0.990	0.986	1.021	1.067	1.000
Component factor	1.003	0.988	0.992	1.034	0.990	0.986	1.021	1.067	1.000
D. Weighted factor	1.002	0.993	0.995	1.020	0.994	0.992	1.013	1.040	1.000
Category factor	0.972	0.964	1.004	1.101	1.081	1.097	0.862	1.052	1.000

Source: Commission calculation.

WHAT IS THE IMPACT ON THE GST DISTRIBUTION?

- 41 Table 13 shows the extent to which the assessment for this category moves the distribution of the GST away from an equal per capita distribution. It shows that GST revenue is redistributed to Queensland, Western Australia, South Australia, Tasmania and the Northern Territory and away from New South Wales, Victoria and the ACT.

Table 13 Illustrative GST impact, Services to industry, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Dollars million	-53	-52	5	63	34	13	-13	3	118
Dollars per capita	-7	-9	1	25	20	25	-35	13	5

Source: Commission calculation.

- 42 The main reasons for these redistributions are the differences between States in the level of activity in different industries which affect State regulatory activities along with differences between States in the wage costs.

- 43 Some of the main reasons for the redistributions for each State are:
- For New South Wales, Victoria and the ACT, the below average need for spending is due to their relatively small agricultural and mining industries.
 - For Queensland, its above average costs for regulating the agricultural industry are almost offset by its lower wage costs. While it has a below average share of operating mines, its share of mining value of production means that there is a small redistribution towards Queensland for mining regulation.
 - For Western Australia and the Northern Territory, the above average need for spending is due to the high level of economic activity in the non-farm sector and high wage costs.
 - For South Australia and Tasmania, the above average need for spending is largely the result of above average costs for regulating the agriculture industry.
- 44 Table 14 provides a summary of the major reasons the assessment moves State GST revenue away from an equal per capita distribution.

Table 14 Major reasons for differences from EPC, Services to industry, illustrative, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Agriculture regulation	-42	-6	15	-13	44	16	-13	-2	75
Mining regulation	-19	-28	2	51	-4	-1	-2	1	54
Other industries regulation	2	-1	-2	3	-2	-1	0	0	6
Location	6	-17	-10	21	-4	-2	2	4	33
Total	-53	-52	5	63	34	13	-13	3	118

Source: Commission calculation.

CHANGES SINCE THE 2010 REVIEW

Discounting

- 45 In the 2010 Review, the Commission decided to apply a 12.5% discount to the expense weights used in the assessment due to concerns about the reliability of the data provided by the States. In consultation for this review, South Australia, Tasmania, the ACT and the Northern Territory said the Commission should maintain the 12.5% discount. New South Wales and Victoria argued the discount should be increased.
- 46 In this review there has not been sufficient time to revisit the 2010 Review survey or consider other approaches for disaggregating category expenses. The issue was identified by only one State as a priority issue in the Data Working Party process, and therefore, was not progressed.

- 47 The Commission remains concerned about the quality of the survey data used to calculate component and sub-component expenses but in keeping with the Commission's decision not to discount estimates of total national expenditure, we have removed the discount. We consider the survey provides the best available data for disaggregating category expenses.

Other changes

- 48 There are three other category-specific changes since the 2010 Review.
- We have recognised State spending on mining regulation net of user charges.
 - A regional cost factor has been applied to 20% of service expenses in the category.
 - VET expenses previously recorded in this category have been removed. They are assessed in the Post-secondary education category.

ATTACHMENT 20

OTHER EXPENSES

Summary of changes since the 2010 Review

- The impact of cultural and linguistic diversity (CALD) on State expenses is no longer assessed.
- Administrative scale, native title and land rights and some National capital assessments have been relocated from other categories.

WHAT IS INCLUDED IN THE OTHER EXPENSES CATEGORY?

- 1 The Other expenses category comprises services and transactions not separately assessed in other expense categories. It includes:
 - general public services — centrally provided services, including State legislatures and central administrative agencies that support State service delivery agencies and supervision of local government, general research and other administrative functions including GST administration
 - other services not assessed elsewhere — expenses for recreation and culture (such as libraries, public halls, art and sport facilities, national parks), public safety services other than those provided by police services (such as emergency services and fire protection), natural disaster relief, communications and pipelines
 - sundry purposes and transactions — public debt transactions (debt charges and interest charges on unfunded superannuation) and general purpose inter-government transactions (grants, advances or other inter-government transactions that cannot be allocated to purposes).
- 2 Associated user charges are included in the Other revenue category and assessed equal per capita (EPC) because we consider the drivers of user charges are not the same as the drivers of use of the related services. In this way, gross expense needs relating to the services in this category can be assessed.
- 3 In addition, we have included in this category:
 - all administrative scale expenses
 - all native title and land rights expenses

- national capital expenses, except those relating to police.
- 4 The quantum of these expenses and their redistributive impact by category are shown in Attachment 25 - Administrative scale and Attachment 28 – Other disabilities.
- 5 Table 1 shows Other expenses were \$25.3 billion in 2012–13.

Table 1 Other expenses category expenses, 2012–13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Category expenses (\$m)	10 418	1 404	5 864	2 479	1 817	1 012	1 372	886	25 252
Category expenses (\$pc)	1 416	247	1 271	1 000	1 093	1 976	3 630	3 723	1 102
Proportion of operating expenses (%)	16.7	3.2	13.8	10.0	12.2	21.4	32.4	19.2	12.6

Source: Commission calculation using State data.

- 6 Table 2 shows the share of State expenses on Other expenses remained stable at around 13% between 2009–10 to 2012–13.

Table 2 Other expenses as a proportion of State operating expenses

	2009-10	2010-11	2011-12	2012-13
Total for category (\$m)	23 507	23 885	25 645	25 252
Total operating expenses (\$m)	172 788	181 377	190 502	201 171
Proportion of total operating expenses (%)	13.6	13.2	13.5	12.6

Source: Commission calculation using ABS Government Finance Statistics (GFS) data and State data.

How are services delivered?

- 7 The diversity of services in this category means there is also a diverse range of service delivery processes. Large proportions of the legislative and general administrative services and some cultural and recreation services are delivered through major agencies and institutions located in metropolitan areas. Many cultural, recreational and public safety services are provided closer to where people live through State funding for local and community organisations or a network of State service delivery units. National parks expenses may be incurred in any part of a State with environmental or recreational value.

COMMONWEALTH FUNDING

- 8 The Commonwealth provides funding to States to assist them in meeting their expenses. Most Commonwealth payments in the Other expenses category do not impact on the relativities. Some, like the general purpose assistance grants for local governments, are paid to third parties and needs are not assessed. Commonwealth

natural disaster relief payments to the States under the Natural Disaster Relief and Recovery Arrangements (NDRRA) are also treated as having no impact on the relativities. They are netted off State expenses claimed under the NDRRA.

- 9 Other payments, like the digital regions initiative, do impact on the relativities as they fund State services or assets. The expenses funded by these payments are assessed in the same way as State funded expenses and the actual revenue is treated as an offset to the assessed expenses.
- 10 Table 3 details the major Commonwealth payments provided to States for other expenses.

Table 3 Major Commonwealth payments to States for other expenses, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Local government - General purpose assistance	492	378	306	162	112	35	25	16	1 526
Natural disaster recovery and rebuilding	12	280	300	53	0	7	0	0	653
Natural disaster resilience program	7	4	3	2	2	4	1	1	24
ACT municipal services	0	0	0	0	0	0	37	0	37
Digital regions initiative	4	1	2	0	1	2	0	1	12
Other	0	0	-2	1	0	0	6	2	7
Total	515	663	608	218	115	48	69	20	2 258

Source: Commonwealth of Australia's *Final Budget Outcome, 2012-13*.

- 11 A complete list of Commonwealth payments and their treatment is provided in Appendix 2.

CATEGORY STRUCTURE

- 12 The assessment of the Other expenses category is in two components:
 - service expenses, which cover the bulk of the category
 - other expenses, which cover administrative scale, national capital, native title and land rights, and natural disaster relief expenses.
- 13 Table 4 shows the assessment structure for the category, the disabilities that are assessed and the size of each component, using 2012–13 data.

Table 4 **Category structure, Other expenses, 2012-13**

Component	Component expense	Disability	Influence measured by disability
	\$m		
Service expenses	21 459	Share of population, cross-border and location	Recognises States' population shares, the cost of providing labour resources between States and to different areas within a State, and the cost to the ACT of providing services to people who are New South Wales residents.
Other expenses	1 928	Administrative scale	Recognises the unavoidable costs each State incurs to provide the policy and administrative infrastructure necessary to provide the minimum unavoidable service, regardless of the size of the task.
	20	National capital	Recognises the costs to the ACT due to Canberra's status as the national capital and seat of government.
	152	Native title and land rights	Recognises State costs of settling native title and land rights claims made under Australian Government legislation.
	1 693	Natural disaster relief	Recognises State costs of natural disaster relief. These are claims made under the Australian Government's natural disaster relief arrangements. Australian Government assistance is not included.

Source: Commission calculation.

SERVICE EXPENSES

- 14 We consider the need for services covered by this category largely reflects State populations. There are only two reasons States need to spend more than an equal per capita amount on these services:
- expenses on general public services, public safety, culture and recreation, national parks and wildlife services, pipeline and communication expenses are affected by wage and regional cost differences
 - expenses on the ACT library, sportsgrounds and other cultural and recreational services are increased because of cross-border use by New South Wales residents.
- 15 We have, therefore, recognised three cost influences: State population shares, cross-border and location.
- 16 We do not consider the cost of providing services and transactions such as general public services and administrative functions, public safety, culture and recreation, and public debt transactions, are influenced by particular population groups or that unit costs differ materially between States. Therefore we have adopted State population shares as the major driver.

- 17 Cross-border disabilities reflect the nature and geography of the ACT. Being a large centre surrounded by New South Wales means that the ACT provides cultural and recreational services to New South Wales residents, such as library services. The method used to calculate the general cross-border factor is described in Attachment 28 - Other disabilities, Cross-border.
- 18 We have recognised the differences in wage costs between States in this assessment. These influences are measured in a similar way for most categories. The assessment of wage differences is discussed in Attachment 22 – Wage costs.
- 19 We consider that the costs of providing many of the services in this category increase with increasing remoteness. Therefore we have recognised the costs of providing these services to different areas within a State in this assessment. These influences are measured in a similar way for categories where they apply. The assessment of regional costs is discussed in Attachment 23 – Regional costs.

Calculating the service expenses assessment

- 20 The assessed service delivery expenses for each State were derived by:
 - sharing aggregate service delivery expenses between States on the basis of their population shares (EPC)
 - applying a cross-border factor to the proportion of service expenses relating to culture and recreation
 - applying a regional location factor
 - adjusting for wage cost disabilities.
- 21 The proportions of expenses to which the cross-border and regional location factors apply were calculated using the average expenses for the assessment years, on a rolling basis. The resulting proportions are shown in Table 5.

Table 5 Proportion of service expenses to which cross-border and regional disabilities apply

Year	Cross-border	Regional location
	%	%
2010–11	13.2	46.0
2011–12	13.4	45.1
2012–13	11.4	46.1
Average	12.7	45.7

Source: Commission calculations.

- 22 The cross-border disabilities have been applied to expenses related to culture and recreation, which include expenses on libraries, swimming pools, public halls, civic centres, museums and art galleries. This amounted to 13% of service expenses on

average over the period 2010–11 to 2012–13, and the cross-border factor is applied to this proportion (Table 5).

- 23 Regional cost disabilities have been applied to expenses relating to public safety, culture and recreation, national parks and wildlife, pipelines and communications, and half of the expenses for general public services, intergovernmental transactions and other purposes. This amounted to 46% of service expenses on average over the period 2010–11 to 2012–13, and the regional cost factor is applied to this proportion (Table 5).

- 24 Table 6 shows the total assessed expenses.

Table 6 Illustrative assessed expenses, service expenses component, 2012–13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
EPC expenses (\$m)	6 887	5 321	4 319	2 320	1 556	480	354	223	21 459
Cross-border factor	0.999	1.000	1.000	1.000	1.000	1.000	1.011	1.000	1.000
Location factor	1.000	0.990	0.997	1.022	0.994	1.004	1.005	1.090	1.000
Total (\$m)	6 881	5 268	4 307	2 372	1 547	482	360	243	21 459
Total (\$pc)	935	927	934	957	931	940	951	1 021	936

Source: Commission calculation.

OTHER EXPENSES

- 25 The other expenses component includes administrative scale expenses, national capital expenses for the ACT, native title and land rights expenses and natural disaster relief expenses (net of Commonwealth payments).¹
- 26 Administrative scale includes minimum fixed costs associated with head office functions and services provided for the whole of the State. The assessed administrative scale expenses for each category are shown in Table 7. The assessment of administrative scale is described in attachment 25 — Administrative scale.

¹ Average expenses have been reduced in the functional categories to which these expenses relate. They have been added to the expenses included in this category.

Table 7 Illustrative assessed administrative scale expenses, by category, 2012–13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Schools education	16	16	16	17	16	16	17	18	133
Post-secondary education	9	9	9	9	9	8	9	10	70
Health	22	22	22	23	22	21	23	25	180
Welfare	9	9	9	9	9	8	9	11	72
Housing	9	9	9	9	9	8	9	11	72
Services to communities	4	4	4	4	4	4	3	4	30
Justice	24	23	23	25	23	23	25	25	192
Roads	4	4	4	5	4	4	5	5	36
Transport	4	4	4	4	4	4	3	4	32
Services to industry	25	24	24	26	24	24	17	26	191
Other expenses	115	112	112	120	112	110	119	121	921
Total	241	235	236	251	235	231	238	260	1 928

Source: Commission calculations.

27 National capital expenses are incurred by the ACT due to its role as the national capital. Specifically, we consider the existence of the National Capital Plan, which is not administered by the ACT Government, increases planning related costs incurred by the ACT (for example, it leads to a higher ratio of public to private land). National capital costs associated with wider roads are also included. The assessed national capital expenses are shown in Table 8.

28 The assessment of national capital influences is described in Attachment 28 — Other disabilities.

Table 8 Illustrative assessed national capital expenses, by category, 2012–13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Roads	0	0	0	0	0	0	4	0	4
Other expenses	0	0	0	0	0	0	16	0	16
Total	0	0	0	0	0	0	20	0	20

Source: Commission calculations.

29 Native title and land rights expenses are related to the operation of the Commonwealth's native title and land rights legislation. The assessed native title and land rights expenses for each category are shown in

30 Table 9. The assessment of native title and land rights expenses is described in Attachment 28 — Other disabilities.

Table 9 Illustrative assessed native title and land rights expenses, by category, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Housing	0	0	0	1	0	0	0	3	4
Services to communities	0	0	0	7	0	0	0	4	12
Justice	0	4	0	23	2	0	0	4	33
Roads	0	0	1	0	0	0	0	2	3
Services to industry	0	0	6	8	0	0	0	3	17
Other expenses	7	3	21	28	10	0	0	15	83
Total	7	6	28	68	12	0	0	31	152

Source: Commission calculations.

Natural disasters

- 31 We have assessed natural disaster relief expenses on an actual per capita (APC) basis because we consider that the State expense data are sufficiently comparable to make a reliable assessment. Further, we expect the comparability of the data to improve over the coming years. Most States supported an APC assessment.
- 32 Natural disaster relief expenses reflect the net cost to States of damage caused by natural disasters after making claims to the Commonwealth under the Natural Disaster Relief and Recovery Arrangements (NDRRA). A common framework has been established by the Commonwealth for claims and State expenses are reported under this framework.
- 33 Given the existence of the common framework, differences between the States in their per capita expenses are not subject to significant policy differences and can be attributed to the effect of factors beyond the control of individual States. The framework has been further strengthened by the 2012 Determination, which requires stronger mitigation efforts, appropriate insurance and audited claims to be submitted in a timely manner.
- 34 The Determination should therefore make State expenses more comparable and help us to avoid large revisions and the situation of the past where some States have held over from submitting NDRRA claims for several years, pending auditing.

Insurance arrangements

- 35 Under the NDDRA, States are expected to insure public assets. The Commission adds the insurance premiums to the net expenses on natural disaster relief and assesses them APC because we consider the size of the premiums are mainly influenced by the quantity of assets covered and the risks of natural disaster. Insurance receipts are subtracted from the net expenses.

- 36 A review of State insurance arrangements undertaken by the then Commonwealth Department of Finance and Deregulation (DoFD) under the 2011 Determination found that Tasmania and the Northern Territory did not have adequate insurance. In addition, only Victoria and the ACT had insurance cover for road assets. But in this case, the review concluded that the non-insurance of road assets may reflect the lack of cost effectiveness and the high risk exposure of road assets in non-insured States. Victoria and the ACT are not out-of-pocket for the insurance costs they face because the premiums they pay are included in the expenses covered by the assessment.
- 37 The main HFE implication of the lack of insurance by Tasmania and the Northern Territory is that, following a natural disaster, their expenses covered by the Commission's assessment may be higher than they would have otherwise been if they had had insurance. However, this would be partly offset by insurance premiums not being included in Tasmania and the Northern Territory's natural disaster relief expenses.
- 38 We considered whether we should add notional annual insurance premiums and net off a notional insurance payout for each State. However, we cannot estimate premiums using the average premiums of other States because differences in risk should affect the premiums of different States. Nor can we estimate payments of claims. They would depend on the nature of the insurance selected. In any case, no State has received an insurance payout in the last three years and Tasmania and the Northern Territory would have been unlikely to receive a payout in recent years because expenses on restoration or replacement of public assets were relatively small.
- 39 We do not consider we could estimate premiums or payouts reliably, and have elected not to do so. In practice, based on recent natural disaster history, we consider the impact would likely be small.

Revisions

- 40 While revisions to natural disaster relief expenses are usually not a significant problem, there were large revisions to expenses by Queensland and Victoria in connection with their 2010-11 natural disasters. The Commission made adjustments to ensure there was no double counting of these two States' expenses over time. In this review and the following updates, we will monitor the size of the revisions of State expenses and make adjustments when the revisions are material. As noted above, changes to the Determination should make such revisions less likely.

Bringing the other expenses component together

Table 10 Illustrative assessed expenses, other expenses component, 2012–13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Administrative scale (\$m)	241	235	236	251	235	231	238	260	1 928
National capital (\$m)	0	0	0	0	0	0	20	0	20
Native title and land rights (\$m)	7	6	28	68	12	0	0	31	152
Natural disasters (\$m)	456	430	662	91	14	24	8	7	1 693
Total (\$m)	704	672	926	410	261	255	267	298	3 793
Total (\$pc)	96	118	201	165	157	498	705	1 250	165

Source: Commission calculation.

BRINGING THE ASSESSMENT TOGETHER

41 Table 11 brings the assessed expenses for each component together to derive the total assessed expenses for each State for the category.

Table 11 Illustrative category assessment, Other expenses, 2012–13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc
Service expenses									
Equal per capita	936	936	936	936	936	936	936	936	936
Cross-border	-1	0	0	0	0	0	10	0	0
Location	0	-9	-3	21	-5	4	5	84	0
Total	935	927	934	957	931	940	951	1 021	936
Other expenses									
Equal per capita	165	165	165	165	165	165	165	165	165
Administrative scale	-51	-43	-33	17	57	367	546	1 008	0
National capital	-1	-1	-1	-1	-1	-1	52	-1	0
Native title and land rights	-6	-5	0	21	1	-7	-7	123	0
Natural disasters	-12	2	70	-37	-65	-27	-52	-46	0
Total	96	118	201	165	157	498	705	1 250	165
Category total	1 031	1 045	1 134	1 123	1 088	1 438	1 656	2 271	1 102

Note: Component disabilities may not add due to interactions.

Source: Commission calculation.

Alternative presentation

42 Table 12 provides an alternative presentation using a factor approach. The table shows for each disability how the expenses per capita in each component and in total are affected by differences in State characteristics. Disability factors below one

indicate a State is assessed to need to spend less than average. Disability factors above one indicate a State is assessed to need to spend more than average.

Table 12 Illustrative category factor, Other expenses, 2012–13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Average
Service expenses (component weight = 85%)									
Cross-border	0.999	1.000	1.000	1.000	1.000	1.000	1.011	1.000	1.000
Location	1.000	0.990	0.997	1.022	0.994	1.004	1.005	1.090	1.000
Component factor	0.999	0.990	0.997	1.022	0.994	1.004	1.016	1.090	1.000
A. Weighted factor	0.999	0.991	0.998	1.019	0.995	1.004	1.013	1.077	1.000
Other expenses (component weight = 15%)									
Administrative scale	0.389	0.492	0.607	1.205	1.683	5.369	7.491	12.984	1.000
Natural disaster relief	0.839	1.025	1.945	0.499	0.113	0.632	0.299	0.379	1.000
National capital	0.000	0.000	0.000	0.000	0.000	0.000	60.636	0.000	1.000
Native title and land rights	0.138	0.171	0.929	4.113	1.084	0.000	0.000	19.568	1.000
Component factor	0.578	0.715	1.214	1.000	0.950	3.011	4.261	7.554	1.000
B. Weighted factor	0.937	0.957	1.032	1.000	0.992	1.302	1.490	1.984	1.000
Category factor	0.936	0.949	1.030	1.019	0.988	1.306	1.503	2.061	1.000

Source: Commission calculation.

Influences not assessed in this category

National parks and wildlife services

- 43 We have investigated an assessment of National parks and wildlife expenses, which was supported by Western Australia and the ACT.
- 44 We found that, despite national guidelines on the establishment of designated protected areas, significant differences remain between the States in numbers and areas protected. The historical development of protected areas will continue to mean that some States will have considerably larger proportions of their jurisdictions protected. While it is difficult to attribute all these differences to State policies, undoubtedly, these have had a major impact. The Commonwealth also has had a major influence on the size of areas protected, particularly in Tasmania and the ACT.
- 45 We do not think it is possible to develop a reliable assessment of national parks and wildlife services needs given the uncertainties surrounding the policy influences on the number and size of national parks and the difficulty in obtaining reliable data to measure relative cost influences. Therefore, national parks are assessed using State population, applying wage costs and regional costs effects.

Cost of borrowing

- 46 We have not made allowances for the impact on public debt transactions of interstate differences in the cost of borrowing. We acknowledge States may face different borrowing costs but they are affected by several things, especially their credit ratings, which are often policy influenced and do not constitute grounds for assessing disabilities.
- 47 The Northern Territory said its borrowing costs were 31 basis points higher than triple A rated States in 2012-13. It attributed that premium to the lower liquidity of its bonds and its lower credit rating, which it said was largely due to non-policy factors such as the narrowness of its economy and its relatively high debt arising from its early stage of development.
- 48 Informal advice from the Reserve Bank during this review indicates interstate differences in interest rates on securities of similar terms are predominantly driven by differences in credit ratings. The effects of State size were considered to be small.
- 49 Since the Northern Territory has been self-governing for over 30 years, a stage of development disability cannot be justified. Furthermore, sensitivity testing indicates a margin of over 45 basis points is required before a cost of borrowing factor would be material if outstanding borrowing remained at the 2011-12 level. If borrowing doubled, a 23 point margin is required.

WHAT IS THE IMPACT ON THE GST DISTRIBUTION?

- 50 Table 13 shows the extent to which the assessment for this category moves the distribution of the GST away from an equal per capita distribution. It shows that GST revenue is redistributed to Queensland, Western Australia, Tasmania, the ACT and the Northern Territory, and away from New South Wales, Victoria and South Australia.

Table 13 Illustrative GST impact, Other expenses, 2012–13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Redist
Dollars million	-520	-322	151	52	-23	173	210	278	864
Dollars per capita	-71	-57	33	21	-14	337	554	1 169	38

Source: Commission calculation.

- 51 The main reasons for these redistributions are the differences between States in their expenses on administrative scale, natural disasters, native title and land rights, and location.
- 52 Some of the main reasons for the redistributions for each State are:

- New South Wales, Victoria and Queensland have below average needs for administrative scale expenses. Other States have above average needs.
- Queensland has above average needs for natural disaster relief expenses, and Victoria has average needs. Other States have below average needs.
- Western Australia, Tasmania, the ACT and the Northern Territory have above average needs due to differences in wage costs between States and in the cost of providing services to different areas within a State. Other States have below average needs.
- The Northern Territory, Western Australia and South Australia have above average native title and land rights expense needs. Other States have below average expense needs.
- The ACT has above average expense needs due to its status as the national capital.

53 Table 14 provides a summary of the main reasons the assessment moves State GST revenue away from an equal per capita distribution.

Table 14 Major reasons for differences from EPC, Other expenses, illustrative, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Redist
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Cross-border	-4	0	0	0	0	0	4	0	4
Location	-2	-53	-12	52	-9	2	2	20	76
Administrative scale	-378	-243	-152	43	96	188	206	240	773
National capital	-6	-5	-4	-2	-1	0	20	0	20
Native title and land rights	-42	-31	-2	51	1	-3	-3	29	81
Natural disasters	-87	11	322	-92	-109	-14	-20	-11	332
Total	-520	-322	151	52	-23	173	210	278	864

Source: Commission calculation.

CHANGES SINCE THE 2010 REVIEW

- 54 There are a number of minor category-specific changes associated with this category since the 2010 Review, mainly presentational.
- All administrative scale and native title and land rights expenses are now included in the category.
 - The roads component of the national capital assessment is now included in this category.
 - Miscellaneous expenses, which is a balancing item, is not included in this category.

- CALD related expenses are no longer assessed. This issue is further discussed in Attachment 28 - Other disabilities.

ATTACHMENT 21

INFRASTRUCTURE ASSESSMENTS

Summary of changes since the 2010 Review

- Infrastructure used in providing urban transport and housing services is included in the general government infrastructure stocks.
- The quantity of infrastructure stock disabilities are calculated by combining the factors affecting the use of each service using the average proportion of infrastructure devoted to the service.
- Factors affecting recurrent service use but which do not affect infrastructure requirements are explicitly excluded from the infrastructure calculations and the 12.5% discount has been deleted.
- Capital cost disabilities are measured by reference to construction cost indices, discounted by 50% for roads and urban transport and 25% for other services.

WHAT IS IN THE INFRASTRUCTURE ASSESSMENTS?

- 1 The infrastructure assessments allow for the impact on State fiscal capacities of the infrastructure (buildings, roads, equipment) States need to provide services. They cover the total capital expenditure of the State general government sector on non-financial assets which consists of:
 - depreciation to recognise the use of existing infrastructure during the year
 - investment in the acquisition of extra or upgraded infrastructure. Investment is defined as gross capital expenditure less depreciation.¹
- 2 The Commission has decided to treat the activities of State owned housing and urban transport corporations as if they are general government sector activities. Consequently, investment and depreciation relating to those activities is in the assessments. Expenditure by other State public non-financial corporations (PNFCs), such as those providing water, ports and electricity, is not included.

¹ Investment is equivalent to 'net acquisition of non-financial assets' in the ABS Government Finance Statistics operating statement. It is defined as gross fixed capital formation less depreciation plus changes in inventories plus other transactions in non-financial assets.

- 3 Table 1 shows infrastructure expenditure was \$26.3 billion in 2012-13. The share of total outlays devoted to investment varied from 1.8% in South Australia to 16.6% in the ACT. The average was 12.2% for all States.

Table 1 Infrastructure expenditure, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Investment (\$m)	3 608	4 985	3 282	2 587	-264	-103	414	280	14 790
Depreciation (\$m)	3 820	2 412	2 732	1 238	531	220	357	197	11 508
Total (\$m)	7 428	7 398	6 014	3 825	267	118	771	477	26 298
Total (\$pc)	1 010	1 302	1 304	1 543	161	230	2 040	2 004	1 147
Share of total outlays (%)	11.3	15.3	13.1	14.0	1.8	2.5	16.6	9.8	12.2

Source: Commission calculation using State data.

- 4 Table 2 shows the share of State total outlays directed to investment and depreciation fell from 16.5% in 2010-11 to 12.2% in 2012-13, primarily because investment fell by almost 40% (or \$9.2 billion).

Table 2 Infrastructure expenditure as a proportion of total State outlays (a)

	2009-10	2010-11	2011-12	2012-13
Investment (\$m)	20 530	24 013	17 887	14 790
Depreciation (\$m)	9 607	9 972	10 433	11 508
Total (\$m)	30 137	33 985	28 319	26 298
Total outlays (\$m)	193 318	205 390	208 389	215 960
Proportion of total outlays (%)	15.6	16.5	13.6	12.2

(a) State total outlays are the sum of total operating expenses and investment.

Source: Commission calculation using ABS GFS data and State data.

COMMONWEALTH FUNDING

- 5 The provision of infrastructure may be funded from State own source revenue, the GST and Commonwealth payments.
- 6 Most Commonwealth payments for infrastructure affect State fiscal capacities. Those which do not affect fiscal capacities include those the terms of reference direct us to exclude (such as the payments for the Centenary of Canberra celebrations and the Macquarie Point Rail yards remediation project) and those on-passed to local government for local functions for which needs are not assessed. Infrastructure spending funded by Commonwealth payments which affect the relativities is assessed together with that funded from State sources. Revenue from those payments is treated as being available to fund State needs and partly offsets assessed expenditure.

- 7 Commonwealth payments for infrastructure are often lumpy and can involve large projects. The funding is mainly provided through the National Partnerships on the Nation Building Program and the Building Australia Fund. In 2009-10, 59% of State investment was funded by Commonwealth payments but the percentage fell to 22% in 2012-13. Table 3 shows the major Commonwealth payments for infrastructure.

Table 3 Commonwealth payments to States for infrastructure, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Nation building program	544	133	313	245	45	39	0	46	1 366
Building Australia Fund	323	622	0	0	13	0	23	0	982
Other programs	225	134	376	94	88	39	21	18	995
Total	1 093	890	689	340	146	78	44	64	3 342

Source: Commonwealth of Australia's *Final Budget Outcome, 2012-13*.

- 8 A complete list of Commonwealth payments and their treatment is in Appendix 2 — Treatment of Commonwealth Payments.

CATEGORY STRUCTURE

- 9 The infrastructure assessment is in two parts:
- investment, which is sub-divided into roads, urban transport, other services and land
 - depreciation expenses.
- 10 Table 4 shows the assessment structure, the disabilities assessed and the size of each component, using 2012-13 data.
- 11 Some States argued there is double counting over time between the investment and depreciation assessments because investment fully covers new infrastructure when it is acquired and depreciation covers it again as it is used up.
- 12 We consider those arguments overlook the role of depreciation in replacing assets. We are convinced there is no double counting of expenditure or disabilities.
- Investment increases asset stocks through the acquisition of extra or upgraded assets and depreciation reflects the use or replacement of existing assets. Together they sum to total annual expenditure on non-financial assets. Omitting one or other of them would omit part of infrastructure spending.
 - Investment is affected by factors which change the level of infrastructure required — population growth, other changes in State circumstances and changes in the average capital stock per capita. Depreciation, however, is driven by the size of the capital stock at a point of time and the expected useful life of assets, as reflected in the average depreciation rate.

Table 4 Assessment structure, Infrastructure, 2012-13

Component	Expense	Disability	Influence measured by disability
		\$m	
Investment			
Roads	6 880	Capital stock	Recognises the impact of road length, road use and bridges on the need for road infrastructure.
		Population growth	Recognises the impact of differences between States in population growth on the need for road infrastructure.
		National needs	Recognises the impact of national growth and efficiency issues on the need to invest in national network roads.
		Capital cost	Recognises the impact of differences between States in the cost of constructing roads.
Urban transport	4 854	Capital stock	Recognises the impact of city size on the need for urban transport infrastructure.
		Population growth	Recognises the impact of differences in population growth on the need for urban transport infrastructure.
		Capital cost	Recognises the impact of differences between States in the cost of constructing transport infrastructure.
Other services	2 914	Capital stock	Recognises the impact of service use on the need for infrastructure.
		Population growth	Recognises the impact of differences between States in population growth on the need for infrastructure.
		Capital cost	Recognises the impact of differences between States in the cost of infrastructure.
Land	142	Equal per capita	No interstate differences in factors affecting spending on land and other non-produced assets are recognised.
Depreciation			
	11 508	Capital stock	Recognises the impact of differences in the quantity of infrastructure needed to provide services.
		Capital cost	Recognises the impact of differences between States in the cost of infrastructure.

Source: Commission calculation.

- 13 Some States suggested a gross capital spending assessment may overcome the perceptions of double counting. A gross approach could be done in several ways. Gross approaches would not sub-divide capital spending into its replacement and investment components, making it clear there is no double counting. However, they involve other sub-divisions which reflect the underlying reasons for the spending. Those sub-divisions could include allowing for population growth, allowing for other changes in circumstances, replacing existing infrastructure and capital deepening (increasing the average stock per capita) or combinations of those elements. Depending on the approach adopted, the GST outcome could differ slightly from that produced by the 2010 Review method.
- 14 We have decided to retain the existing presentation because we are not convinced a change is warranted or that a gross assessment is simpler or more transparent.

INVESTMENT

- 15 State investment spending varies noticeably over time. Table 5 shows the total investment for each component for 2010-11 to 2012-13.

Table 5 Total investment, 2010-11 to 2012-13

	2010-11	2011-12	2012-13	2012-13
	\$m	\$m	\$m	%
Roads	3 908	6 116	6 880	46.5
Urban transport	7 280	3 552	4 854	32.8
Other services	10 750	6 531	2 914	19.7
Land (a)	2 075	1 687	142	1.0
Total	24 013	17 887	14 790	100.0

(a) Includes a balancing item to ensure the total investment aligns with that reported in the ABS GFS.

Source: ABS GFS data and State supplied information.

- 16 Table 6 shows the average value of assets used in providing road, urban transport and all other services.

Table 6 Average value of assets per capita, 2010-11 to 2012-13

	2010-11	2011-12	2012-13	2012-13
	\$pc	\$pc	\$pc	%
Roads	7 448	8 022	8 486	40.3
Urban transport	2 937	2 918	3 085	14.6
Other services	9 014	9 654	9 503	45.1
Total	19 399	20 594	21 074	100.0

Source: State data returns.

Assessment method

- 17 The assessment estimates the amount each State would invest in a year to acquire extra infrastructure to ensure it finishes the year with the average per capita stock of infrastructure, adjusted for its disabilities.
- 18 Each State's assessed investment in roads, urban transport and other infrastructure is calculated using the formula in Box 1. It is the difference between the infrastructure stock it requires at the end and the start of the year, adjusted for factors affecting the cost of acquiring infrastructure.

Box 1 Calculation of assessed investment

$$\text{Assessed Investment} = \left\{ \left[\left(\frac{K_1}{P_1} \right) p_{i,1} \delta_{i,1}^u \right] - \left[\left(\frac{K_0}{P_0} \right) p_{i,0} \delta_{i,0}^u \right] \right\} \times \delta_{i,1}^c$$

Where:

$\delta_{i,1}^u$ and $\delta_{i,0}^u$ are the disabilities affecting the quantity of infrastructure required by State i at the end and the start of the year

$\delta_{i,1}^c$ is the cost disability for State i at the end of the year

$p_{i,1}$ and $p_{i,0}$ are the populations of State i at the end and the start of the year

K is the Australian total value of infrastructure stock

P is the Australian population

19 The calculation of assessed investment allows for the effects of:

- population growth
- changes in other State circumstances affecting the quantity of infrastructure required to provide average services
- changes in the average stock of infrastructure per capita
- relative cost levels prevailing during the year.

Population growth

20 State public documents indicate population growth increases the demand for State services and the infrastructure required to provide them.

- 'The growing population will require investment in additional basic services: local roads, utilities, healthcare and education. It will also require investment in transport infrastructure'²
- '... population growth is driving unprecedented demand for government services and infrastructure ...'³

21 States respond by investing in infrastructure, changing the total amount and the amount per capita over time. We take the observed investment of States and the observed average level of infrastructure as the starting point of our assessment.

22 The assessment is based on the view that, if States were alike, they would need the average per capita stock of infrastructure if they were to have the capacity to provide the average level of services under average service delivery policies. This approach recognises population growth affects investment. It recognises States with above average population growth need to invest above average amounts.

23 Most States accept population growth affects investment, but they differ on whether the assessment accurately measures the effect. Attachment 27 – Impact of

² Infrastructure NSW, State Infrastructure Strategy 2012-2032, p34.

³ Western Australia 2013-14 Budget Paper 3, Economic and Fiscal Outlook, p37

Population Growth on Fiscal Capacities indicates we have decided to continue the 2010 Review methods which recognise population growth effects when the growth occurs and use a direct and proportional relationship between growth and infrastructure investment.

- 24 **Measuring population growth.** Under the 2010 Review methods, the average per capita asset values are derived by reference to asset values at June of each year and population values for the previous December, the same population figures as are used in all other calculations. This was done to keep the calculations as simple as possible. In this review, we considered whether the accuracy of the assessments would be improved if the estimated resident population and asset values used to derive the average per capita value of infrastructure were aligned using June figures.
- 25 However, we are not, at this stage, convinced a change would materially improve the equalisation outcomes. This is because population growth rates are the relevant influence on the GST distribution and the assessments are averaged over three years. We have, therefore, continued to measure population growth on the basis of December to December movements.

Quantity of infrastructure stock disabilities

- 26 States are not alike. So, to deliver the average level of services to their residents, each State needs a State specific stock of infrastructure per capita which reflects its specific characteristics. For example, where a State's population uses hospitals at above average rates, it warrants more hospital beds per capita. The quantity of stock disabilities measure these State specific requirements. For most services, they are measured by reference to the factors for the quantity of services States provide.
- 27 States generally accept there is a link between service use and infrastructure stock requirements. Using assessed service use to measure infrastructure needs was accepted as an appropriate, reasonable and simple approach, subject to an examination of the factors affecting service use to ensure they also affect infrastructure. Some States said a few recurrent factors do not affect infrastructure. Some States also considered infrastructure requirements vary less than proportionally to changes in service use.
- 28 We have proceeded on the basis that factors affecting the quantity of services States provide also affect infrastructure needs. A State which must provide a 10% above average quantity of services is also likely to need 10% above average infrastructure. Above average service and infrastructure requirements arise if a State has: an above average proportion of its population in the service's target group (say, school children) or in groups which use the services more than others; or a below average proportion of the services provided by non-State providers.

- 29 In some services, special programs or extra resources are provided for some groups of users which increase the cost per unit of service provided to those users. For example, in schools special programs may be provided for Indigenous students and there is often extra support staff. These higher unit costs are reflected in the recurrent assessments. We examined these cases and excluded the unit cost effects which are unlikely to have flow-on implications for the infrastructure requirements.
- 30 In the cases of roads and urban transport, there is evidence the effects on investment of factors such as road use, road length and city size differ from their effects on expenses. Specific assessments are used for these as set out below.

ROAD QUANTITY OF STOCK DISABILITIES

- 31 During this review, the Commission has continued to use the basic approach developed in the 2010 Review to assess road stock disabilities. The stock of urban and rural roads is considered to be affected by road length, road use, bridges and national needs. The effects of each of those influences are weighted by the proportion of road capital expenditure they affect. Separate calculations are made for urban and rural roads with the sub-division based on a judgment made in the 2010 Review about the proportion of the value of road assets in urban and rural areas. If reliable data on the value of road assets in each area are received from the States, we propose to update that dissection for the final report.
- 32 ***Are all the main drivers of roads investment captured?*** Submissions from States indicated much of their recent road investment, especially for rural roads, has been to improve road quality (broadly defined) or upgrading. The capital programs of New South Wales, Victoria and Western Australia also indicate most of their road capital spending is for projects aimed at improving efficiency and increasing the capacity of their road networks.
- 33 Investment in these types of projects is influenced by road length and use, but it is also affected by a need for multi-laned, higher quality roads in heavily trafficked areas. Unless we could get data on an indicator of traffic intensity (such as average annual daily traffic) which are reliable, comparable across States and policy neutral, we do not propose to assess a traffic intensity factor.
- 34 ***Are the weights given to each factor appropriate?*** All States accept the value of road stock is driven by the length of roads and road use. The debate has been about the relative contribution of those factors.
- 35 Prior to the 2010 Review, judgment was used to attach a weight of 0.5 to both length and use. During the 2010 Review, the Commission concluded more objective weights could be drawn from National Transport Commission (NTC) data on the proportion of State capital spending on road extensions and improvements directly attributed to

heavy vehicles. The Commission considered spending not directly attributable to heavy vehicles was driven by road length.

- 36 This approach indicated capital expenditure on roads was driven 67% by road length, 17% by road use (consisting of 6% driven by traffic volume and 11% by heavy vehicle use) and 16% by population (which, in the absence of a more appropriate indicator, was used to measure the need for bridges)⁴.
- 37 In the absence of new data or other evidence we have retained this approach.
- 38 **National needs.** Commonwealth capital payments for the NNR fund a large part of State investment in roads. They funded over 60% of State net investment on roads over the seven years 2006-07 to 2012-13. The proportion varied from 90% in 2008-09 to 22% in 2012-13.
- 39 In the 2010 Review, the Commission treated half these payments and the spending of them in a way that had no impact on the GST distribution. It did so because it considered the investment funded by those payments was driven by national needs as determined by the Commonwealth which were not fully captured by State-based measures of road length and use.
- 40 This approach has been controversial. Some States support it and the implied national needs. Others argue it was not justified because the needs are captured by the measures of road length and use in each State. Others said it distorts investment decisions, especially the choice between road and rail projects.
- 41 We have found no relationship between State shares of the NNR payments and any of the State based drivers of road investment (population growth, road length, heavy vehicle use and traffic volumes) for individual years or on average over the years 2006-07 to 2012-13. Since that investment is intended to improve the national road network as a whole, it may be driven by benefits or needs in States other than those where the investment is made.
- 42 The importance of Commonwealth payments as a source of roads capital spending and the absence of a link between those payments and the State-based indicators of the need to invest in roads indicates an allowance for national needs is necessary. In the absence of alternative data, we have continued to make the assessment on the basis that the national needs are measured by reference to the interstate distribution of half the NNR payments. We do not consider the assessment of national needs related to roads investment distorts investment decisions.

⁴ However, the weighted needs factors were not applied to the expenditure of 50% of the Commonwealth payments for the National Network Roads. That expenditure was considered to be driven by national needs.

- 43 We will, however, review this decision when further details become available on the Commonwealth's Infrastructure Investment Programme' which targets 'nationally significant projects'.

URBAN TRANSPORT QUANTITY OF STOCK DISABILITIES

- 44 The urban transport investment component covers the consolidated urban transport investment of the general government and public non-financial corporation (PNFC) sectors. It does not cover inter-urban passenger transport investment.
- 45 It is a new component in the assessment, in part, in response to the requirement in the terms of reference that the Commission consider developing a new transport infrastructure assessment. The Commission also concluded that recognising the full impact of urban transport corporations on State fiscal capacities was appropriate because they provided services more like general government services than commercial enterprises.
- 46 Further detail on the context for this assessment is in the Main report Chapter 5 – Priority Issues.
- 47 *How are urban transport services delivered?* States differ considerably in the way they provide these services. In capital cities, States use a mix of providers including general government, PNFCs and private providers to deliver services. In large regional centres, services are provided through PNFCs and/or private providers. In smaller centres, States generally provide services through private providers.
- 48 At the time of the 2010 Review, States predominantly delivered urban passenger transport services through PNFCs or private providers. Since then, some States, such as South Australia, have shifted towards providing urban passenger transport services (or some of the functions related to these services, such as integrated ticketing systems, timetabling, multi-modal interchanges and passenger safety for their major urban networks) directly through the general government sector.
- 49 In terms of the transport modes, heavy and light rail are restricted to the five largest capital cities and a number of their satellite cities. Rail services are highly capital intensive and necessitate considerable investment and recurrent expenses on maintenance of rolling stock and infrastructure, safety and regulation. Buses are employed in virtually all urban centres with populations over 20 000.
- 50 The urban rail networks are State owned. Victoria owns the rail network through its PNFC VicTrack and leases it to private operators, while the other four States with urban rail networks own and operate them in their capital cities through PNFCs or, in the case of South Australia, directly through the general government sector. The

urban rail network in South-East Queensland is owned by Queensland Rail and operated by the general government sector.

- 51 New South Wales, Victoria and Queensland own and operate significant rail networks in large urban centres outside of the capital cities. These are the Central Coast, Newcastle and Wollongong in New South Wales, Geelong in Victoria, and the Gold Coast and Sunshine Coast in Queensland.
- 52 State ownership of bus transport assets is more limited. New South Wales owns some in Sydney and Newcastle. South Australia owns some in Adelaide. The ACT and the Northern Territory own bus transport assets in Canberra and Darwin. Western Australia and Tasmania own bus transport assets in the capital cities and regional towns through their urban transport PNFCs. All other States contract with private providers for bus services with assets owned and maintained by the providers.⁵
- 53 Table 7 shows 24 cities with a population over 20 000 have State-owned urban transport assets.

Table 7 Asset ownership for cities with population over 20 000

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Cities with State-owned assets (totally or in part)	4	5	3	6	1	3	1	1	24
Cities with no State-owned assets	21	7	10	0	3	1	0	1	43

Source: State provided information and State government publications. The Sunshine Coast and the Gold Coast are classified as two cities.

Assessment method

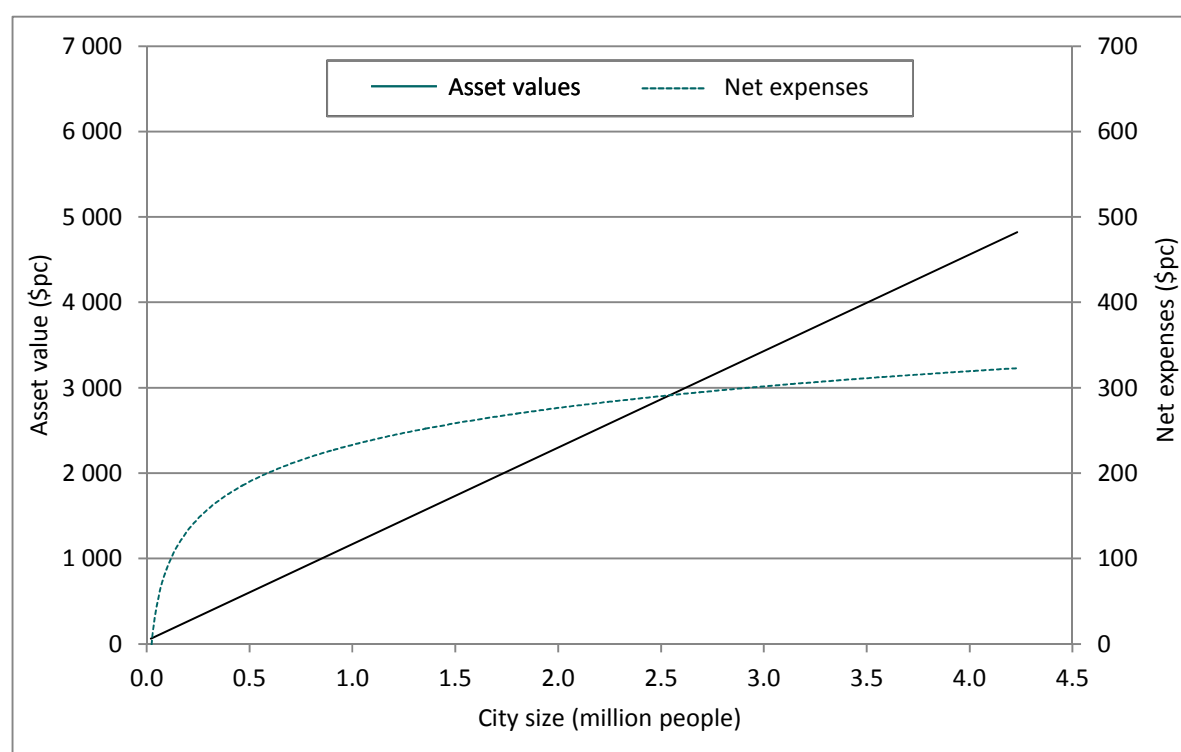
- 54 The Commission has decided to assess investment in urban transport infrastructure in much the same way as other investment, based on average infrastructure stocks. A city's assessed investment is determined by its population growth, its size which determines the amount of infrastructure per capita it needs and the cost of infrastructure in the State.
- 55 Population growth and cost disabilities are assessed using the approach adopted for the other components of the category, and are not discussed further in this section.
- 56 **City specific infrastructure requirements.** The infrastructure per capita needed by a city is assessed using a model based on the observed relationship between city population and per capita infrastructure asset values. Larger cities are assessed as needing much more stock per capita than smaller cities. According to the consultants employed in the 2010 Review to advise on the Transport assessment methods, this is likely to be because the number of public transport trips per capita

⁵ In Queensland, local governments own some bus assets.

(the transport task) rises as city population increases, needing more assets to carry the greater number of people. When the transport task reaches a certain size, fixed track infrastructure (mainly rail) is needed in larger cities.

- 57 Figure 1 shows the relationship is very different from the one observed between city size and net operating expenses. As a result, we have decided to use specific disabilities derived from the stock-city size relationship for the urban transport infrastructure assessment rather than the net expense disabilities.

Figure 1 Comparison of relationships between transport assets and net expenses and city size, 2011–12



Source: Commission calculation.

- 58 The model includes all cities with populations over 20 000. The populations for these cities are defined using ABS Urban Centres/Localities (UC/Ls) contained within Significant Urban Areas (SUAs). While the definition of urban centres may not capture exactly the population serviced by the urban transport networks, we have adopted it because it is policy neutral.
- 59 Table 8 shows how the per capita stock of urban transport assets varied with urban centre population in 2011-12.

Table 8 Stock of urban transport infrastructure by urban population size, 2011–12

City size	20 000 to 50 000	50 000 to 100 000	100 000 to 250 000	250 000 to 1 000 000	1 000 000 to 2 500 000	2 500 000 and over	Total
Asset values (\$pc)	36	81	181	425	2 051	4 808	2 158
Total population living in cities by size (million)	1.1	0.8	0.9	2.3	5.1	8.3	18.4

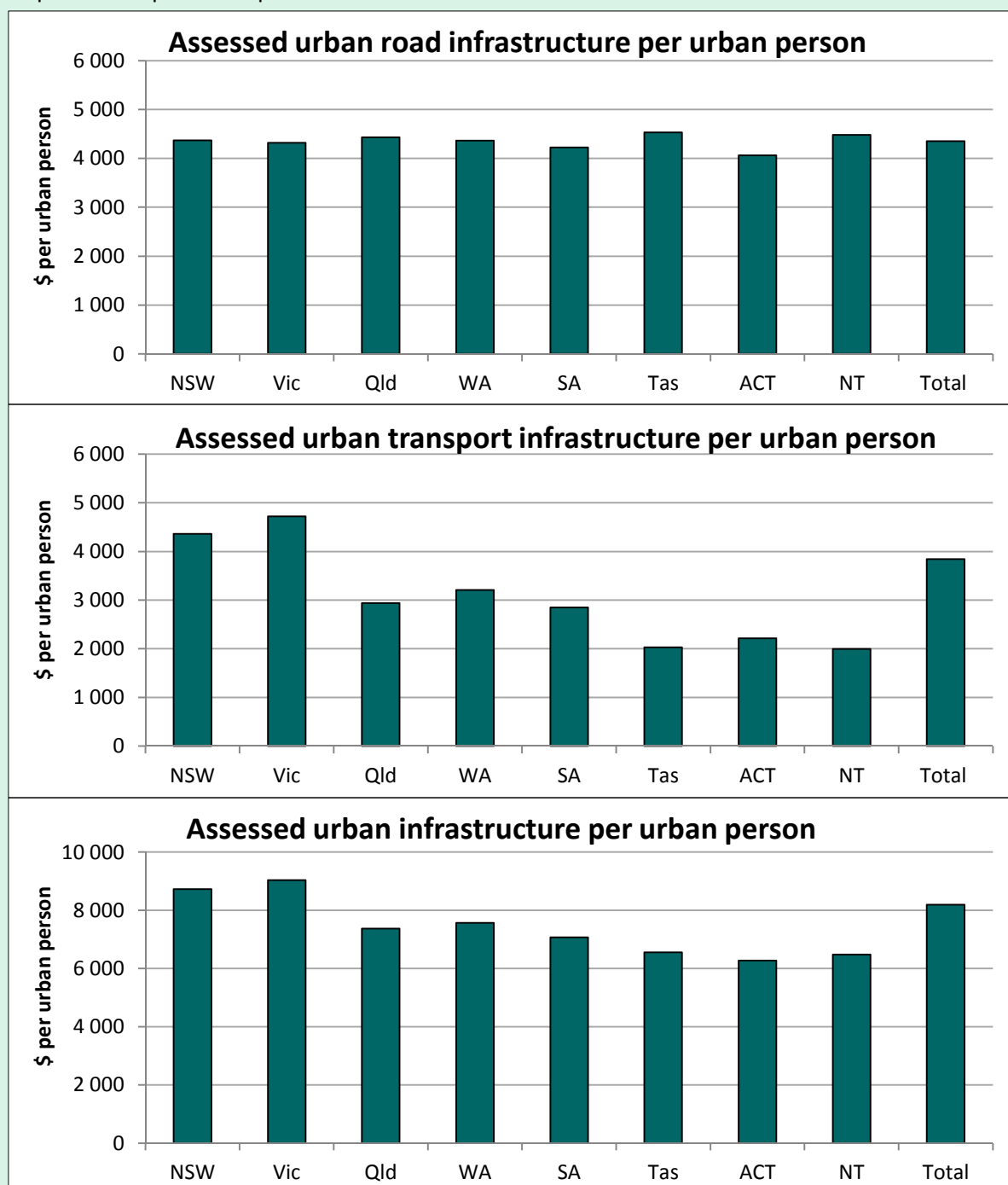
Source: Commission calculation using data from State transport departments and ABS.

- 60 The inclusion of all urban centres with populations greater than 20 000 is consistent with the new approach to deciding what States do (average policy) and with the assessment for net urban operating expenses in the Transport category. The greater number of data points means the estimated relationship is more robust in a statistical sense. This addresses a concern raised by Queensland.
- 61 In cities where States do not own assets, zero asset values were recorded. We have weighted the regression variables by urban population size to match the approach to averages in other parts of the assessments — averages are weighted averages for the eight States, with the weights based on population or service use.
- 62 The estimated relationships for 2010-11 and 2011-12 are very similar. They are also similar to the relationships derived by the consultants in the last review. For example, Sydney is still assessed as requiring about twice the per capita stock as Brisbane, about three and a half times Adelaide (up from three) and about 13 times the per capita stock requirements of Darwin (down from 15).
- 63 New South Wales, Victoria and the Northern Territory broadly supported this approach.
- 64 Western Australia was concerned the proposed relationship between per capita asset values and city size may be driven by differences in State policies and timing of investment. This was in the context of a significant planned expansion of Perth urban transport infrastructure to be completed in 2031. It said a quadratic function fitted better than a linear one. The ACT also supported the use of a quadratic function.
- 65 To capture changes in per capita asset values, we will seek asset data from States and re-estimate the relationship that underpins the assessment annually. New South Wales and Victoria supported the annual update of capital stock. At this stage, unlike Queensland, we consider there is no reason to believe volatility will be an issue. However, we will monitor the volatility of the assessment over future updates and review the need for discounting as appropriate.
- 66 We have used a linear model instead of a quadratic one because it will help minimize the possibility of one State influencing the relationship too much.
- 67 South Australia expressed concerns about the reliance on the raw statistical analysis of asset value to population centre size. The general idea behind the relationship had the support of the 2010 Review consultants.

- 68 We have used actual book values rather than replacement values (book value plus accumulated depreciation). This is consistent with asset values used in other parts of the investment assessment and will ensure the GST distribution adjusts to give each State the capacity to hold the average levels of assets, given the size of its cities.
- 69 No adjustment was made for the presence of rail in larger cities because it is not clear that two separate cost functions exist. In any case, including a rail variable in the model was not significant.
- 70 We have engaged a consultant to review the econometric work but have not received that advice. Given the concerns expressed by the States, as a placeholder, we have discounted the relationship between assets per capita and city size by 50% before applying it to the urban centre populations in each State.
- 71 **Population growth.** The assessments for other components of investment use State population to measure change in demand. For urban transport investment, however, the relevant measure would be the population of cities with population over 20 000. Use of this measure had the strong support of New South Wales.
- 72 The main problem with using city population is the ABS does not publish city population data for the last assessment year in time for inclusion in the assessments.
- 73 The differences in the annual growth rates between State population and population of cities over 20 000 are small and not material. We, therefore, decided to use State population growth in this assessment as it is the more practical approach.

URBAN INFRASTRUCTURE ASSESSMENTS

The terms of reference asked us to consider developing a new transport infrastructure assessment. We have not developed a single assessment for transport infrastructure in urban areas. We have made separate assessments for urban roads infrastructure and urban transport infrastructure because it is the most transparent way of recognising the different drivers of roads and urban transport infrastructure. The following figures summarise the assessed transport infrastructure requirements per urban person.



QUANTITY OF STOCK DISABILITIES FOR OTHER SERVICES

- 74 The Appendix to this attachment provides the results of our consideration of whether the factors affecting service delivery expenses also affect infrastructure requirements. We have concluded most do.
- 75 Table 9 shows the recurrent factors which have little or no effect on infrastructure requirements and which are not included in the assessments.

Table 9 Factors affecting recurrent expenses not applied to infrastructure

Category or factors	Comments
Schools — socio-demographic factors	Interstate differences in government school enrolments will have a proportionate effect on all recurrent inputs and infrastructure required to deliver school services. Low SES and Indigenous students may increase staffing but not necessarily school size or staff housing since the extra staff are often locally recruited. Some extra capital spending may arise in remote areas, but this is partly reflected in the service delivery scale. The Indigenous and low SES cost weights do not apply to assets. This conclusion may be reviewed in the light of further analysis of My School data.
Non-government schools factors	Non-government enrolments, the composition of those enrolments and other factors affecting State subsidies to non-government schools have no effect on the quantity of State infrastructure. They are not in the infrastructure assessments.
School transport	These services are usually acquired from non-government providers. Recurrent costs are affected but infrastructure requirements are not.
Post-secondary	Low SES and Indigenous cost factors do not have a major effect on physical assets.
Welfare — service delivery scale for child services	Unlike police and schools services, child protection services in sparsely populated areas are usually provided by staff from nearby larger centres. This affects recurrent expenses but not infrastructure. The factors are not applied to infrastructure.
Housing — Indigenous cost weights	The greater propensity of Indigenous people to use government housing is captured. The Indigenous cost factor captures the extra costs of managing and maintaining housing for Indigenous tenants. The factor is applied to the proportion of the housing stock constructed specifically for Indigenous tenants (10%) which is larger, has higher specifications and costs more. It is not applied to the other stock where extra maintenance costs are incurred in part to minimise extra infrastructure costs.
First home owners	These expenses have no effect on State infrastructure requirements.
Police — national capital allowance	The factor reflects the higher wages paid to police in the ACT because they are Commonwealth employees. It is not included in the infrastructure assessments.
Other expenses — National capital factors	The factors allow for the maintenance of wider roads provided before self-government and extra planning functions arising from Canberra's national capital role. They do not provide for replacing or increasing the road stock or affect other infrastructure needs. They are not included in the infrastructure assessments.
Natural disasters factors	The factors cover all above average disaster assistance and rebuilding. They are not included in the infrastructure assessments to avoid double counting.
Native title and land rights factors	These factors cover all interstate differences in costs of resolving and compensating claims. Including them in the infrastructure assessments would be double counting.
Wages and regional costs	The recurrent factors are not applied but capital specific cost factors have been used.

How should the stock disabilities be combined?

- 76 For services other than roads and urban transport, we have constructed aggregate quantity of stock disabilities as a weighted combination of the disabilities for each service. In this review, the weights are the average proportion of infrastructure used in providing each service.
- 77 All States agreed this is the most appropriate basis for weighting. It better matches the disabilities with the infrastructure they affect than the 2010 Review method which, in the absence of data on the infrastructure used for each service, used the proportion of depreciation expenses as a proxy. That approach understated the proportion of infrastructure devoted to some services because it implied the depreciation rates for all infrastructure were the same.
- 78 The data on State infrastructure used for each service have been provided by the States. We consider the data provide a sufficiently robust and reliable basis for calculating the all-State averages required for the calculations.
- 79 The national average proportion of infrastructure for each service is in Table 10.

Table 10 **Average proportion of infrastructure, other than roads and urban transport**

	2010-11	2011-12	2012-13
	%	%	%
Schools education	23.9	24.8	24.4
Post-secondary education	3.5	3.6	3.5
Health	15.8	16.2	17.7
Welfare	1.0	1.0	1.0
Housing	23.6	23.1	22.7
Services to communities	3.4	3.4	3.3
Justice	7.8	7.6	7.6
Transport (a)	0.6	0.7	0.7
Services to industry	3.4	2.6	2.6
Other expenses	17.0	16.9	16.5
Total	100.0	100.0	100.0

(a) Excludes assets used for urban transport.

Source: State provided data.

Dealing with volatility

- 80 The weighted disabilities have been averaged on a three year moving average basis before they are used in the assessment. The three year moving average is used to reduce the volatility in the year to year changes in the disabilities and to recognise that States do not necessarily respond immediately to changing circumstances.

CAPITAL COST DISABILITIES

- 81 Cost disabilities allow for the effects of interstate differences in wage levels, the price of other inputs and other unavoidable factors affecting the unit cost of services and infrastructure.

A construction cost index

- 82 During this review, some States argued the cost disabilities applied in the infrastructure assessments should be based on an explicit capital cost index instead of the recurrent interstate and regional cost factors used in the 2010 Review method.
- 83 A capital cost index is more appropriate than the recurrent cost factors if a reliable one is available, it is policy neutral and it is materially different from the recurrent factors. A capital cost index would reflect the mix of inputs used in producing capital and the prices of those inputs rather than the mix and price of inputs used in service delivery. Capital cost indices also usually capture the effects on costs of city size, construction market conditions and environmental impacts (where they affect the building codes). Since those factors affect the costs States face in acquiring infrastructure and their effects vary from State to State and over time, they should be reflected in Commission assessments.
- 84 We have decided to measure capital cost disabilities by using a construction cost index derived from the Rawlinsons construction cost index but have discounted the resulting disabilities because of concerns about their reliability.
- 85 Rawlinsons publish two sets of construction cost indices⁶.
- A capital city index which shows costs in each capital city relative to Sydney. It is derived annually from a review of building costs for the most commonly constructed types of buildings, tender returns, market conditions and discussions with contractors, consultants and suppliers. Rawlinsons has advised the capital city indices are derived in a consistent manner across States and can be used for interstate comparison.
 - Regional indices which capture construction costs in regional and remote areas of a State relative to its capital city. The indices are calculated by comparing the cost of a building in the capital city with the cost of the same building in regional and remote towns. They provide an intrastate measure of cost differentials and must be adjusted to include the interstate dimension.

⁶ Rawlinsons Australian Construction Handbook, Edition 31, 2013. See the Regional Variation Indices on page 875 (called capital city indices in this report) and the Regional Indices on pages 22 to 32 (called regional indices in this report).

- 86 Other companies produce construction price indices. They are, however, less suitable for the Commission's purposes because they do not cover Hobart or regional centres in each State and they cover a more restricted range of construction activities.
- 87 In submissions to this review, Queensland noted the Commission used the Rawlinsons indices with a 50% discount in deriving the depreciation cost disability in the 1999 Review but discontinued that approach in the 2004 Review because it was considered inappropriate for equalisation purposes. It argued the Commission should not use an index it previously considered was inappropriate.
- 88 The circumstances which led to the previous decision no longer apply. The previous decision reflected concerns about the impact of State taxes and charges on the indices, volatility in the indices over time and possible double counting with other disability factors. However, recent information indicates interstate differences in taxes and charges have a negligible effect on the indices, other changes in Commission methods have removed the potential for double counting and we consider changes in State circumstances affecting the costs States incur in purchasing for construction services affect their fiscal capacities.
- 89 **Reliability.** The Rawlinsons construction cost indices are prepared specifically to provide data on construction costs and variations in them. They are independent and widely used, including in arbitration cases, throughout Australia. They are regarded as the industry standard in construction cost indices, at least for buildings.
- 90 The indices cover a wide range of construction in all capitals. The range of activities covered in regional centres is of necessity narrower. Similar methods are used in preparing the indices for each capital city and for each region within States. The indices are therefore suitable and reliable indicators of inter-location and inter-temporal differences in construction costs.
- 91 The capital city construction cost indices are a composite of indices for commonly constructed building types, including administrative buildings, retail, industrial, civic, hotel and residential buildings. Some States said that coverage does not reflect the construction undertaken by States. While the indices do not specifically cover the types of buildings States construct, we consider the breadth of their coverage means they provide a good guide to the underlying differences in construction costs.
- 92 **Policy neutrality.** State policies may affect the indices in following ways.
- Differences in State taxes and charges. The indices may be affected by interstate differences in some taxes, such as payroll tax. The effects of these differences are minor as taxes and charges affect at most 5% of construction costs and State infrastructure contribution levies are not included in the indices. Adjusting the indices by the relative State revenue raising efforts would introduce complexity and have a negligible effect on the GST outcome.

- Differences in specifications for State buildings. This effect is minimal because few State buildings have a direct impact on the overall capital city indices.
- Differences in building codes. A national building code sets uniform minimum standards but States and local governments can increase them, thereby introducing policy effects. States can also limit local government's ability to vary the codes. However, the building codes appear to be heavily influenced by technical requirements which would be broadly similar in similar circumstances. Queensland noted its building code also deals with siting standards and energy efficiency which may have greater policy content. Tasmania and the Northern Territory said differences between the national minimum code and their codes are due to technical issues. The Northern Territory said its examination of State building codes found no evidence that State variations are inconsistent across areas with the same natural hazards.

- 93 **Coverage.** Some regional centres are not explicitly covered by the Rawlinsons regional indices. The extent of coverage varies across States (it averages 80% of the population) and is lowest for Tasmania (60% of population) and the Northern Territory (68% of population).
- 94 Indices for centres not explicitly covered by the data were estimated by assuming they have the same regional cost index as the closest centre whose index is available and which has a similar degree of remoteness. The Northern Territory has argued that approach may noticeably understate the overall costs in its remote and very remote areas and provided data to support its concerns. It suggested the criteria be amended to apply the index of the closest centre with the same degree of remoteness and a similar population. We acknowledge that approach will provide a more appropriate basis for the index and propose adopting it for the final report.
- 95 The most important coverage issue relates to the range of investment the indices cover. The Rawlinsons indices are based on reviews of a set of commonly constructed buildings. As road construction requires a more limited range of materials, the indices may be less suitable as a guide to relative road construction costs, especially if variations in the prices of road building materials are markedly different from those for other construction materials.
- 96 In addition, while the construction cost indices capture the costs of equipment included in buildings, such as air conditioning, they do not capture the costs of other equipment used in service delivery. Over the years 2009-10 to 2011-12, investment in plant and equipment, other than transport equipment was about 17% of investment.
- 97 **Conclusion.** We consider the use of a construction cost index in the infrastructure assessments is conceptually superior to the use of recurrent cost disabilities and the Rawlinsons indices are reliable and comprehensive indicators of relative construction costs. However, there are concerns about whether they are sufficiently reliable and

suitable for our purposes, including concerns about the extent to which the indices accurately capture differentials in the costs of road construction materials and plant and equipment. These concerns indicate disabilities measured using the indices should be discounted.

- 98 On balance and against the background of these concerns, we have based the capital cost disabilities on the construction cost indices prepared by Rawlinsons but included a 50% discount when they are applied to roads and urban transport and a 25% discount when they are applied to other services. Table 11 compares the capital cost indices for 2012-13 applied in the 2014 Update for roads and other services with those derived from the Rawlinsons index as discounted by 50% and 25% respectively. Using these factors will materially affect the GST distribution.

Table 11 Comparison of 2014 Update recurrent cost factors and discounted construction cost factors, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Average
2014 Update recurrent factors									
Roads	1.000	0.972	1.003	1.064	0.991	0.967	1.004	1.101	1.000
Non-roads	1.001	0.985	0.997	1.039	0.987	0.981	1.009	1.098	1.000
Construction cost indices									
Roads	1.003	0.982	0.979	1.053	1.007	0.996	1.010	1.141	1.000
Urban transport	1.007	0.991	0.976	1.027	1.002	1.012	1.022	1.118	1.000
Other services	1.006	0.971	0.978	1.065	1.005	0.986	1.013	1.238	1.000

Source: Staff calculations.

The effects of the physical environment

- 99 The issue of whether interstate differences in the physical environment lead to material differences in the costs of providing services, including the costs of acquiring infrastructure, has been debated in many previous method reviews. During this Review, the Commission engaged consultants to advise on the issue.
- 100 The consultants examined the effects of topography, rainfall, temperature, wind, shrink/swell of soil and acid sulphate soil on infrastructure costs. They focussed on those environmental features because technical specialists identified them as likely to have a material impact on the cost of constructing or maintaining roads and buildings and reliable national data were available to measure the effects.
- 101 The consultants also identified flooding and soil salinity as potentially having material effects but they were not examined because data were not available to identify flood prone or soil salinity regions consistently across States or to develop reliable cost uplift factors.
- 102 The consultant's report indicated interstate differences in major aspects of the physical environment affect the costs of constructing roads, schools and housing.

Applying cost factors based on that advice to investment and depreciation costs would materially affect the GST distribution for the Northern Territory.

- 103 In their submissions, many States expressed concerns about basing a physical environment factor on the consultant's report because they consider the report omits important environmental features such as flooding and fires and is heavily reliant on the consultant's judgment and internal data to derive the cost impacts of the environmental influences. Other States acknowledged the omission of some environmental influences but considered the report provided a suitable basis for allowances because it was based on national data and tailored to the Commission's requirements.
- 104 The capital construction cost factors based on the Rawlinsons indices capture the impact of some environmental influences. Unless we can devise a way of capturing all the other environmental impacts without introducing double counting, we do not propose to introduce a physical environment factor.

Urban influences

- 105 Some submissions suggested further allowances for urbanisation were required because the urban influences captured under the 2010 Review methods, such as those in the urban roads infrastructure assessment, covered only the need to service larger populations. They omitted the effects on infrastructure costs arising from the greater complexity of constructing infrastructure in urban areas and the need to acquire land.
- 106 We have continued to recognise urban influences on the need for infrastructure for roads and other services (such as health services) where services are used more intensively in urban areas. We have also explicitly allowed for the effects of city size on the quantity and cost of infrastructure required for urban transport services.
- 107 No further allowances have been made for the effects of urbanisation on the costs of infrastructure because reliable data to measure any such effects are not available.

The effects of economic development

- 108 Some States have argued the infrastructure assessments do not capture the full effects of population growth or the effects of intrastate migration. These issues are discussed in Attachment 27 – Impact of Population Growth on Fiscal Capacities.

INVESTMENT IN LAND AND NON-PRODUCED ASSETS

- 109 In the 2010 Review, the Commission considered general government land and other investment should not affect the relativities. Consequently, that expenditure was

assessed on an equal per capita basis. The States accepted that approach and it has been continued.

BRINGING THE INVESTMENT ASSESSMENT TOGETHER

110 Table 12 illustrates the determination of the total assessed investment for 2012-13.

111 These and subsequent calculations in this attachment rely on service use data in all other expense assessments. The effects of updating data in categories, such as health and justice, will flow-on to and vary the infrastructure assessments.

Table 12 Illustrative assessed infrastructure stocks and investment, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Assessed infrastructure stocks at the end of the year									
Roads	54 696	39 617	43 136	27 094	16 321	4 133	1 766	7 757	194 519
Urban transport	26 052	22 042	10 596	6 521	3 717	668	829	282	70 707
Other services	68 778	50 614	45 037	23 458	16 334	5 621	3 458	4 536	217 836
Total	149 526	112 273	98 769	57 073	36 373	10 421	6 053	12 574	483 061
Assessed infrastructure stocks at the start of the year									
Roads	53 154	38 387	41 711	26 000	15 903	4 058	1 708	7 494	188 415
Urban transport	24 421	20 512	9 826	5 936	3 491	632	771	263	65 853
Other services	68 075	49 974	44 319	22 852	16 215	5 620	3 413	4 452	214 922
Total	145 650	108 873	95 856	54 789	35 609	10 310	5 891	12 210	469 189
Change in stocks (a)	3 876	3 399	2 912	2 284	764	111	162	365	13 872
Cost factor (b)	1.000	0.979	0.972	1.042	0.999	0.996	1.009	1.153	1.000
Cost adjusted assessed investment (c)	3 876	3 329	2 830	2 381	763	110	163	420	13 872
Assessed NNR	369	54	180	114	22	2	12	23	776
Assessed investment - land	46	35	29	15	10	3	2	1	142
Total assessed investment	4 291	3 418	3 038	2 510	795	116	177	445	14 790

(a) Total assessed stocks at the end of the year less total assessed stocks at the start of the year.

(b) An investment weighted combination of the cost factors for each component.

(c) Assessed change in stocks multiplied by the cost factor.

Source: Commission calculation.

DEPRECIATION

112 This assessment provides States with the capacity to meet the depreciation expenses on their assessed infrastructure stocks assuming they applied the average depreciation rate. The assessment, however, does not include urban transport

depreciation because those expenses are elements of the net expenses and are part of the urban transport assessment.

- 113 Each State's assessed depreciation is calculated by applying the observed average depreciation rate to its assessed stock of infrastructure and adjusting the result to allow for interstate differences in the cost of infrastructure.
- 114 However, we vary the way we construct the total assessed stock of infrastructure for this assessment by combining the components using their share of depreciation expenses instead of their share of the asset stock. This ensures the assessment captures both the asset specific average depreciation weights and the interstate differences in the per capita requirement for assets.

The depreciation cost disability

- 115 These disabilities allow for the effect of interstate differences in circumstances which affect the price of infrastructure.
- 116 The disabilities are a combination of the capital cost factors for each service other than urban transport used in the investment assessment. However, in this case, the weights used to combine the components are the proportion of depreciation expenses attributed to the service rather than the infrastructure proportions.

BRINGING THE DEPRECIATION ASSESSMENT TOGETHER

- 117 Table 13 shows the assessed stock and capital cost factors assessed for each State for 2012-13. Disability factors below one indicate a State is assessed to need to spend less than average. Disability factors above one indicate a State is assessed to need to spend more than average.

Table 13 Illustrative depreciation assessment, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Assessed stock (\$pc)	17 256	16 348	19 083	19 450	18 851	19 275	13 769	41 391	17 990
Average depreciation rate (%)									2.4
Estimated depreciation at average rate (\$pc)	482	456	533	543	526	538	384	1 155	502
Capital cost factors	1.005	0.974	0.978	1.061	1.006	0.989	1.012	1.207	1.000
Assessed depreciation (\$pc)	482	443	519	574	527	530	388	1 390	502
Assessed depreciation (\$m)	3 548	2 517	2 395	1 422	876	272	147	331	11 508

Source: Commission calculation.

THE AGGREGATE INFRASTRUCTURE ASSESSMENT

118 Table 14 brings the assessed investment and assessed depreciation together to derive the total illustrative assessed infrastructure spending for each State.

Table 14 Illustrative infrastructure assessments, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Investment	4 291	3 418	3 038	2 510	795	116	177	445	14 790
Depreciation	3 548	2 517	2 395	1 422	876	272	147	331	11 508
Total assessed infrastructure	7 839	5 935	5 433	3 932	1 672	387	324	776	26 298

Source: Commission calculation.

Influences not assessed in this category

119 For reasons outlined previously, the Commission has not made specific assessments of the effects of urbanisation or the physical environment on infrastructure costs.

WHAT IS THE IMPACT ON THE GST DISTRIBUTION?

120 Table 15 shows the extent to which the illustrative infrastructure assessments for 2012-13 would move the GST distribution away from an equal per capita distribution. It shows GST revenue would be redistributed to Queensland, Western Australia, the Northern Territory and away from the others.

Table 15 Illustrative GST impact, infrastructure, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Redist
Investment									
Dollars million	-455	-249	61	911	-277	-215	-67	291	1 263
Dollars per capita	-62	-44	13	368	-167	-419	-177	1 223	55
Depreciation									
Dollars million	-145	-337	79	178	42	15	-43	211	525
Dollars per capita	-20	-59	17	72	25	28	-114	888	23
Total Infrastructure									
Dollars million	-600	-586	141	1 089	-235	-200	-110	503	1 732
Dollars per capita	-82	-103	30	439	-142	-391	-291	2 111	76

Note: The difference from an equal per capita assessment using 2012-13 assessed expenditure and GST.

Source: Commission calculation.

121 Table 16 provides an illustrative impact on the GST distribution for 2012-13 of each component of infrastructure expenditure.

Table 16 Illustrative GST impact by component, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Redist
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Investment									
Roads	-425	-316	155	482	-25	-63	-42	233	870
Urban transport	85	313	-225	75	-126	-73	-21	-29	474
Other services	-236	-108	109	324	-93	-65	-3	72	504
NNR	120	-138	23	30	-34	-15	-1	15	189
Total investment	-455	-249	61	911	-277	-215	-67	291	1 263
Depreciation	-145	-337	79	178	42	15	-43	211	525
Total Infrastructure	-600	-586	141	1 089	-235	-200	-110	503	1 732

Source: Commission calculation.

122 Some of the main reasons which cause the GST distribution for each State to move away from the equal per capita distribution are differences between States in:

- population growth — States with above average population growth (Victoria, Queensland, Western Australia and the ACT) need an above average share of investment and GST
- capital intensity — the per capita requirement for capital differs between States due to differences in their demographic and economic circumstances and changes in those circumstances. States where demographic and economic circumstances lead to above average use of services or above average increases in service use require above average amounts of infrastructure to meet that demand. For example, in urban transport, our analysis shows greater per capita stock requirements in larger cities because of the increasing size and complexity of the necessary transport network which led to above average investment and GST requirements in New South Wales and Victoria.
- relative construction costs — the construction cost indices indicate the costs of acquiring infrastructure are above average in Western Australia and the Northern Territory and below average in Victoria and Queensland.

CHANGES SINCE THE 2010 REVIEW

123 The basic approach to the Infrastructure assessments is the same as that in the 2010 Review, but there have been some changes in aspects of them.

- Housing and urban transport activities and their associated infrastructure are treated as general government services with fiscal needs assessed directly in the infrastructure assessments, whereas they were previously treated as public corporations with State holdings treated as part of their net financial worth. This means population growth, stock and cost disabilities have been assessed for housing and urban transport in this review whereas only population growth disabilities were assessed in the 2010 Review.

The change in the approach to urban transport infrastructure has changed the GST distribution compared to that produced by the 2010 Review methods. It redistributes GST to New South Wales, Victoria and Western Australia and away from all other States.

- The quantity of infrastructure stock disabilities are calculated by combining the factors affecting the use of each service using the average proportion of infrastructure devoted to the service instead of the proportion of depreciation.
- Factors affecting recurrent service use but which do not affect infrastructure requirements are explicitly excluded from the infrastructure calculation whereas a 12.5% discount was used for that purpose in the 2010 Review. The previous 12.5% discount has been deleted.
- Capital cost disabilities are measured by reference to construction cost indices, discounted by 50% for roads and urban transport and by 25% for other services, instead of using recurrent cost disabilities as in the 2010 Review.

124 The infrastructure assessments are also affected by the changes in the way we measure service use disabilities for each service described in other attachments of this draft report.

UPDATE PROCESS

125 We recommend that data used in this assessment be updated when new data become available to ensure the relativities remain contemporary and consistent with the circumstances of the States. On this basis we expect:

- the following data would be updated annually:
 - the total investment and depreciation expenditure and Commonwealth payments
 - the value of State infrastructure stocks, including the value of urban transport infrastructure in cities with over 20 000 people
 - State and urban centre population data
 - Rawlinsons construction cost indices
 - State asset proportions
- the following data would be updated at longer intervals:
 - the list of centres classified as urban, which is fixed using 2011 Census data on centres of 20 000 people or more in that year.

APPENDIX

Table A-1 Recurrent expense disabilities and their impact on infrastructure requirements

Category/ Disability	Influence or disability being measured	Link between disability and infrastructure	Included in infrastructure
COMMON FACTORS (Disabilities applied to several expense categories)			
Administrative scale	Allows for unavoidable costs incurred in providing the policy and administrative infrastructure for the minimum level of service, regardless of State size.	A State with a recurrent administrative scale disability will have higher capital costs per capita reflecting the need for additional office space and equipment.	Yes
Wages and regional costs	Recognises the effects on the costs of services of interstate differences in the cost of labour and regional differences in the cost of labour and non-labour inputs.	Differences between States and regions within States in the costs of labour and materials affect the costs of acquiring infrastructure. However, the impact of cost differences on infrastructure have been measured using explicit construction cost indices rather than recurrent wages and regional cost differentials.	No
Native title	Recognises extra costs incurred by the States due to the operation of the Australian Government's Native Title Act 1993.	All relevant costs are captured in the factors. Those costs are mostly administrative and negotiation expenses and compensation paid but also include any capital costs. Since any capital costs are captured in the expense assessments, applying the factor to infrastructure would be double counting.	No
Land rights	Recognises additional and unique costs of providing services in the Northern Territory because of the operation of the Australian Government Aboriginal Land Rights (Northern Territory) Act 1976.	All relevant costs are captured in the factors. Those costs are mostly administrative and negotiation expenses and compensation paid but also include any capital costs. Since any capital costs are captured in the expense assessments, applying the factor to infrastructure would be double counting.	No
Cross-border	Recognises cross-border use of schools services.	This use factor has a proportionate effect on all inputs. More students implies more classrooms and equipment. This factor is applicable to infrastructure.	Yes

Category/ Disability	Influence or disability being measured	Link between disability and infrastructure	Included in infrastructure
SERVICE COSTS (Category specific disabilities)			
Schools education			
Socio-demographic composition	Recognises interstate differences in the proportion of the population who are students. It also recognises Indigenous and students from low socio-economic backgrounds use schools at different rates than other students and have different per unit service delivery costs. It also recognises services provided in remote areas cost more than those provided in other areas.	<p>Interstate differences in government school enrolments have a proportionate effect on the quantity of labour, non-labour and infrastructure required to deliver school services. For example, more students imply more classrooms and equipment. This aspect of the factor is applicable to infrastructure.</p> <p>Interstate differences in non-government enrolments will not affect infrastructure requirements.</p> <p>Low SES and Indigenous cost weights are unlikely to result in a proportionate need for physical assets. Low SES students may increase the need for staff but not necessarily school size. Indigenous students may increase staffing requirements but not necessarily school size or staff housing since the extra staff are often locally recruited. Some extra capital spending may arise in remote areas, but this is partly reflected in the service delivery scale and regional cost factors. The Indigenous and low SES cost weights do not apply to assets. This conclusion may be reviewed in the light of further analysis of My School capital cost data to be done after the draft report.</p> <p>Remoteness cost weights are captured in the infrastructure cost factor.</p>	Yes, but not non-government, low SES or Indigeneity
Service delivery scale	Recognises the cost of providing schools education in small population centres.	A State that has more schools in sparsely populated areas is likely to face greater capital costs per capita.	Yes
Transport of school children	Recognises differences between States in the cost of providing transport services to students.	The average policy is to acquire school transport services from private contractors. There is no need for States to acquire physical assets.	No
Post-secondary education			
Socio-demographic composition	Post-secondary use	This use factor will have a proportionate effect on the quantity of recurrent and capital inputs. This factor is applicable to infrastructure.	Yes
	Post-secondary cost influences (Indigeneity, remoteness and socio-economic status)	As in schools, low SES and Indigenous cost weights are unlikely to affect physical assets. Remoteness weights will have an effect.	No

Category/ Disability	Influence or disability being measured	Link between disability and infrastructure	Included in infrastructure
Health services			
Socio-demographic composition	Recognises that on average different amounts are spent on people from some population groups because they use services at different rates and/or have different per unit service delivery costs. Population characteristics assessed are: age, Indigeneity, location and SES.	The use and cost influences are likely to affect expenses and infrastructure similarly. More patients imply more (or bigger) health facilities and higher per unit service delivery costs often reflect a longer length of stay. This will affect the quantity of all inputs needed to deliver services.	Yes
Economic environment	Recognises that GP and specialist services and OATSIH funded non-State community health providers are partially substitutable for State-provided emergency department, outpatient and community health services.	This factor reflects differential demand for State funded services which will affect recurrent expenses and infrastructure requirements similarly.	Yes
Welfare			
Socio-demographic composition	<p>Family and child - recognises that Indigeneity and low SES population characteristics affect the use and cost of providing services.</p> <p>Disability services – NDIS (State share of tier 3 clients).</p> <p>Non-disability care - Recognises that Indigeneity affects the use and cost of providing services.</p> <p>Aged care services (WA only) – equal per capita.</p> <p>Concessions – number of pensioners and health care card holders</p> <p>General welfare- Recognises that low SES population characteristics affect the use and cost of providing services</p>	The use factors will have a proportionate effect on the quantity of all inputs required to deliver services.	Yes
Service delivery scale	Family and child - Recognises the additional cost of providing child protection services in sparsely populated areas.	Unlike police and schools services, child protection services in sparsely populated areas are usually provided by staff located in nearby centres. This will lead to more recurrent expenses but not more infrastructure.	No

Category/ Disability	Influence or disability being measured	Link between disability and infrastructure	Included in infrastructure
Housing			
Socio-demographic composition	Recognises income, Indigeneity and location affect the use and cost of providing housing services.	The use factors will have a proportionate effect on the quantity of all inputs required to deliver services.	Yes
		The Indigenous cost disability captures the extra costs of managing and maintaining housing used by Indigenous tenants. The Northern Territory argued this should be applied to infrastructure because houses occupied by Indigenous tenants tend to have a shorter life than other housing which has led to extra maintenance programs. The extra programs are in part intended to ensure the life of housing used by Indigenous tenants is similar to that of other public housing. They are intended to avoid flow-ons to infrastructure costs. However, It also argued housing built for Indigenous tenants tends to be larger, have higher specifications and thus costs more. To reflect this effect, the Indigenous cost weight has been discounted to apply to the approximate proportion of Indigenous specific housing in the State housing stock (10%).	Partly
First home owners	This is an equal per capita assessment.	There is no differential effect on recurrent costs or infrastructure.	No
Services to communities			
Uniform tariffs	An increasing number of States are providing subsidies (including capital subsidies) for water and desalination plants in major urban areas.	The subsidies are assessed equal per capita. There is no differential effect on recurrent costs or infrastructure.	Yes
Water and electricity costs (General subsidy CSOs)	Small communities - Recognises interstate differences in the cost of subsidies to isolated communities for the provision of electricity, water and wastewater services.	Subsidies per capita may need to be larger if physical asset requirements per capita are greater. Since some general government assets are involved the factor is applicable to infrastructure. However, the factor has a low weight since most of the required assets are owned by public corporations or non-State providers.	Yes
Indigeneity	Recognises interstate differences in the costs of community development (planning and governance) services for discrete Indigenous communities.	This factor will have a proportionate effect on all inputs required to deliver services. It is discounted to only apply to the relevant expenses in the category, including depreciation expenses.	Yes

Category/ Disability	Influence or disability being measured	Link between disability and infrastructure	Included in infrastructure
Justice services			
Socio-demographic composition	Recognises different population groups use police services, courts services and prisons at different rates. Population characteristics assessed are: Indigeneity, gender, age and low SES.	This use factor will have a proportionate effect on the quantity of all inputs required to deliver services.	Yes
Service delivery scale	Recognises the additional cost of providing services from police stations in sparsely populated areas.	A State that has more police stations in sparsely populated areas is likely to face greater capital costs per capita.	Yes
National capital	Recognises additional costs incurred by the ACT due to Canberra's status as the national capital.	The national capital allowance is directly linked to police wages.	No
Roads			
Urban road length	Recognises expenses are affected by the non-policy influenced length of urban road networks, proxied by urban populations. Includes National Network Roads.	Roads account for a large part of State physical assets. The disabilities aim to capture interstate differences in road maintenance costs. Road use and length affect the stock of assets. However, different weights are applied to road length and use disability factors in the maintenance costs and infrastructure assessments because the factors affect maintenance and capital costs differently.	Yes, but capital specific weights
Rural road length	Recognises expenses are affected by the length of rural roads. Includes National Network Roads.		
Traffic volume	Recognises the effect on maintenance and traffic management costs of road use.		
Heavy vehicle use	Recognises effects of heavy vehicles on maintenance.		
Local roads	Recognises that some States maintain roads normally managed by local governments.	Factors for local roads and other services do not have implications for State road infrastructure.	No
Other services	Recognises some road related expenses are not affected by length or use.		No

Category/ Disability	Influence or disability being measured	Link between disability and infrastructure	Included in infrastructure
Transport services			
Urban	Recognises differences between States in the average per capita expenses in urban areas of different sizes.	This factor recognises interstate differences in the expenses reflect differences in city sizes. Since the relationship between infrastructure and city size differs from that for net recurrent expenses, the infrastructure relationship is used in the investment assessment instead of the relationship for net recurrent expenses.	Yes, but capital specific
Non-urban	Recognises the effects of different population settlement patterns on State spending on non-urban transport.	This use factor will have a proportionate effect on the quantity of all State inputs required to deliver services. This factor should be applied to physical assets. However, since most of the required assets are owned by public corporations, the factor has a low weight.	Yes
Services to industry			
Economic environment	Recognises interstate differences in the cost of services to industries are related to State population, industry size and the number of establishments.	This use factor will have a proportionate effect on the quantity of all inputs required to deliver services. This factor should be applied to infrastructure.	Yes
Other services			
National capital	Recognises additional costs incurred by the ACT that stem directly from influences that are unavoidable consequences of Canberra's status as the national capital and seat of government.	The allowance is linked to the impact of the National Capital Plan on the ACT's capital works program, road network and planning and development activities. It also recognises the above standard costs incurred by the ACT in operating a leasehold system. It recognises all extra costs, so should not be applied to capital stocks.	No
Natural disasters	Recognises State net expenses on natural disaster relief.	This factor recognises all extra recurrent and capital spending arising from natural disaster relief. It would be double counting if the factor was applied to physical assets.	No

ATTACHMENT 22

WAGES COSTS

Summary of changes since the 2010 Review

- There have been no method changes in this assessment.
- The assessment will be reviewed when new ABS Characteristics of Employees data become available (expected prior to the 2016 Update).

WHAT IS THE WAGE COSTS DISABILITY?

- 1 The wage costs disability recognises that otherwise comparable public sector employees in different States are paid different wages, partly due to differences in labour markets beyond the control of State governments.
- 2 We have assessed a wage costs disability, based upon relative wage levels in States for private sector employees, after allowing for differences in industry structure and workforce attributes.
- 3 A wage costs disability has been assessed in all expense categories, reflecting the extent to which wages contribute to recurrent costs within each category. There is no wage costs disability applied in the infrastructure assessments, as we have measured the cost disabilities in those assessments using an explicit capital cost index derived from the Rawlinson's construction costs index.

The conceptual case

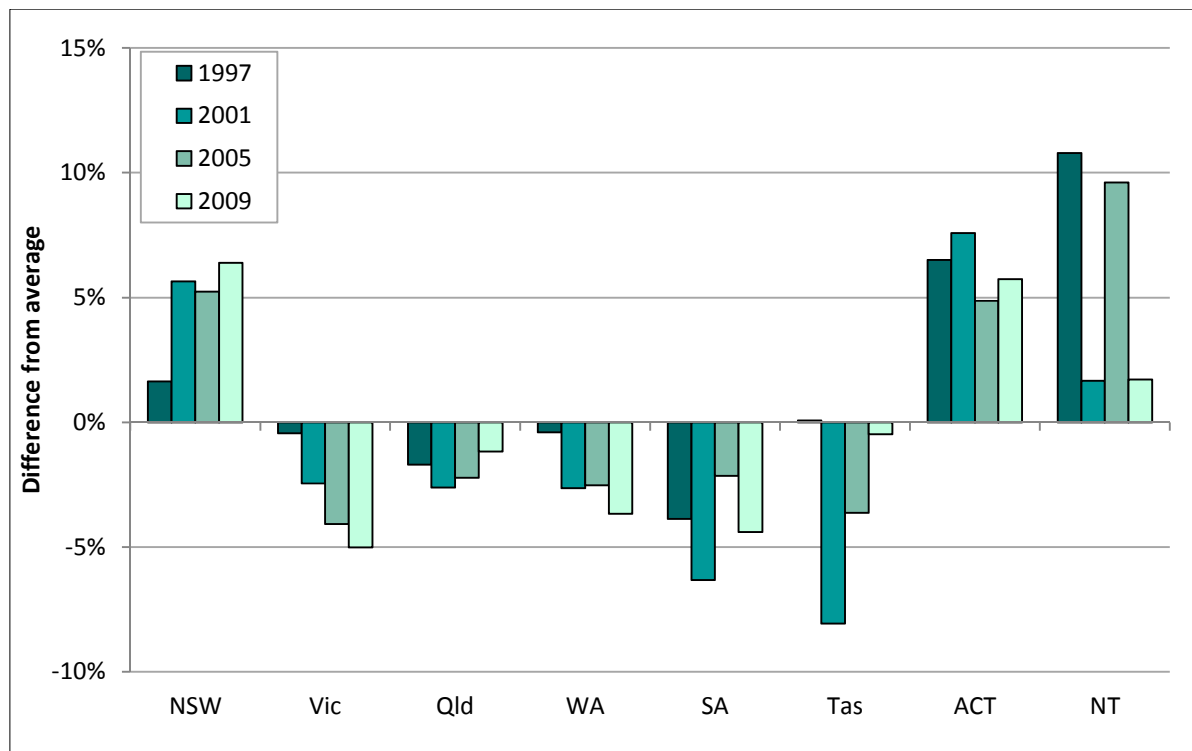
- 4 Wage levels may vary between States because of differences in the attributes of their workforces — a State that has more highly educated and skilled workers may have above average wages. There are also differences in the wages paid to comparable public (and private) sector employees in different States. It is the latter differences that we seek to capture.
- 5 In past reviews, the Commission assessed interstate differences in public sector wages as it considered these differences were partly beyond the control of State governments. The Commission did this on the basis that employers pay different wages for comparable employees in different States, due to differences in the cost of living, the attractiveness or otherwise of the location, or competition for labour.

- 6 In this review we have continued to accept that wages can be influenced by both employee productivity and location effects, and to accept that the influence of location on wages is beyond the control of States and presents a conceptual case for making an assessment of a wage costs disability.

Evidence supporting the conceptual case

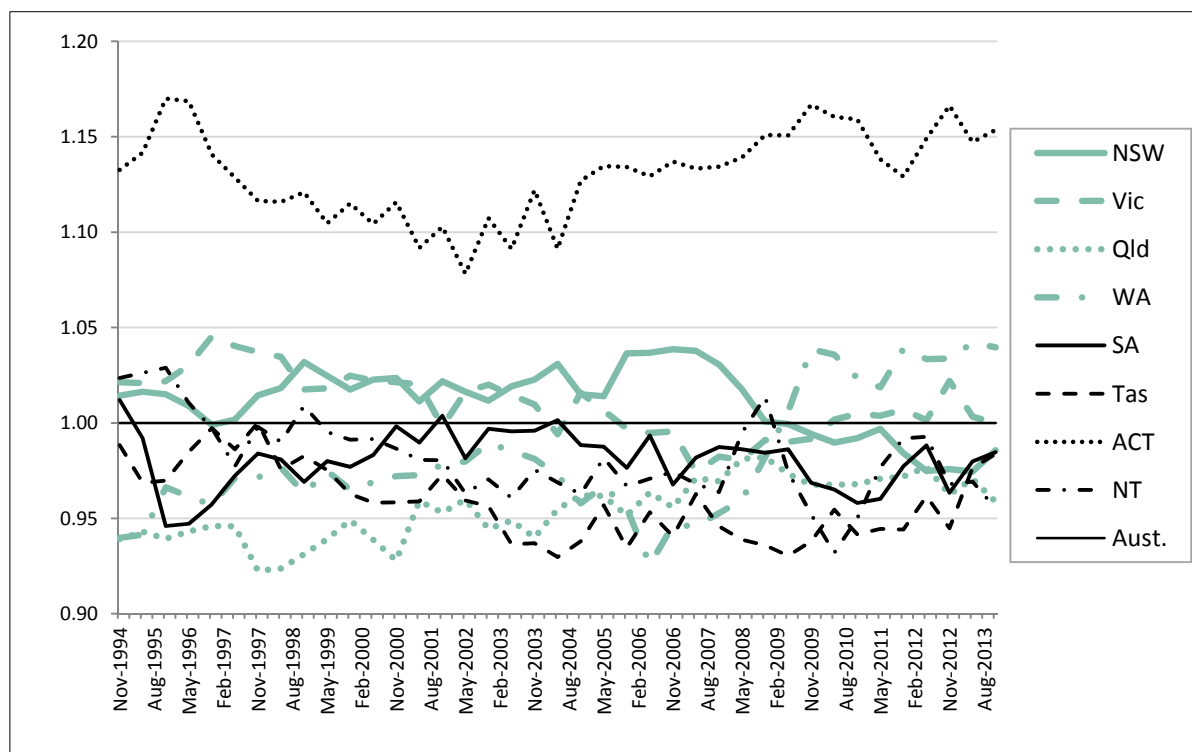
- 7 Figure 1 shows how public sector wage levels for comparable employees can vary considerably between States, using ABS Survey of Education and Training (SET) data from the 2009 survey. It also shows that a variance in public sector wage levels across States has existed over time.
- 8 While these observed differences in public sector wage levels are heavily influenced by State policies, we consider that circumstances beyond the control of State governments also drive some of these differences.
- 9 Some States dispute that wage cost disabilities exist. Victoria and Queensland remain opposed to the wages assessment. They referred to current State policies to suggest that average policy is to limit wage growth to changes in the consumer price index (CPI), or a measure of productivity. However, even if this were the case, the previously existing differences would continue.
- 10 ABS Average Weekly Earnings (AWE) data also indicate that public sector wages have varied persistently over time. Figure 2 shows the relative wage levels across States for full time ordinary time earnings in the public sectors over the 20 years to November 2013. While unadjusted for differences in industry structure, workforce experience and qualifications, public sector wages exhibited a regular 20% differential (or 10% for seven of eight States).

Figure 1 Relative survey of education and training (SET) public sector wage levels



Source: Commission analysis of ABS SET 1997, 2001, 2005 and 2009.

Figure 2 Relative public sector average weekly earnings (AWE) by State

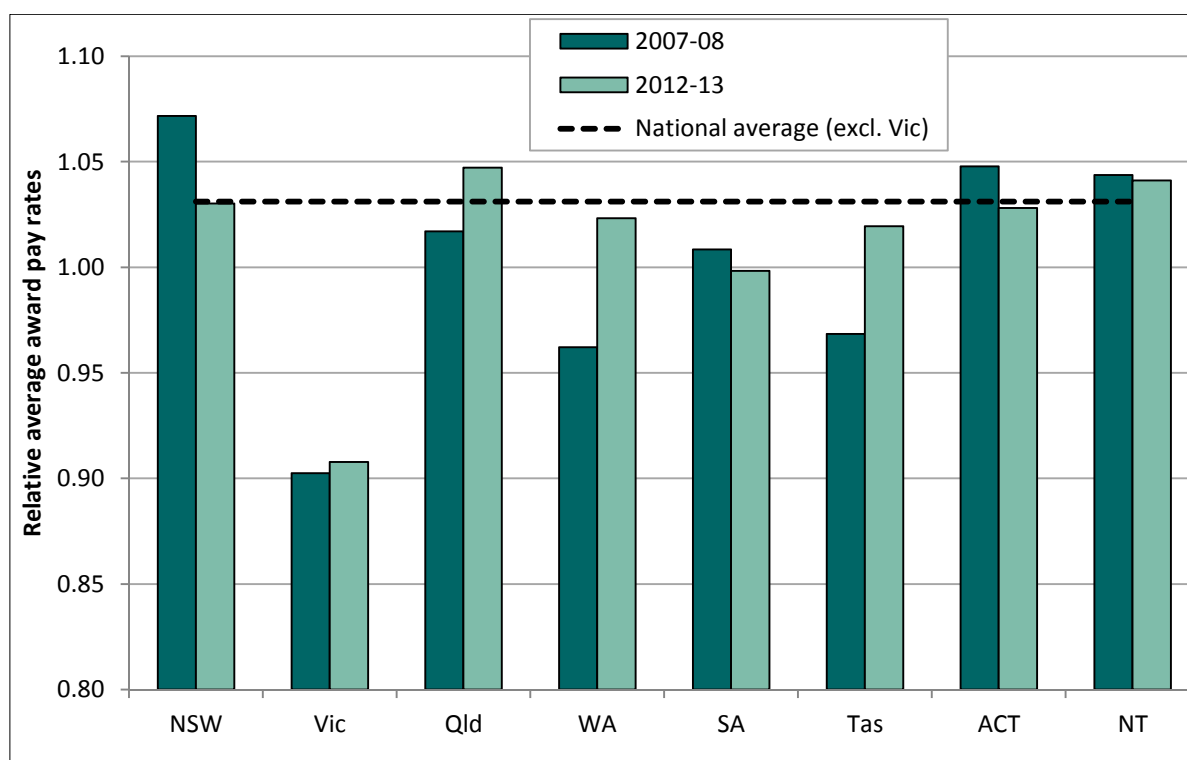


Note: The ACT reflects the concentration of senior Commonwealth public servants in Canberra.

Source: ABS, 6302.1 *Average Weekly Earnings Australia*, November 2013, Tables 14A-14H.

- 11 The AWE data also indicate that States do change their relative public sector wage levels over time. For example, Figure 2 shows that Western Australia moved from having the lowest relative wage levels in May 2006 to having the highest (with the exception of the ACT) by November 2009.
- 12 Some States argued that the Australian public sector labour market is inherently national in nature. This theory presumes employers in different States pay the same wage for comparable employees.
- 13 In the 2010 Review, we showed that award rates of pay for registered nurses varied significantly between States. Figure 3 shows by 2013, these pay rates had converged somewhat, with only Victorian nurses apparently earning significantly less than nurses in other States. While they are not as significant as they were in 2007-08, there are still differences in nursing wage levels across States.

Figure 3 Relative award rates of pay, registered nurses, 2007-08 and 2012-13

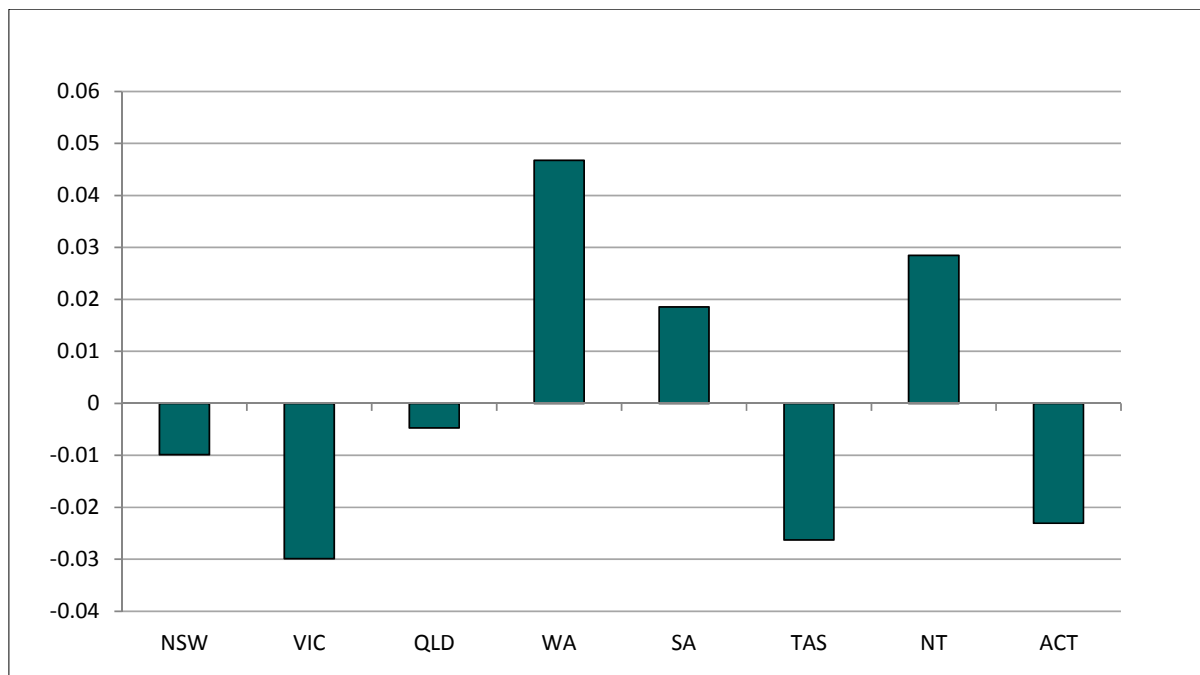


Note: Due to concerns about the comparability of Victorian data, a national average excluding Victoria has been shown, in addition to the national average (relativity of 1).

Source: Australian Nurses Federation, Nurses' Paycheck.

- 14 Figure 4 shows that, as at October 2013, wage levels for comparable public sector teachers also varied across States, with a spread of around 7.5% of the average from lowest to highest.

Figure 4 Relative public sector wage levels for comparable teachers (a), 2013



(a) Low band wage levels for 4-year graduate teachers.

Source: Australian Education Union, Classroom teacher salary rates at October 2013.

- 15 In summary, while for some sectors of the public sector labour force there may be less difference across States in wage levels than previously, there are still differences. Across the entire public sector labour force, neither Figure 1 nor Figure 2 indicates that relative public sector wages are converging. We therefore conclude there has been no clear move to a national labour market.

MEASURING WAGE COSTS

Private sector differences as a proxy for public sector differences

- 16 We cannot directly compare public sector wages across States as this would not be consistent with our policy neutrality principle. It would allow State policies on wage setting to directly influence GST shares. Therefore, as in past reviews, private sector wages have been used as a policy neutral measure of interstate differences in the pressures on public sector wage levels. This assumption is based on the theory that private sector wage levels are freely determined by market driven influences and that public sector wages face these same pressures.
- 17 Figure 5 shows how private sector State relative wage levels for comparable employees can vary considerably between States, using ABS Survey of Education and Training (SET) data from the 2009 survey. We consider this to be compelling evidence

that otherwise comparable private sector employees in different States earn different amounts.

Figure 5 Relative private sector wage level for comparable employees, 2009



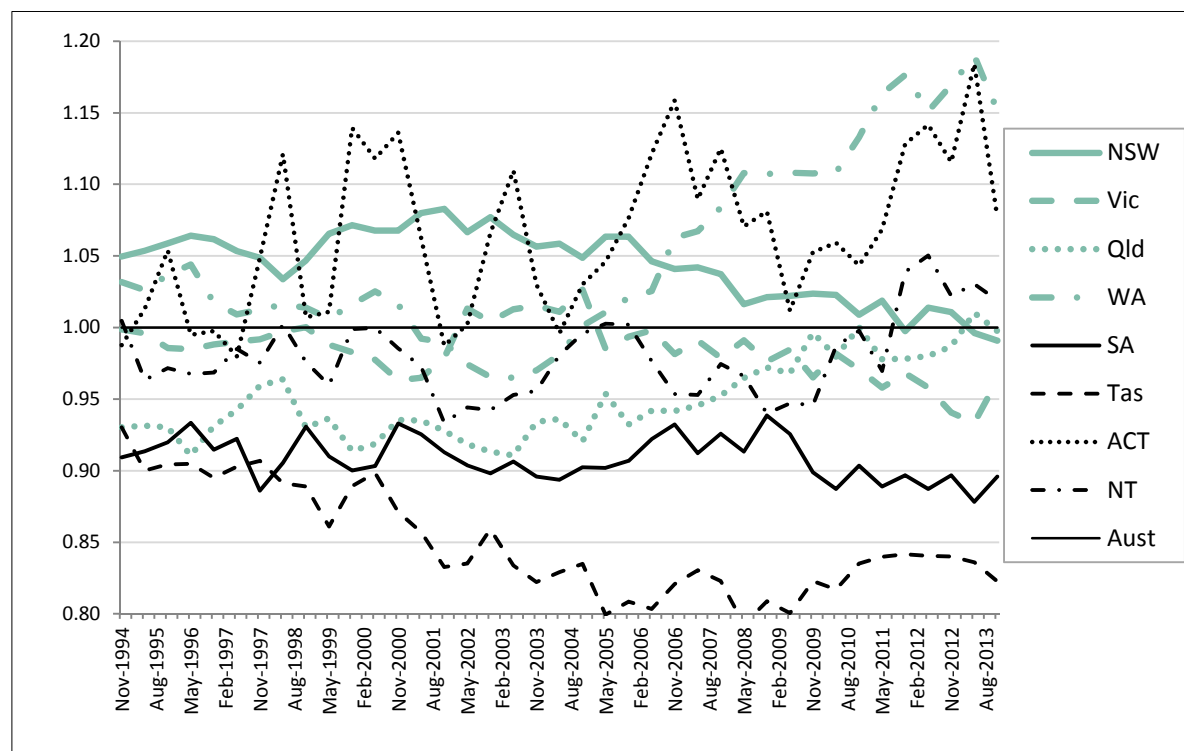
Note: Wage levels are relative to national average wage levels.

Source: SET 2009.

- 18 Like for public sector wages, ABS Average Weekly Earnings (AWE) data indicate that private sector wages have varied persistently over time. Figure 6 shows that the differential across private sector wages has increased by more than that for public sector wages, more than doubling over the 20 years to November 2013, from around 15% to more than 30% over the period. Again, there is no convergence.
- 19 New South Wales, Western Australia, Tasmania, ACT and the Northern Territory said private sector wages are an appropriate proxy for public sector wages.
- 20 New South Wales believes the relationship between public sector and private sector wages holds in the long term, although it shows a weakening link in the 2009 SET. Western Australia said there are pressures that require public sector wages to remain competitive with private sector wages. It also agrees that the link holds in the long term.
- 21 Victoria, Queensland and South Australia did not agree that private sector wages should be used as a proxy. Victoria and Queensland argued that while private sector wages may have some influence on the wage setting process in the public sector, other factors, such as a State's own general wage policy settings, along with wage levels for comparable public sector employees in other States, play a more significant role. South Australia said that while public sector wages are greatly affected by policy

differences across States, for certain employee sub-groups, private sector wages were not 'policy neutral' in respect of State governments, either.

Figure 6 Relative private sector average weekly earnings (AWE) by State



Source: ABS, 6302.1 *Average Weekly Earnings Australia, November 2013*, Tables 14A-14H.

- 22 The AWE data show that movements in public sector wages follow movements in private sector wages. For example, Figure 7 shows that Western Australia moved from having the lowest relative wage levels in May 2006 to having the highest (with the exception of the ACT) by November 2009. This movement lagged a similar upward movement in Western Australia's relative private sector wage levels, beginning a sustained increase from May 2003.

Figure 7 Public and private sector AWE relative to national averages, Western Australia



Note: The public sector line shows the variance to the national average public sector wage while the private sector line shows the variance to the national average private sector wage. The public and private national average wages are not the same.

Source: ABS, 6302.1 *Average Weekly Earnings Australia*, November 2013, Tables 14A-14H.

- 23 Similarly, Figure 8 shows New South Wales' relative public sector wages began declining (from being well above average) from May 2007, lagging a decline in its relative private sector wage levels commencing in November 2005.
- 24 Charts for each State showing their public and private sector AWE relative to national averages are included at Appendix A to this attachment.
- 25 While we accept that, at times, States act in the short term to place limits on public sector wage growth, our observations of the AWE data suggest these actions merely result in lags in public sector wages following private sector wage trends. Our view is that, over time, the link between private and public sector wages holds.

Figure 8 Public and private sector AWE relative to national averages, New South Wales



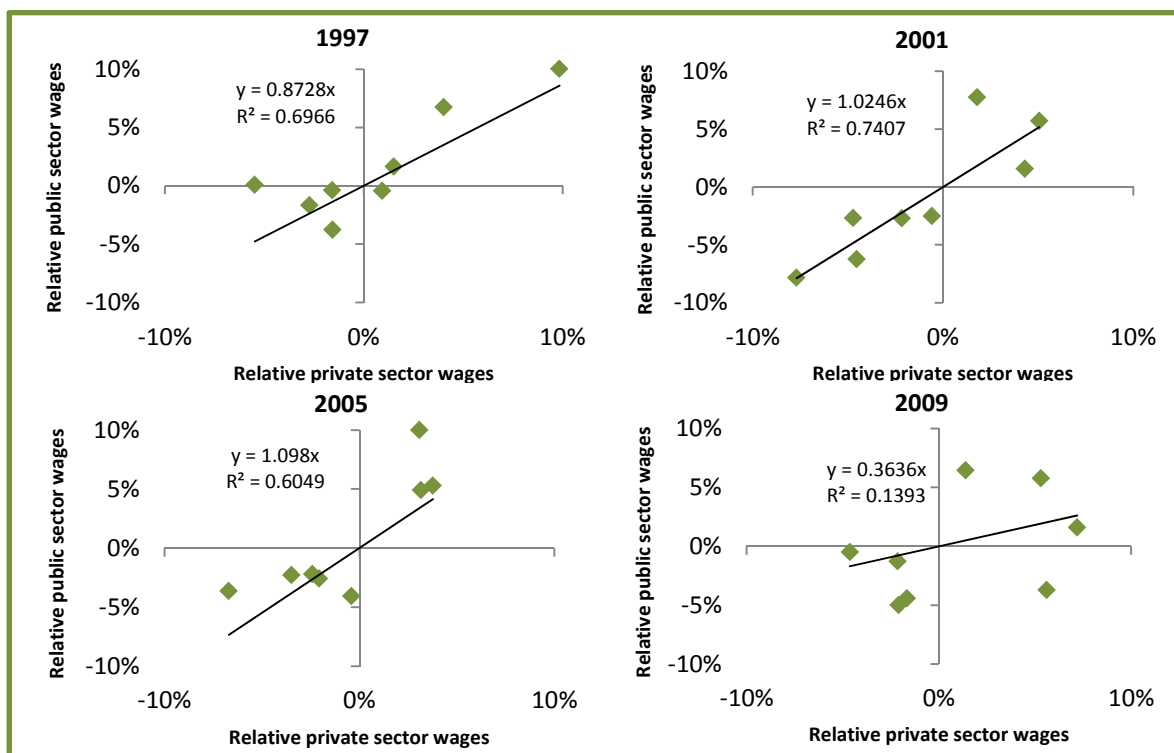
Note: The public sector line shows the variance to the national average public sector wage while the private sector line shows the variance to the national average private sector wage. The public and private national average wages are not the same.

Source: ABS, 6302.1 *Average Weekly Earnings Australia*, November 2013, Tables 14A-14H.

Using a regression model to estimate private sector wage differences between States

- 26 As in the last review, we have estimated wage level differences between States using an econometric model of wages of private sector employees, controlling for differences in workforce attributes such as industry, occupation, qualifications and experience. Until more recent data become available we will continue to use the 2009 SET data in the regression analysis. We have updated the State differences from the SET regression using the relative change in the ABS's private sector Labour Price Index (LPI).
- 27 Data from the SET in 1997, 2001 and 2005 have shown that States where private sector wages were above average also had above average public sector wages. We considered this general relationship to be consistent with the proposition that the same underlying factors affect relative wages for both sectors. We observed that the correlation weakened in the 2009 SET, but consider that a relationship between public and private sector wages has been maintained.
- 28 The SET relationships are shown in Figure 9 below.

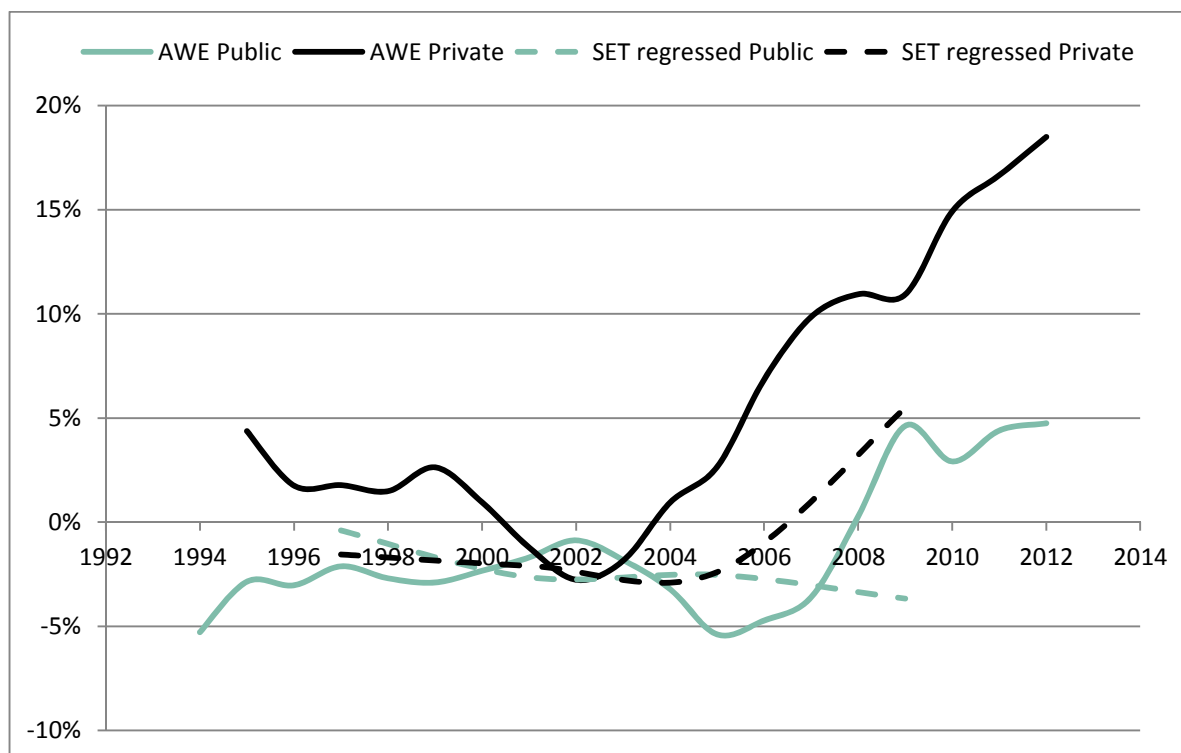
Figure 9 Comparison of relative wages levels in public and private sectors as measured by SET



Source: Commission analysis of ABS SET 1997, 2001, 2005 and 2009.

- 29 Western Australia has raised concerns with the accuracy of the SET whole-of-State analysis. It said the weakening relationship between public and private sector wages in 2009 SET, partly attributed to Western Australia's below average public sector wages, was because the 2009 SET have understated the public sector wage levels in Western Australia. It referred to other data sources that suggest:
 - SET private sector results are conservative for Western Australia
 - Western Australian public sector wages are comparatively higher than the SET analysis indicates.
- 30 Queensland provided a copy of a report it had prepared by its Statistician's Office. The major point in the report was that the slope of the line of best fit for the relationship between public and private sector wages was not statistically different from zero in 2009 (implying no difference in public sector wages).
- 31 Figure 10 shows the relationship between the relative wage outcomes based upon SET and AWE data for Western Australia. While the levels differ (due in part to the standardisation controls applied to the SET data), the two sets of results are consistent in the trend direction for private sector wages. We have observed that for all States, there is a trend consistency between SET and AWE for relative private sector wages. The SET and AWE comparison charts for all States are included at Appendix B to this attachment.

Figure 10 Western Australia wage levels relative to national averages, SET and AWE



Source: ABS SET and AWE, various years.

- 32 However, the same is not always the case for relative public sector wages. Consistent with Western Australia's argument, the 2009 SET does not appear to have picked up the increase in public sector wages observable in the AWE data. While this may contribute to the weakened relationship observed in 2009, the public sector results have no effect on the wages assessment, which is based upon the private sector regression results.
- 33 New South Wales questioned whether all the variables currently standardised to remove their impact on interstate wage differentials should be standardised. These factors, beyond the control of States, could simply be part of the fundamental differences between States. However, New South Wales supports continuing to use the 2009 SET updated by LPI until data from the new ABS Characteristics of Employees survey (COE) are available.
- 34 Conceptually, the optimum approach would be to measure wage differences of private sector employees with characteristics similar to public sector employees. Such an approach would mean that the assessment would reflect the pressures faced by States on wages for the types of people employed by States. However, there are data reliability and policy neutrality issues in pursuing an approach of identifying private sector workers comparable to public sector workers. The effect of reducing the utilised SET sample under such an approach, as argued by South Australia, would

increase the sampling errors, and potentially introduce policy neutrality concerns in certain segments of the labour force.

- 35 The current econometric model using SET data represents a 'next best' alternative. By measuring wage differences after controlling for differences in workforce attributes such as industry, occupation, qualifications and experience, it benchmarks State differences against the 'average' State, with the average industry structure, the average distribution of occupations and the average workforce qualifications and experience. Including only the private sector in the model maintains policy neutrality.
- 36 On balance, we consider that the SET approach remains the most preferable. The assessment needs to standardise for influences outside the control of States. The comparable employee concept is important. While not able to include only those private sector workers comparable to public sector workers, the current approach does standardise to the average private sector profile.
- 37 We have continued to use the 2010 Review regression model, which includes 219 variables.¹ Because the SET includes a relatively large number of observations, the standard errors for each variable are not particularly sensitive to increases in the number of variables. However, it is important to ensure each variable retains theoretical relevance and assists in controlling for variation in wages.
- 38 While it is likely that the model can be simplified without losing any of its explanatory power, by reducing the number of variables, most States supported maintaining the current model. The Commission intends to further consider whether the regression model can be simplified when the more timely COE data become available.² On current timetables, these data should become available in 2015, to be first applied in the 2016 Update.

Capital city or whole of State?

- 39 We considered assessing interstate wage differences using private sector capital city wages as a proxy for public sector wages, but have not done so in this review.
- 40 In determining wage levels, a State must consider the wage level which will allow it to recruit staff in most areas of the State. In most States, the capital cities have the highest private sector wage level. To compensate for the relative unattractiveness of more remote locations, loadings and or other allowances (such as housing) may be provided. In States where regional private sector wages are particularly high (such as

¹ This number includes all dummy variables within each category and all female interaction variables.

² The COE data will provide an enhanced replacement for SET data. The increased sample size of COE will reduce the uncertainty of any modelling and the annual collection will remove the need for updating using LPI. The latest advice from the ABS is that the COE survey remains on track with regard to timing, scope and sample size.

Western Australia), public sector employees are offered regional loadings. We have not observed any State paying a loading to employees in its capital city.

- 41 New South Wales and Victoria supported the use of capital city wages. New South Wales said wage negotiations for Sydney-based employees exert a strong influence on public sector wages across the State. It agrees that, provided data of sufficient quality are available, using capital city wages as the proxy for public sector wages makes sense since capital city wages pressures are reflected across States. Victoria said using capital city wages as a proxy is more in line with 'what States do'. Tasmania and the Northern Territory also supported the proposal.
- 42 Queensland, Western Australia, South Australia and the ACT did not support the approach.
- Queensland said the assumptions we have made on 'what States do' are not valid. It said the determination of public sector wages is complicated, and affected by a number of factors, such as the current fiscal environment, the strength of bargaining parties and wage levels of other States. Queensland said there is not enough evidence to justify a significant change to methodology by assuming that a single factor – private sector capital city wages – is the primary determinant of public sector wage setting.
 - Western Australia considered the SET model already struggles to reflect whole-of-State wage differentials, and that introducing a capital city/rest-of-State distinction simply compounds the reliability problems with the SET analysis.
 - South Australia said limiting the sample to capital cities increases uncertainty further. It also said a capital city assessment will not capture the wage influence of regional areas and it believes a State specific regional cost assessment will not capture these influences.
 - The ACT said there is insufficient evidence to support a methodology change to capital cities.
- 43 While we are attracted to the use of capital city wage levels on a conceptual basis, because it seems more consistent with what States do, we recognise that a new COE data set will become available in 2015, in time for the 2016 Update. This will have a substantially larger sample size than the SET and will be conducted annually. These two improvements should allow us to more confidently explore whether capital city, with or without regional loadings, or whole of State wage levels are a better proxy for differences in public sector wage level differences. As with the simplification of the regression, the Commission intends to further consider this issue when the more timely COE data become available.

Adjustments to the SET results

- 44 In previous reviews, adjustments were made to the modelled outcomes for Tasmania and the ACT to allow for special features of the data and the labour markets in those States.
- 45 After the release of 2009 SET, the Commission decided to discontinue the 25% discount applied to Tasmania's wage factor because Tasmania's private sector wages appeared to be a good proxy for measuring wage pressure faced by the Tasmanian Government. We retain the view that private sector wages remain a good proxy. The atypical structure of Tasmania's private sector is what the regression is designed to account for.
- 46 An adjustment was made to the ACT because SET data did not differentiate between Commonwealth and ACT government wages, so the former could not be included with ACT private sector wages. We continue to consider the omission of Commonwealth wages affects the outcome for the ACT and have again increased its wage relativity by 1%.
- 47 At the time of self-government, many ACT and Northern Territory government employees were members of the Commonwealth Superannuation Scheme (CSS), which was a more generous scheme than those offered by State governments. In the 2010 Review the Commission allocated superannuation expenses to individual categories and adjusted the interstate wage assessment for extra costs.
- 48 While declining in its effect, as the number of current employees who are also members of the CSS declines, the CSS adjustment applied to the ACT and the Northern Territory represents a material non-policy influence on the wage costs States face. As such, we have continued to apply this adjustment.

Where are wage costs disabilities applied?

- 49 Wage costs disabilities have been assessed in all expense categories, weighted to reflect the proportion of expenses attributable to labour costs. Wage costs disabilities have not been assessed in the Infrastructure category, as we have measured the cost disabilities in those assessments using an explicit capital cost index derived from the Rawlinson's construction costs index.

Discounting

- 50 In the 2010 Review, the Commission decided to apply a 12.5% discount to the private sector wage relativities derived from the SET analysis, to reflect a low level of uncertainty around whether the SET data are sufficiently reliable, the econometric model controls for all relevant factors and that private sector wages are a good proxy for the pressures on public sector wages. The 2009 SET results post-date this decision.

- 51 New South Wales and the Northern Territory said that a discount should either not be applied, or at least not be increased from the current low level discount (12.5%). Victoria said the discount should be increased substantially if the assessment is to be retained. Queensland, South Australia and Tasmania said the discount should be increased, as the SET data were no longer reliable due to their age and thus increased uncertainty. Tasmania, ACT and the Northern Territory agreed that the level of discount should be reconsidered as new data become available.
- 52 We share States' concern that the 2009 SET data are quite dated, but consider there is no better alternative. If public sector wages are now capped to various measures of inflation, the differences which existed at the time of the 2009 SET are likely to persist. In addition, there is no clear evidence on why the relationship between public and private sector wages observed in the 2009 SET is weakening. As a result, we do not consider an increase in the discount to be justified at this time.
- 53 However, the annual update guidelines allow us to change a discount in response to new data. We anticipate that the quality and contemporaneity of the data may change considerably during the review period. We will reconsider an appropriate discount at that time.
- 54 In addition, the nature of the relationship between public and private sector wages may also change. Therefore, as more data become available, we will decide the appropriate discount in each year of the review period.

CALCULATING THE WAGE COSTS FACTOR

- 55 The wage costs factor was derived from the State coefficients for whole of State relative private sector wages, output from the regression model based upon the 2009 SET data. Table 1 shows these coefficients. The coefficients represent the degree to which wages for comparable employees in each State differ compared to the reference State of Tasmania. The coefficients indicate that private sector wages are highest in Western Australia and the Northern Territory, and to a lesser extent New South Wales and the ACT.

Table 1 SET regression model coefficients (a), 2009

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
Coefficient	0.061	0.026	0.026	0.102	0.031	0.000	0.099	0.117

(a) State coefficients are expressed as natural logarithms of relative private sector wages.

Source: Commission calculation.

- 56 The raw factors were derived as the exponent of the SET regression coefficients. We then adjusted the ACT's factor up by 1% for Commonwealth influences.

- 57 We have applied the relative growth in the Labour Price Index (LPI) from the SET survey year to the assessment year for each State. To allow for concerns about data quality and changes in the relationship between public and private sector wages since the SET year, these factors were discounted using the low discount (12.5%).
- 58 We subsequently increased the wage costs in the ACT and the Northern Territory by up to a half of 1% to allow for the higher costs they incur because some of their employees are members of the Commonwealth Superannuation Scheme.
- 59 Table 2 shows the process for 2012-13.

Table 2 Interstate wage cost factor calculation, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Average
Adjusted raw factor	1.014	0.979	0.978	1.056	0.983	0.953	1.062	1.072	1.000
Indexed by LPI	1.010	0.977	0.978	1.072	0.977	0.954	1.053	1.076	1.000
Discounted	1.009	0.980	0.981	1.063	0.980	0.959	1.046	1.067	1.000
CSS adjustment	1.000	1.000	1.000	1.000	1.000	1.000	1.003	1.005	
Final Factor	1.009	0.980	0.981	1.063	0.980	0.959	1.049	1.072	1.000

Note: Interim factors are rescaled so as to generate an average of one. Where the average factor is shown as one, the State factors shown are the rescaled factors.

Source: Commission calculation.

Wages proportions of expense categories

- 60 We have calculated the wage proportions of direct service delivery expenses using data from ABS Government Finance Statistics (GFS).
- 61 We assumed that any grants and subsidies in a category had the same wage — non-wage cost structure as that category's direct expense. For example, the wages proportion of grants to non-government schools was assumed to be the same as that for government schools costs.
- 62 We will need to obtain data on the wages paid by State owned public non-financial corporations, as part of bringing the activities of transport and housing public non-financial corporations within scope of HFE. These data will be included in the final report.
- 63 Table 3 shows the proportion of category expenses to which wage cost disabilities are applied. These proportions were obtained by averaging GFS data for the three years 2009-10 to 2011-12. The proportions shown are placeholders, as we will recalculate the average over the three years 2010-11 to 2013-13 once these GFS data are finalised. If the annual proportions remain relatively stable over the three years, we consider it will be unnecessary to update the proportions in future updates.

Table 3 Proportion of wages by expense category, 2009-10 to 2011-12

	Wage expenses	Non-wage expenses	Proportion wages	Assessed proportion
	\$m	\$m	%	%
Schools education	21 855	8 353	72	72
Post-secondary education	3 741	1 802	67	67
Health	31 717	16 294	66	66
Housing (a)	1 128	2 392	32	32
Welfare (a)	3 239	6 867	32	32
Services to communities	1 540	2 970	34	34
Justice	10 831	4 385	71	71
Roads (b)	1 599	4 845	25	58
Transport (b)	497	3 919	11	58
Services to industry	2 821	2 684	51	51
Other expenses	6 824	15 838	30	30
Total (ex. Roads and Transport)	83 697	61 584	58	58

(a) Wage and non-wage expenses for Welfare and Housing will be updated once GFS data are finalised.

(b) The assessed proportion for Roads and Transport has been set to the average of the other categories.

Source: ABS GFS data, Commission calculation.

WHAT IS THE IMPACT ON THE GST DISTRIBUTION?

64 Table 4 shows the extent to which the assessment would move the distribution of GST away from an equal per capita distribution. The assessment shows New South Wales, Western Australia, ACT and the Northern Territory are assessed as needing to spend more per capita to deliver services because of wage costs.

Table 4 Illustrative impact on the GST distribution of the wages costs assessment

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Dollars million	289	-512	-394	701	-150	-93	83	77	1 149
Dollars per capita	39	-90	-85	283	-90	-182	220	321	50

Note: The difference from an equal per capita assessment derived using 2012-13 assessed expenses.

Source: Commission calculation.

CHANGES SINCE THE 2010 REVIEW

65 There have been no changes to this assessment. This is largely because we consider it premature to make changes at this time. The SET data are old and the collection has been discontinued and we do not yet have available the replacement data set, the COE. When this becomes available, we will reconsider whether the disability

continues to exist, and if it does, the model used to measure it, whether wage levels should be based on whole of State or capital cities, whether a State specific regional cost allowance is required and the appropriate level of discounting.

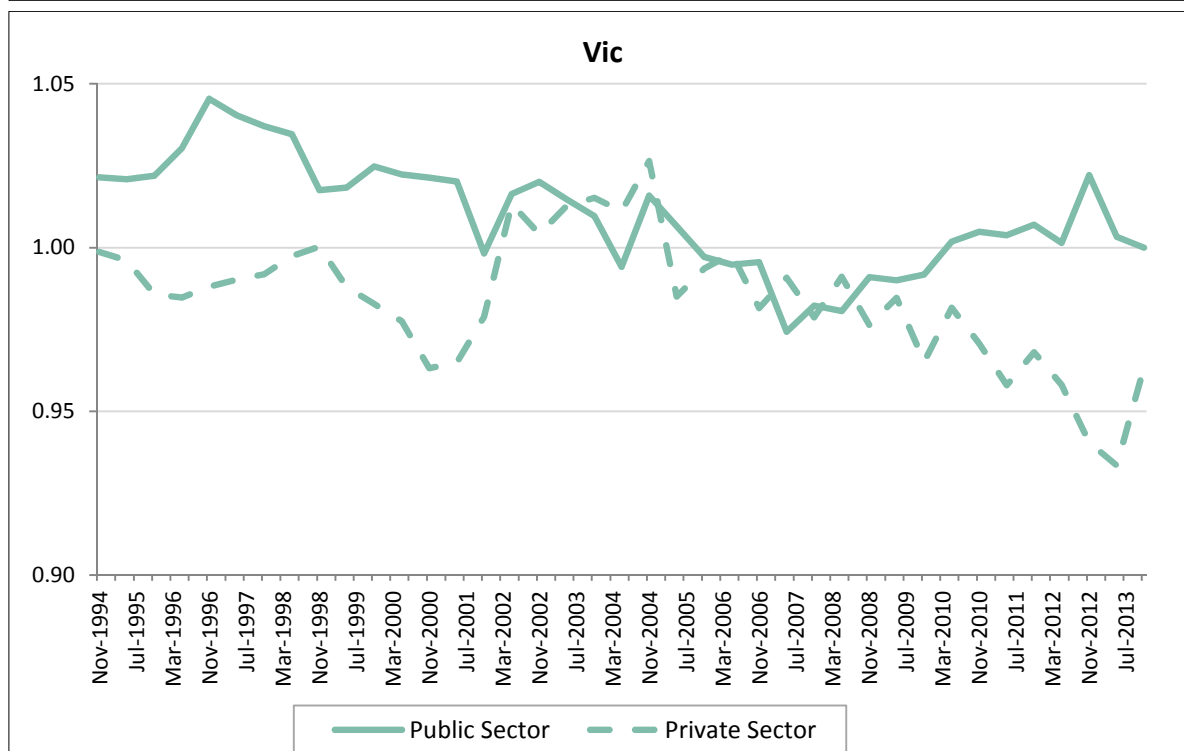
FURTHER INFORMATION

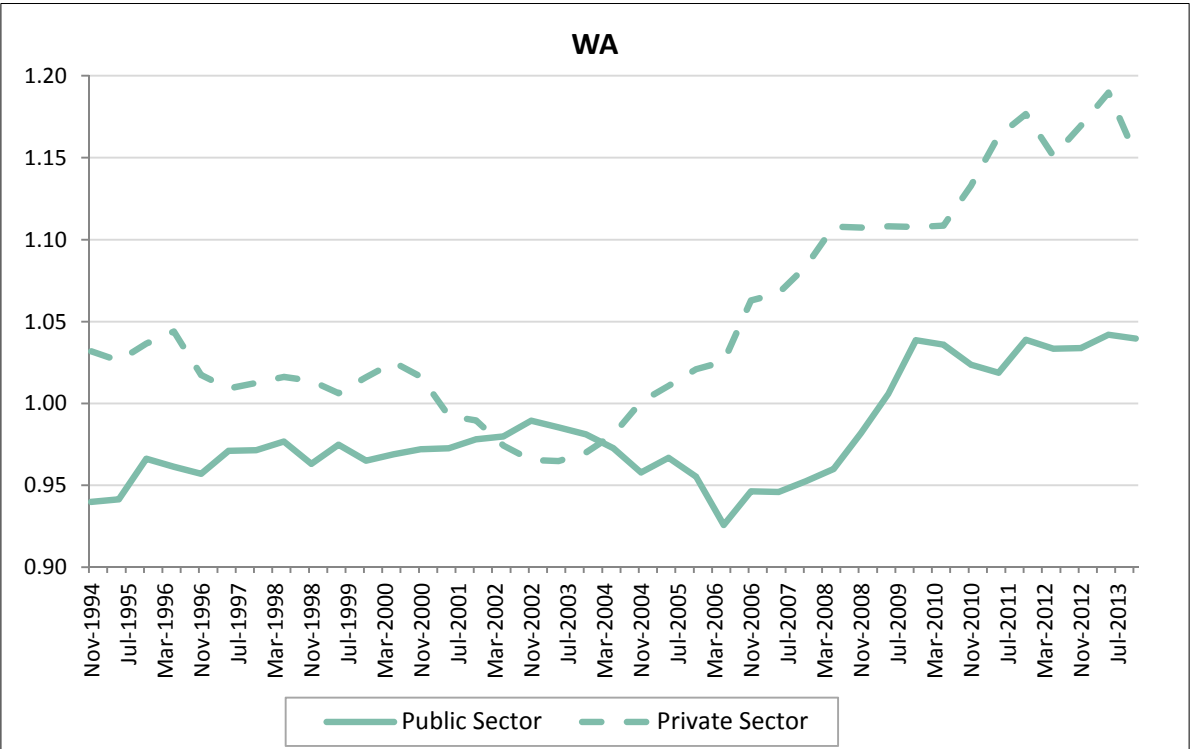
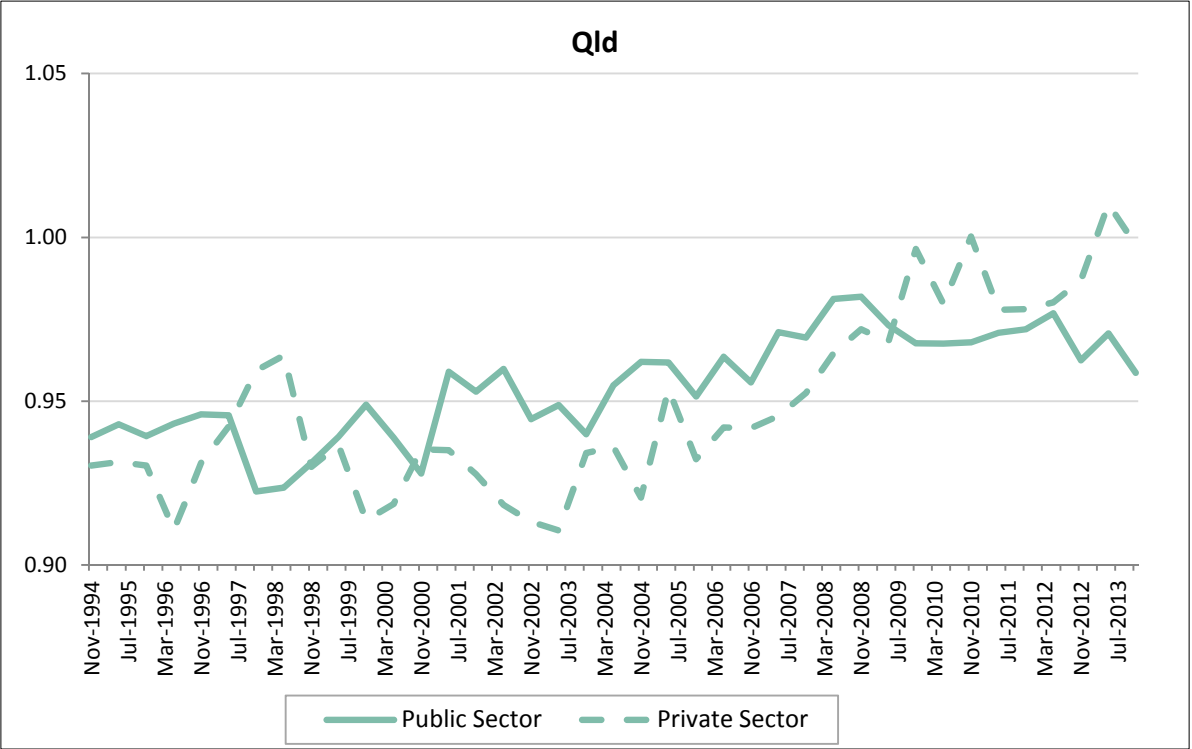
66 Background material in support of this assessment is published on the Commission's website. That material includes the following documents, released for comment in the development of this assessment, together with State submissions responding to those documents.

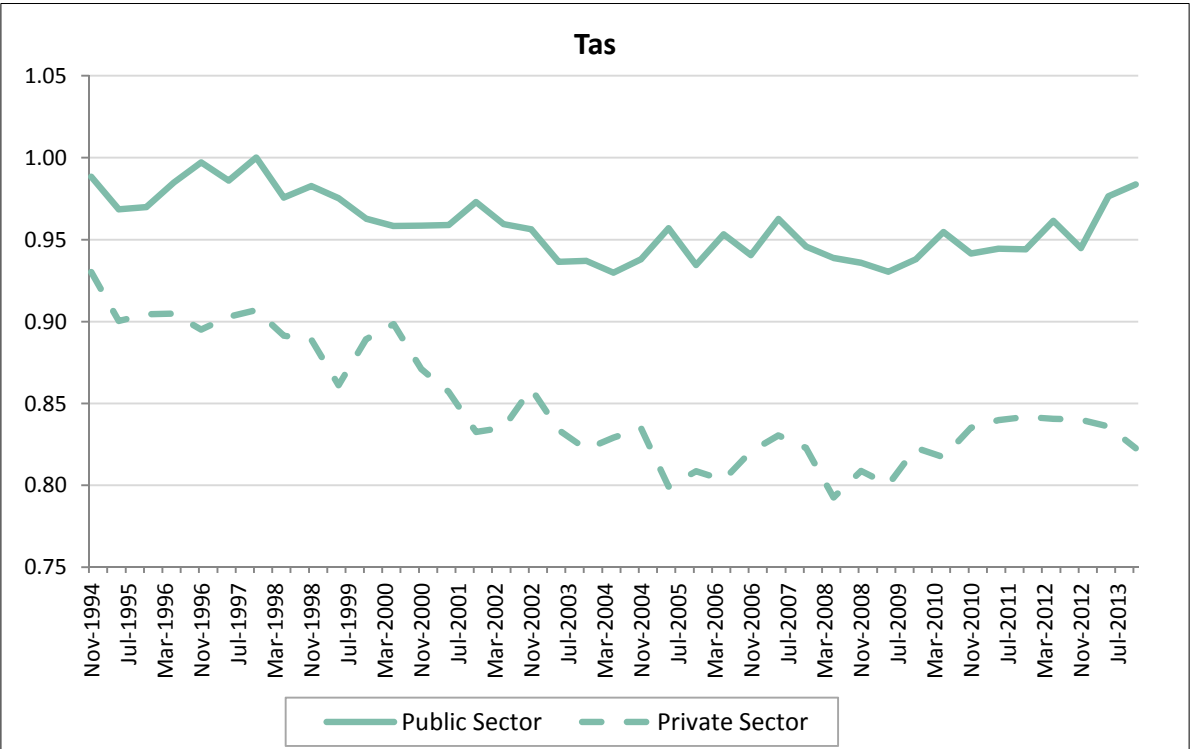
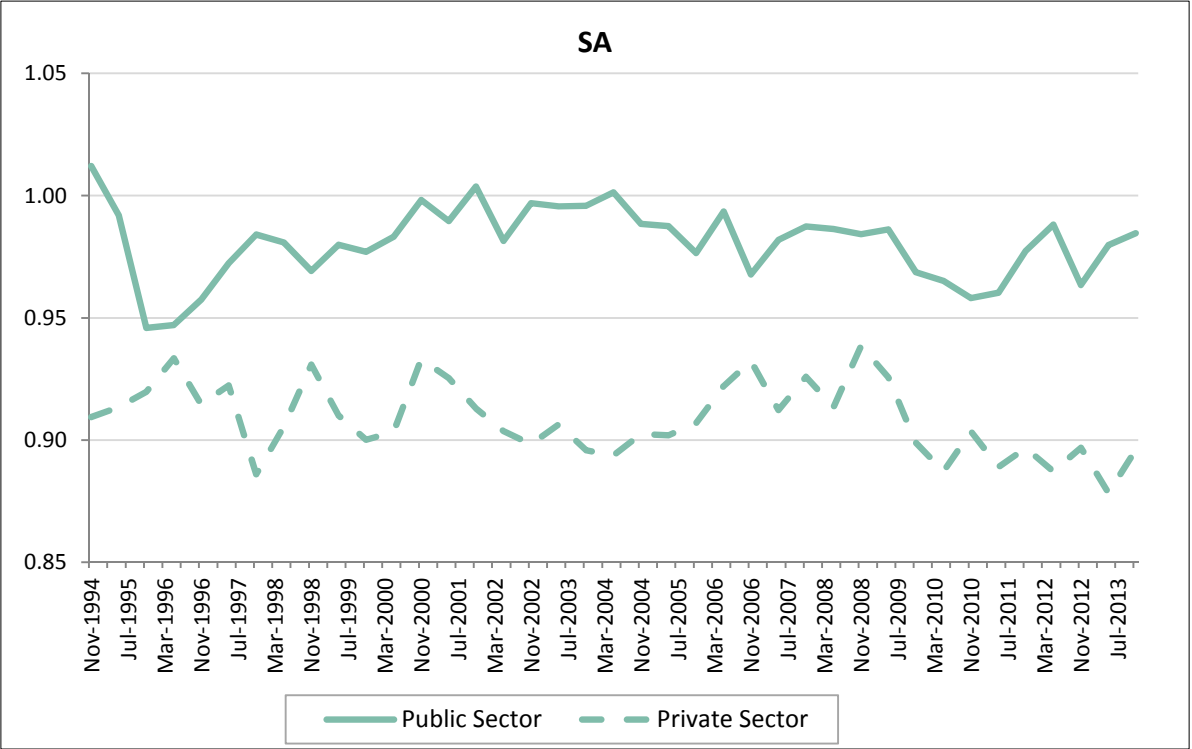
- Staff Discussion Paper 2013-01S *Proposed assessments*
- Staff discussion paper 2014-01S Simplifying the interstate wages regression model.

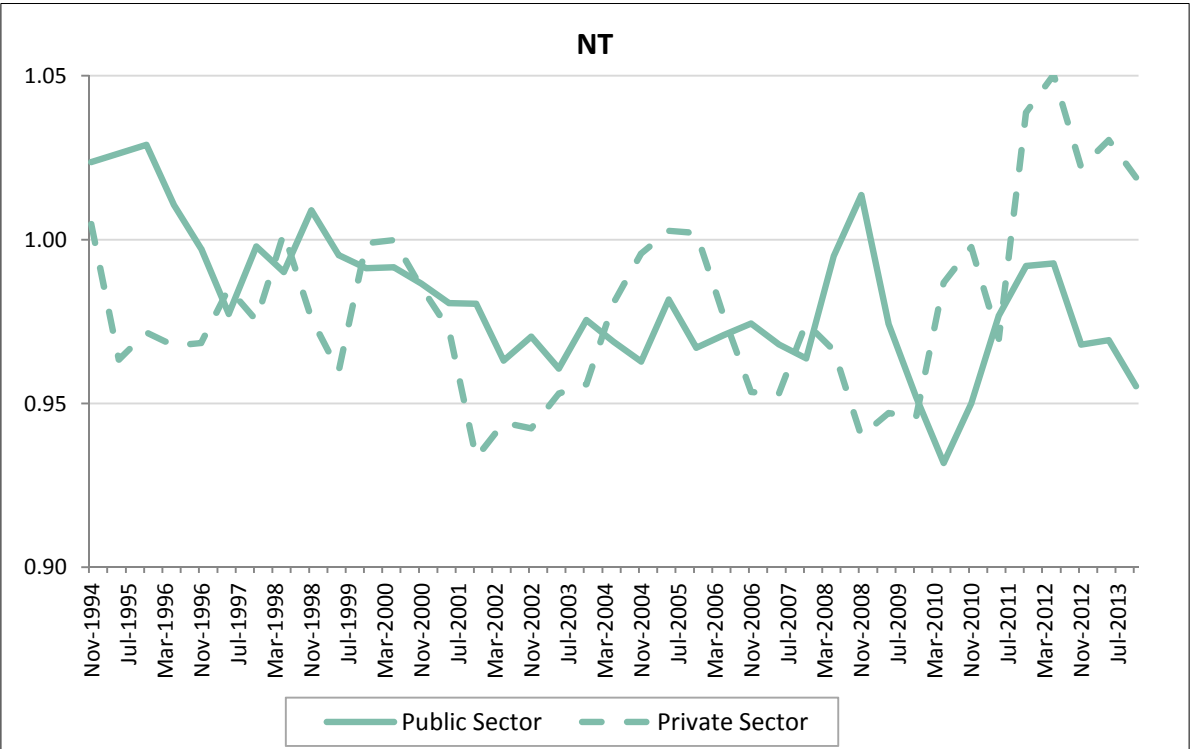
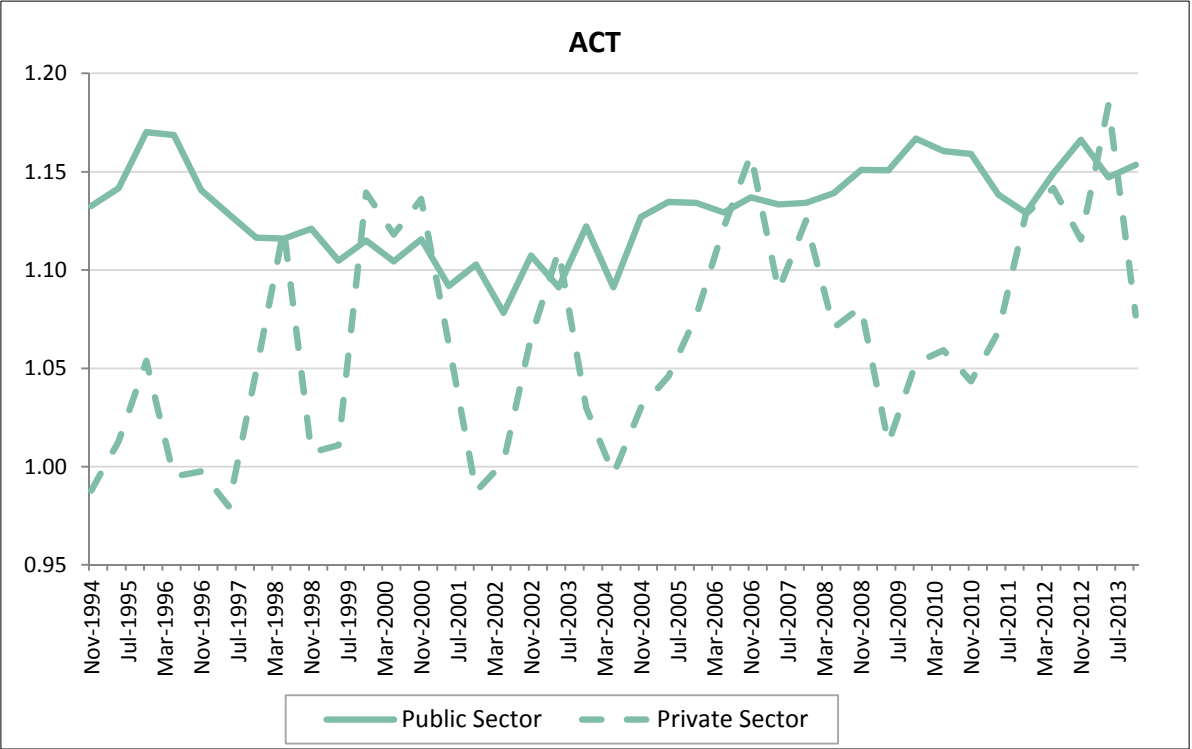
APPENDIX A: PUBLIC AND PRIVATE SECTOR AWE RELATIVE TO NATIONAL AVERAGES, BY STATE

Source: ABS, 6302.1 *Average Weekly Earnings Australia*, November 2013



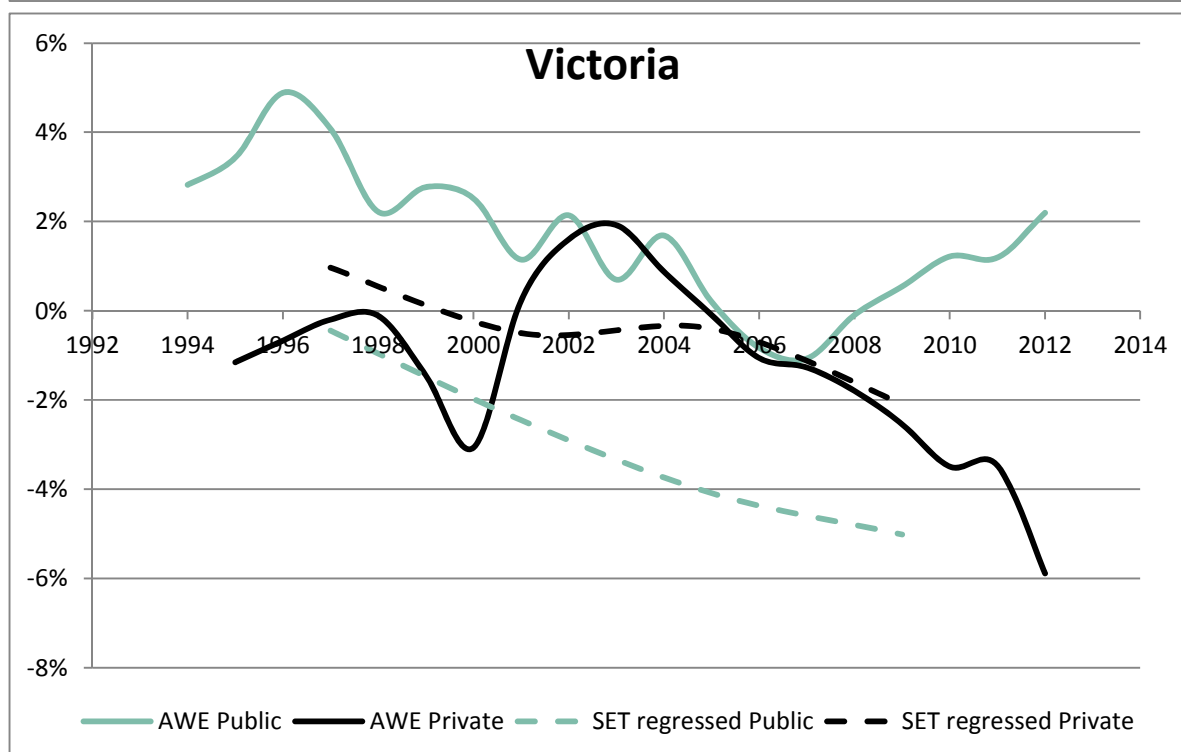
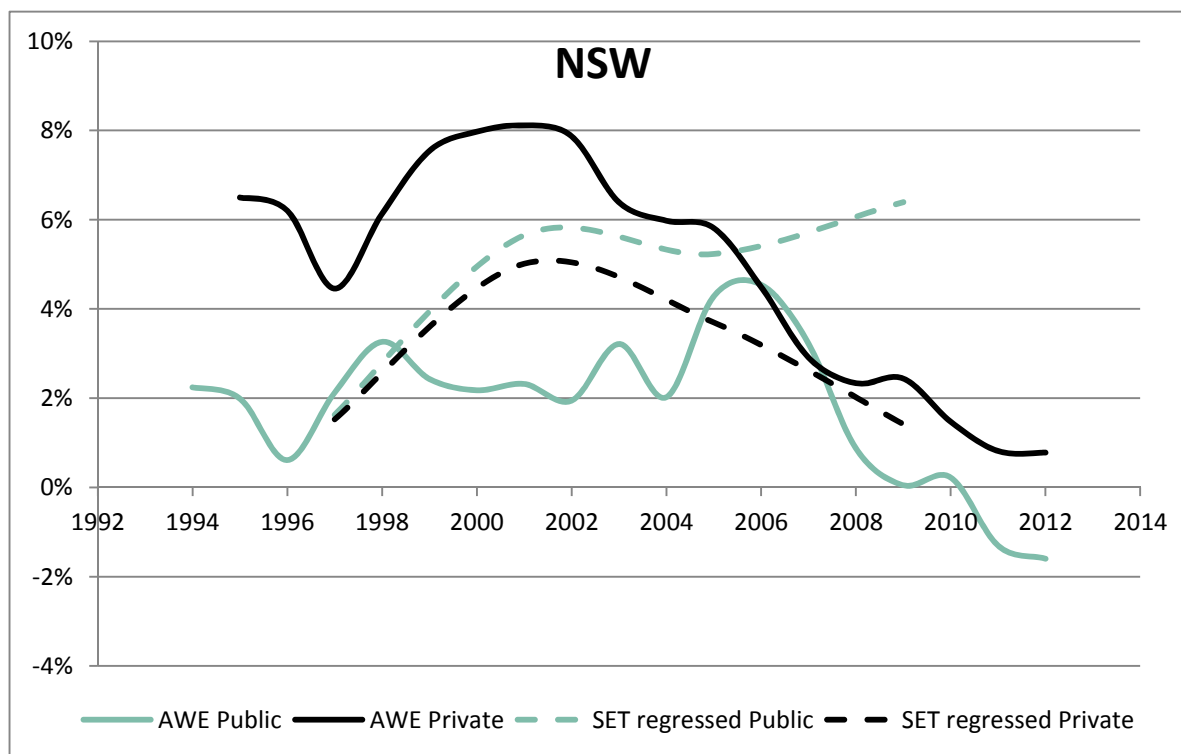


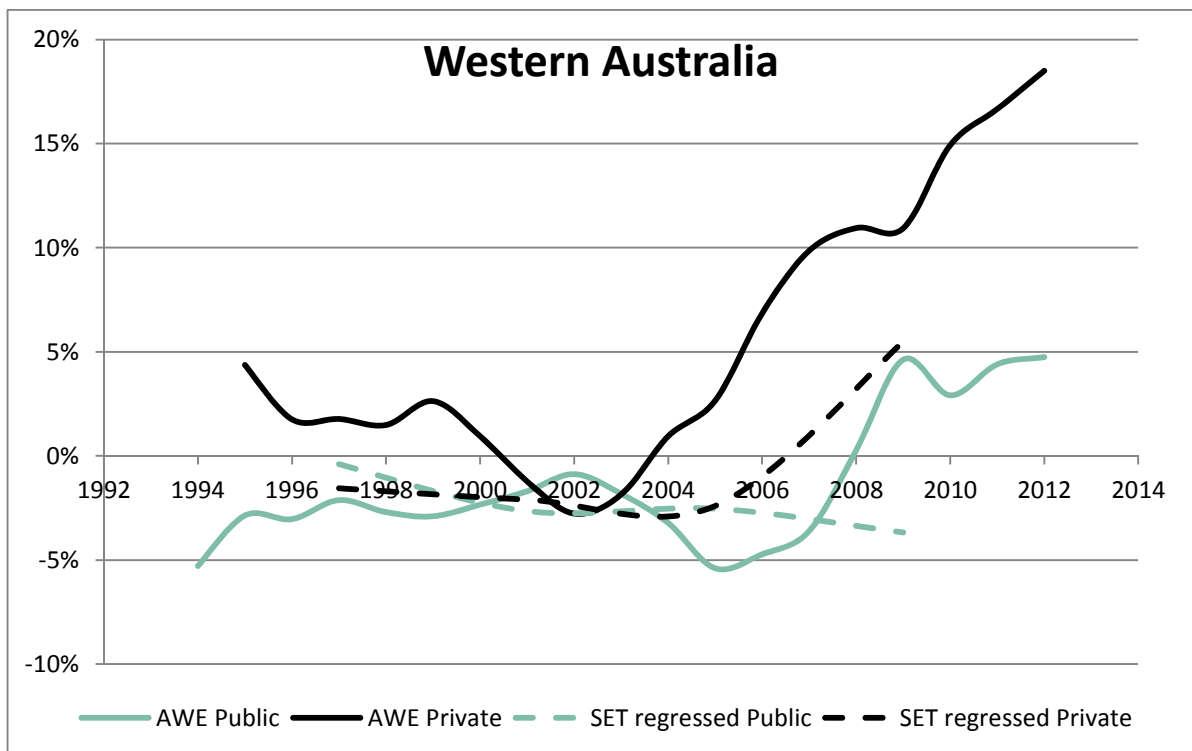
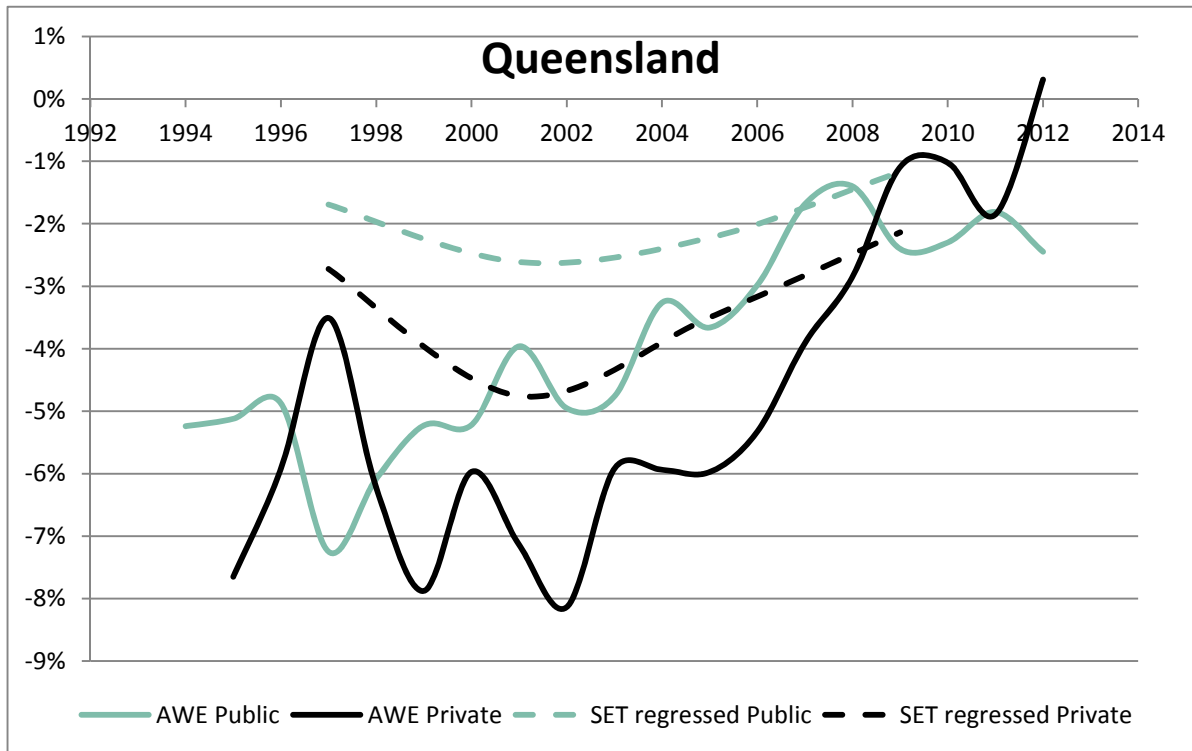


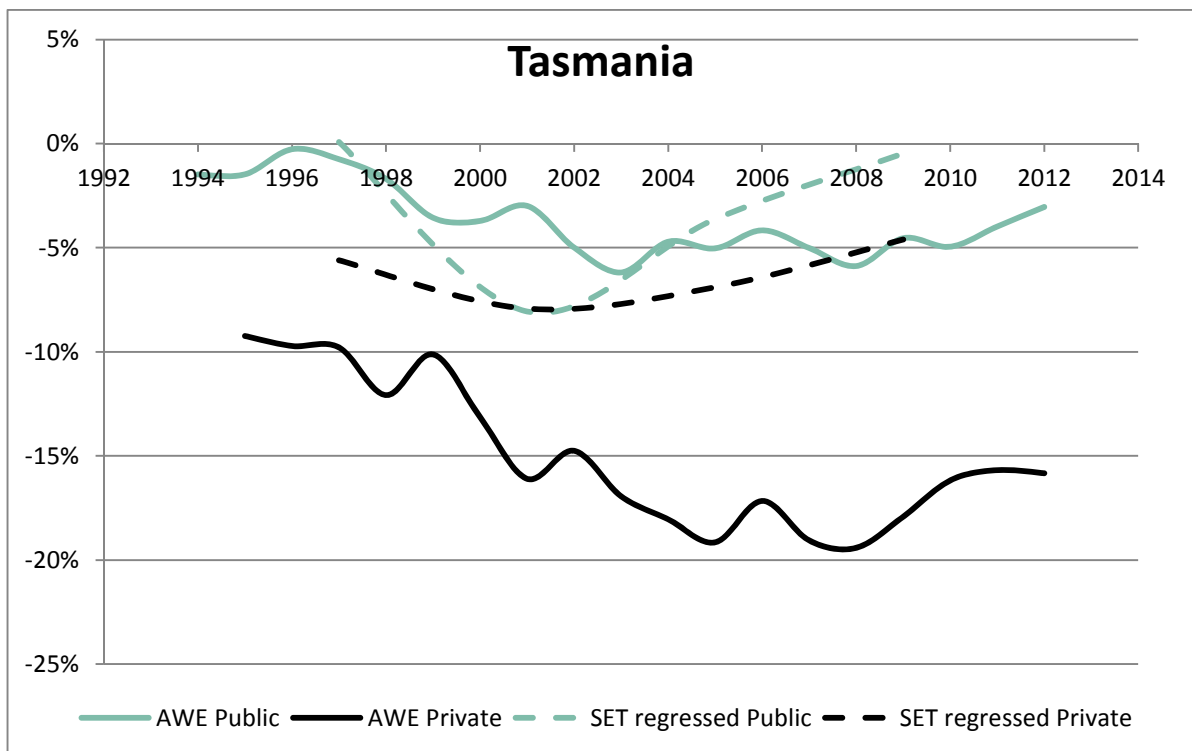
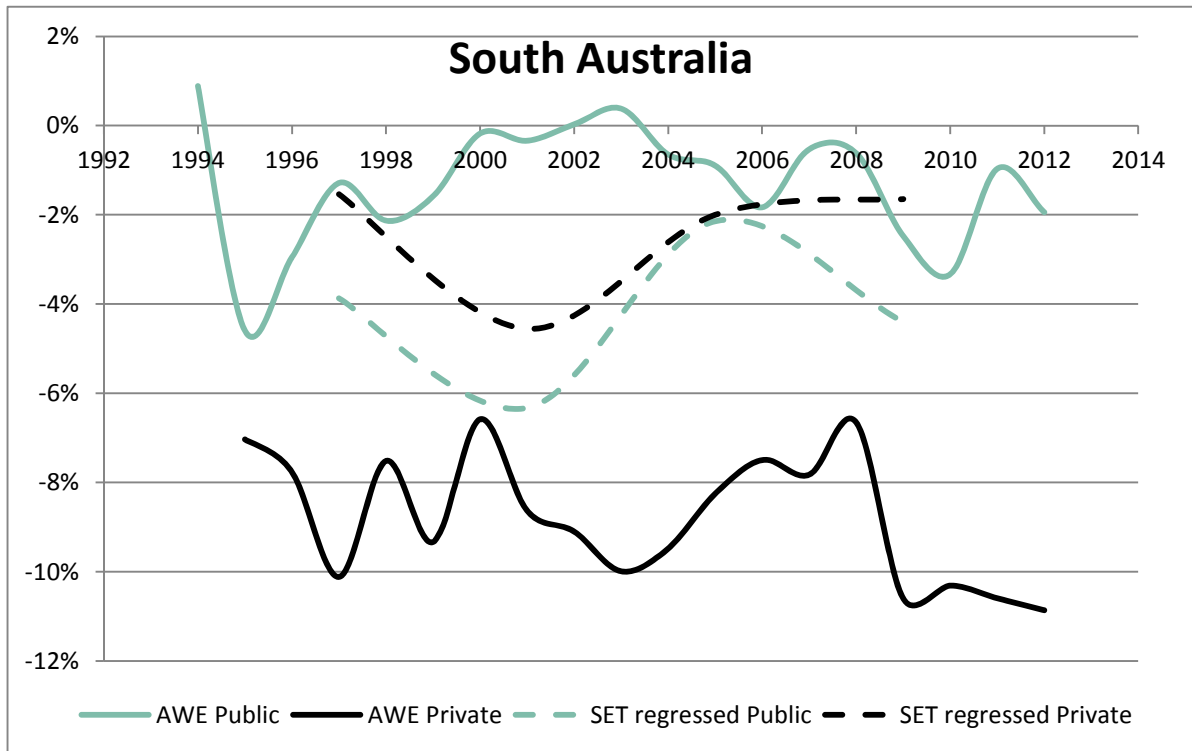


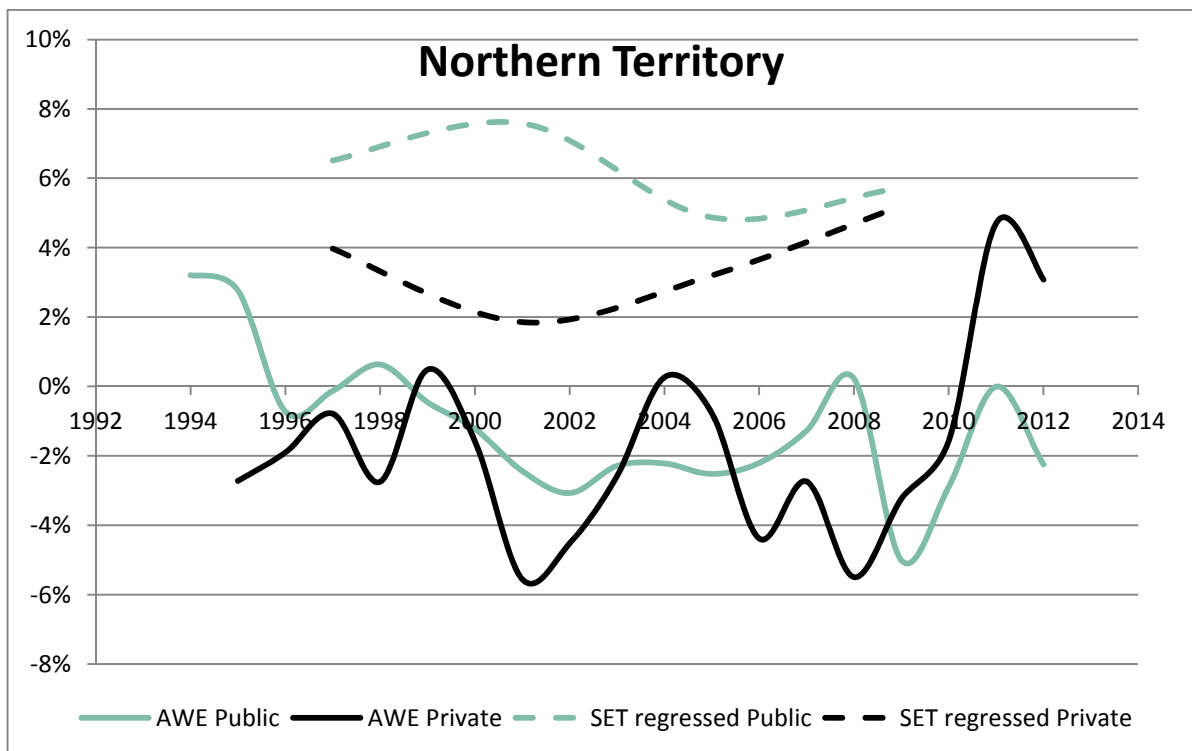
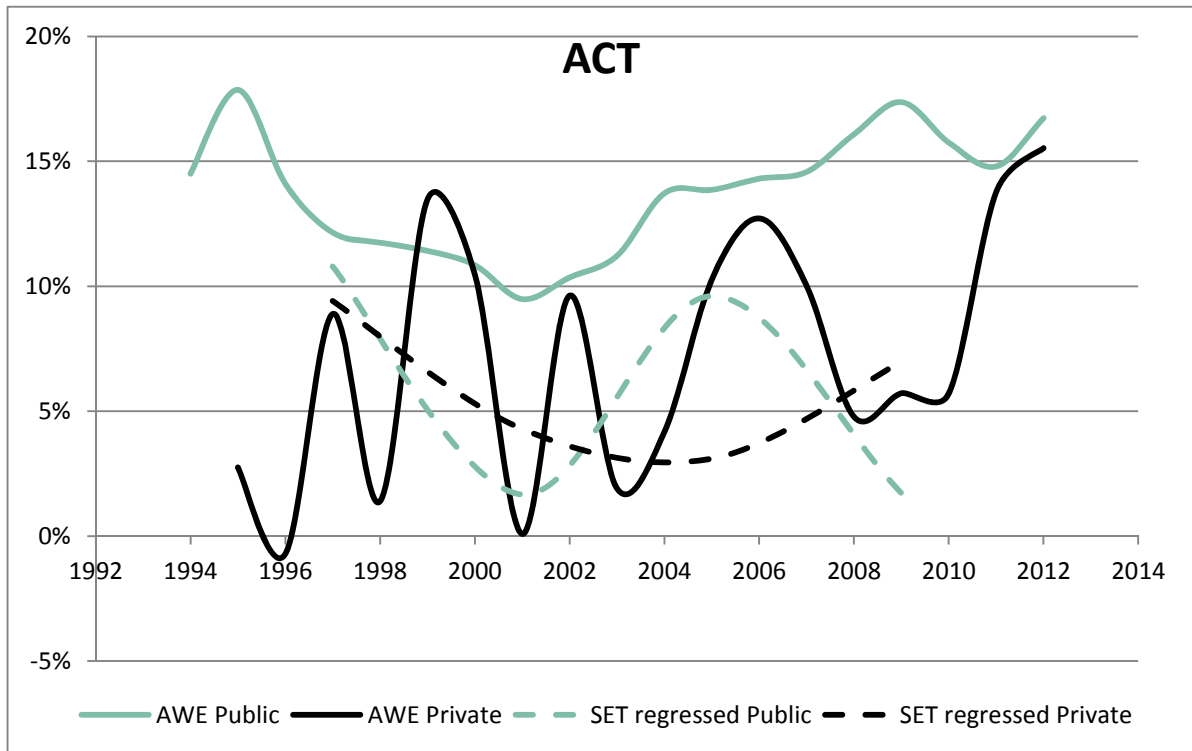
APPENDIX B: STATE WAGES LEVELS RELATIVE TO NATIONAL AVERAGES, SET AND AWE

Source: ABS 6278.0 *Education and Training Experience*, 2009; ABS 6302.1 *Average Weekly Earnings Australia*, November 2013









ATTACHMENT 23

REGIONAL COSTS

Summary of changes since the 2010 Review

- Remoteness is now assessed on the basis of ABS remoteness areas rather than SARIA.
- For categories, other than Justice, where a regional cost disability is assessed, the gradient has been based on the output from the regression analysis of ACARA data.

WHAT ARE REGIONAL COSTS?

- 1 The Regional costs disability recognises that differences in the costs of delivering services can vary between regions for a variety of reasons, including:
 - higher wages are needed to entice people to work in less attractive locations within a State
 - additional benefits may be provided (such as subsidised housing)
 - it may cost more to move goods to some locations or more expensive goods may be required.
- 2 This attachment relates to those categories where we have captured regional cost influences through applying a regional costs factor. In some categories, for example Schools education and Health, regional cost influences have been captured directly within the relevant socio-demographic composition disabilities for some components. More information on how this has been achieved is included in the relevant expense category attachments.
- 3 We have applied a Regional costs factor in the following assessments:
 - Health
 - Outpatients
 - Housing
 - Service expenses
 - Welfare
 - Family and child

- Disability (non-National Disability Insurance Scheme only)
 - General welfare
 - Services to communities
 - Community amenities
 - Community development
 - Justice
 - Roads
 - Rural roads expenses relating to road length
 - Transport
 - Non-urban subsidies
 - Services to industry
 - 20% of category expenses
 - Other expenses
 - 50% of service expenses.
- 4 We have used the ABS remoteness areas to measure Regional costs for the 2015 Review, in place of the previously used State-based Accessibility/ Remoteness Index of Australia (SARIA).¹ The most significant impact of this change is that Hobart and Darwin will be classified as inner regional and outer regional areas, respectively. The implications for this on the assessment of interstate non-wage costs are discussed later in this attachment.
- 5 However, we have observed that the move to ABS remoteness areas results in changes to the distribution of populations by remoteness for some States, in part as a consequence of the truncation aspects of the Accessibility/ Remoteness Index of Australia (ARIA).² For example, compared with the SARIA distribution, Western Australia's proportion of population classified as very remote under ARIA declines substantially, and could have a material impact on the GST distribution. While we have adopted ABS remoteness areas as our preferred measure, before our final report we want to consult further on how well it captures the fiscal consequences of more remote communities.

The conceptual case

- 6 The variation in the cost of delivering services is largely due to cost increases as remoteness increases. The costs in the assessments identified above change with remoteness because:

¹ The ABS remoteness areas are based on the Accessibility/Remoteness Index of Australia (ARIA).

² In the calculation of ARIA scores, distances from a large city are truncated. This truncation was not done in SARIA.

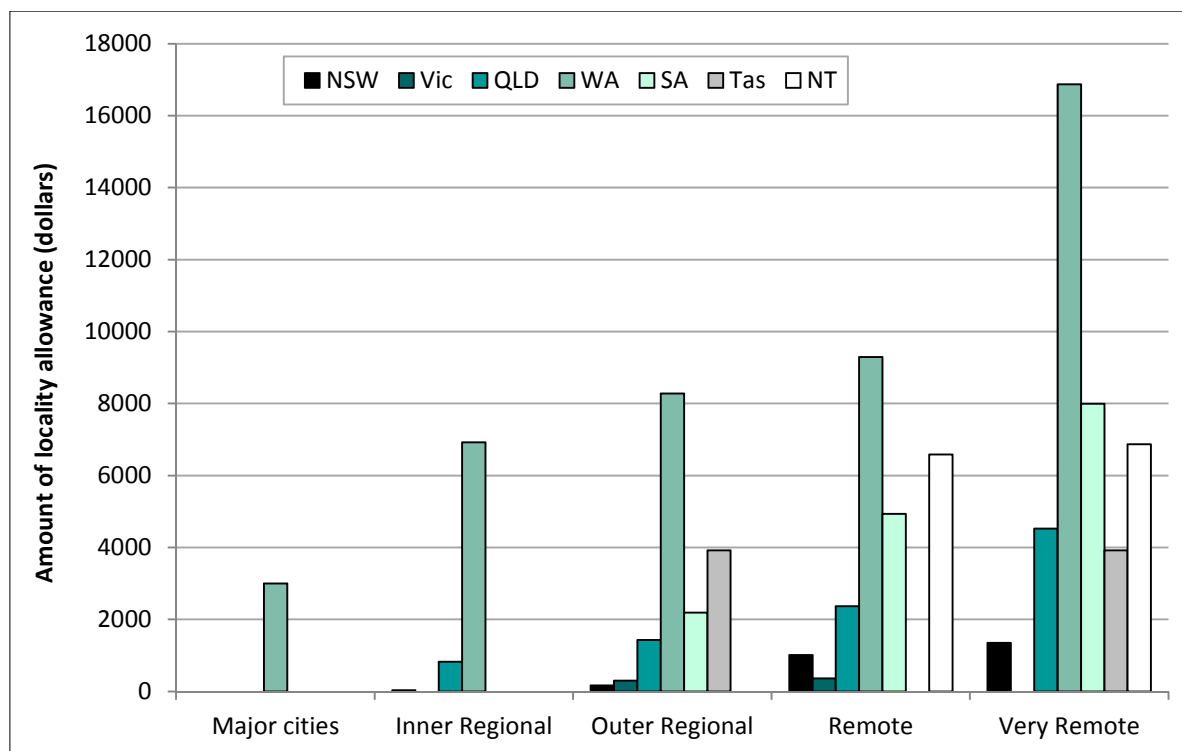
- remote locations are generally less desirable than urban areas hence higher wages or allowances are required for staff
- employee housing is more likely to be provided in remote areas where there are fewer accommodation alternatives
- extra costs are incurred on goods and staff travel over longer distances within a State
- additional inputs are often required (for example, the number of four wheel drive vehicles and additional fuel required for remote policing).

Evidence supporting the conceptual case

- 7 For the 2010 Review we sought data from States on total cost and number of employees by region, for schools and police services. We used the data to calculate average costs (per full time equivalent employee) for each SARIA region for:
 - wage costs
 - employee housing costs
 - other non-wage costs.
- 8 This analysis supported the conceptual case for Regional costs, as average costs generally increased with remoteness.
- 9 For the 2015 Review, we have conducted similar analysis using information on intrastate wage costs for teachers in each remoteness area. The conceptual case for Regional costs was again supported. Figure 1 shows that regional allowances are paid to teachers in the majority of the States and generally rise with increasing remoteness.
- 10 In 2010, the Australian Curriculum, Assessment and Reporting Authority (ACARA) launched its My School website. The data collected by ACARA cover all State government schools (along with non-government schools) and are more detailed and comparable than data previously available. From these data we have been able to develop a fully-integrated regression model for Regional costs, Service delivery scale, Indigeneity and socio-economic status in schools. The regression model and the reliability of these data (including State concerns) are discussed in more detail in Attachment 10 — Schools education.
- 11 The regression modelling using ACARA data further supported the conceptual case for Regional costs in respect of government schools.³ It predicts increased school funding as remoteness increases for schools that are otherwise similar.

³ A similar regression for government funding of non-government schools found no evidence of increases in funding as remoteness increased. For more information refer to Attachment 10 — Schools education.

Figure 1 Average location related loadings paid to teachers, 2013



Note: Bonuses only relate to remoteness or similar allowances. Career progression opportunities, subsidised housing and other in-kind support are excluded.

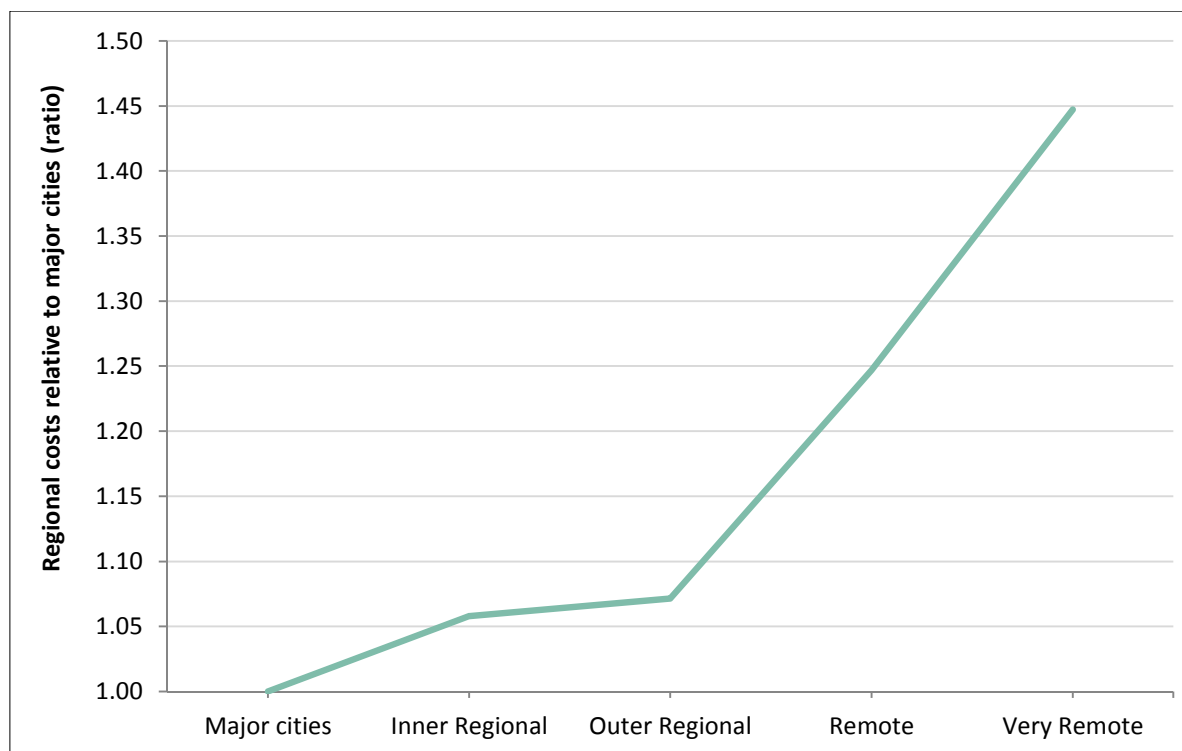
Source: State schools enterprise and related agreements.

MEASURING REGIONAL COSTS

Regional costs gradient

- 12 We used the ACARA data based regression modelling to calculate the additional cost incurred, on average, per State government school student within each remoteness area, compared with major city areas. We then developed a cost gradient which allows us to assess regional cost differences for State government schools in each State. This gradient is shown in Figure 2.

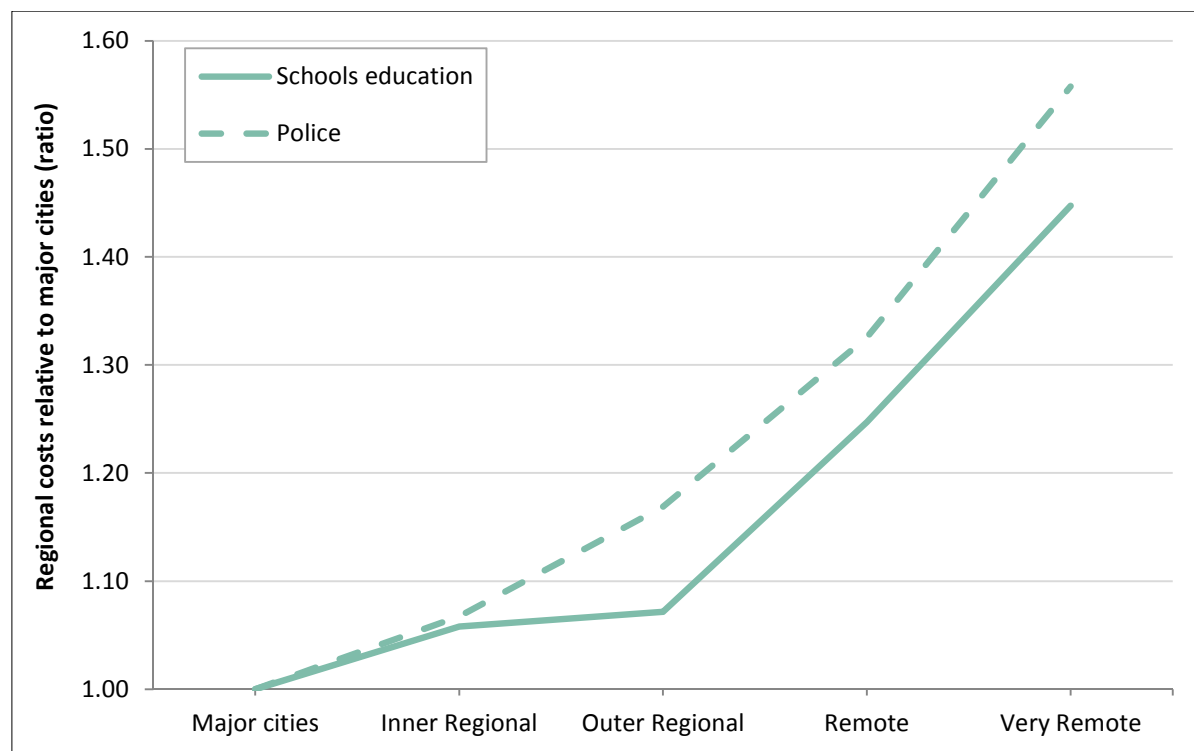
Figure 2 ACARA regional costs gradient



Source: Commission calculation using ACARA data, 2010-11.

- 13 The level of the regional costs effect has been found to be greater in this review than in the 2010 Review. In contrast, the additional costs attributable to students in service delivery scale (SDS) affected schools was found to be lower than previously, at 10% of base student costs. The equivalent weight applied to students in SDS affected schools in the 2010 Review was 40%.
- 14 State issues and concerns with the comprehensiveness, comparability and reliability of the ACARA data are discussed in Attachment 10 – Schools education. As part of our quality assurance processes, we are having our regression models externally verified. We are satisfied that the ACARA data are more comprehensive and more reliable than the data used in the 2010 Review. The combined SDS and Regional costs results suggest that some portion of costs that were considered to reflect SDS effects in the 2010 Review are now being allocated to the regional cost effects in the 2015 Review.
- 15 State provided police data (2008-09) strongly supports the conceptual case for Regional costs. The gradient developed using this data is steeper than that for schools education. The schools education and police gradient are shown in Figure 3.

Figure 3 Schools education and illustrative police Regional costs gradient



Source: Commission calculation using ACARA data, 2010-11 and State provided data, 2008-09.

- 16 We do not consider that there has been any significant improvement or standardisation of State police staffing data since gathering data for the 2010 Review. While weights could be recalculated using new data, like Tasmania, we do not consider that the likely minor revision to costs warrants the significant burden placed on the States by this request in the 2010 Review. As such we have continued to use the 2008-09 data, adjusted to reflect ABS remoteness areas instead of SARIA regions. This was supported by South Australia, Tasmania, the ACT and the Northern Territory.
- 17 Victoria would have preferred that the data be updated as there may have been changes over the last five years that would result in changes to the cost gradient. However, without significant improvement to the quality of the police data, it is not clear to us that changes would be meaningfully captured.

Where should a Regional costs disability be applied?

- 18 We consider that there is a strong conceptual case that costs associated with services other than schools and police, such as welfare and housing, also increase in more remote areas. In the 2010 Review, Queensland and other States provided evidence to support this. We have not seen evidence that would lead us to change from this view. In the absence of data directly measuring costs in these areas, extrapolation is appropriate.

- 19 Police services are provided within communities of all levels of remoteness. Similarly, prisons tend to be located more in inner regional, outer regional and remote areas⁴, while courts, particularly magistrates' courts when acting as circuit courts, tend to operate in remote regions. States that have district (or county) courts also tend to locate them in regional centres.
- 20 Queensland and Western Australia said that the police gradient should be applied to the entire Justice category. Western Australia provided data that also supported higher costs for prisoners as the remoteness of the prison increased.
- 21 The ACARA cost gradient is based on higher quality data, so while it produces a slightly more conservative gradient than the police data (as shown in Figure 3), we have extrapolated this gradient to all other categories in which regional cost disabilities are considered to exist. The gradient calculated from the police data was used throughout the Justice category. Each of these categories and the client base to which the relevant gradient is applied are shown in Table 1. The conceptual case for Regional costs applies to each of these categories.

Table 1 Regional costs client base and gradient used for each assessment

Category or component	Client base	Gradient
Health – outpatients (a)	Population	ACARA
Housing	Population	ACARA
Welfare	Population	ACARA
Services to communities – community development	Assessed population	ACARA
Services to communities – community amenities	Population	ACARA
Justice - police	Police use-weighted clients	Police
Justice - courts and prisons	Use police factors	Police
Transport services – non-urban subsidies	Non-urban population	ACARA
Roads - rural roads (road length expenses)	Assessed rural road lengths	ACARA
Services to industry – 20% of service expenses	Population	ACARA
Other expenses – 50% of service expenses	Population	ACARA

(a) Regional costs for other components in the Health category assessment are calculated within the socio-demographic composition disability.

- 22 South Australia and the ACT supported this approach. The ACT said that this method is consistent with the need to use reliable, fit for purpose data.
- 23 Concerns with the approach, expressed by the other States, related to either the applicability of a Regional costs disability to particular services, or the gradient used.

⁴ An analysis of prisoners by prison location indicated that, on average, 54% of prisoners were located in these regions, compared with 29% of the population. While, on average, 70% of the population is located in major cities, only 45% of prisoners are located there. Data sourced from ABS, Cat. No. 4517.0, *Prisoners in Australia*, 2013.

- 24 New South Wales and Victoria did not support extrapolating the ACARA cost gradient to other categories. Victoria said that a strong conceptual case that the costs of delivering services vary between regions has only been demonstrated in the case of schools education and police services and that the evidence that these costs are significant for other expense categories is lacking. We don't agree.
- 25 Queensland, Western Australia and the Northern Territory consider a general cost gradient should continue to be applied in categories other than Schools education and Justice.⁵ Queensland did not consider there is supporting evidence that the ACARA gradient better reflects Regional costs generally than the police data. Western Australia considered that there is no evidence that the police regional cost gradient is in error, and said that therefore it was more appropriate to average the two regional cost gradients.
- 26 The categories to which the regional costs gradient has been applied are not exactly the same in their model of service provision. Most, however, are provided in, or delivered to, communities of all levels of remoteness and are not significantly centralised in major cities. Higher costs are faced in regional and remote areas when providing these services and these costs are independent of staffing rates (which relate to service delivery scale). The impact on service delivery costs is similar in all components and categories to which Regional costs are applied, including police. However, we have greater confidence in the ACARA gradient as this gradient is based on newer and more comprehensive data. The ACARA gradient rather than the police or a general gradient will be extrapolated to other categories, not because these constitute different methods of service delivery, but because the ACARA gradient is a more reliable measure of Regional costs.
- 27 In 2010, the Regional costs disability was applied in the Community health assessment. We have now incorporated community health services into a single Health category (covering hospital and non-hospital health services). The community health component allocates State spending by region. By doing this we are capturing spending relating to regional costs, and by applying an additional regional costs disability we would introduce double counting. Similar arguments apply for not recognising SDS effects in the community health component.
- 28 The measure of socio-demographic composition in the outpatients component of the Health assessment only recognises the greater use of services by people in remote areas and not the additional costs of those groups. It is therefore appropriate to apply a Regional costs disability to this component within the Health assessment.

⁵ In the 2010 Review, a general regional cost gradient, derived as the simple average of the police and schools gradients at that time, was applied to assessments other than Schools and Justice.

Discounting

- 29 We consider that the ACARA data are sufficiently reliable that no discount is required to their application in the Schools assessment. However, extrapolation of the ACARA cost gradient to other categories opens the assessment to a degree of uncertainty, as we are not accounting for potential differences in labour and non-labour input combinations across categories. To recognise this, we have continued to apply the low discount to the Regional costs factors for all categories to which the ACARA gradient is extrapolated. Despite issues of uncertainty, the conceptual case for the categories to which the Regional costs disability is applied is strong, and the ACARA gradient is the best method we have available for assessing the impact in these categories.
- 30 We have also continued to apply the low discount to the police Regional costs factor. This reflects the more unreliable nature of the available police data in comparison to the available ACARA data.
- 31 States broadly supported this approach. A few States said that:
- a discount should be applied to Schools, and that at least a medium discount should be applied to other categories where the ACARA cost gradient is applied, as the uncertainty in the applicability of these data to other categories warrants a higher level of discount
 - the age of the police data requires a medium discount.
- 32 Other States did not support any discounting, saying that this does not move the assessments closer to achieving equalisation.
- 33 We do not consider that removing or increasing the discount for Regional costs would result in better equalisation outcomes.

Implications for interstate non-wage cost assessments

- 34 We are inclined to cease the assessment of interstate non-wage costs in this review. This assessment was heavily discounted in the 2010 Review to reflect the Commission's strong concerns about data reliability. In addition, the GST requirements of the States with the largest needs will be met through the move to ABS remoteness areas in the Regional costs assessment.⁶
- 35 We considered that in terms of the cost of providing services, and the pattern of use of service by the residents, Hobart and Darwin are more like regional cities of comparable size than they are like capital cities. As such, we concluded that our remoteness classification should classify cities according to their size, and not their

⁶ In the 2014 Update, Western Australia, Tasmania, the ACT and the Northern Territory were assessed as having the largest relative costs. However, interstate non-wage costs were material at the \$30 level for only Tasmania and the Northern Territory and travel costs material for only the Northern Territory.

status as capital or non-capital cities. In turn, this meant that we accepted that borders are permeable, as the calculation of remoteness in Tasmania and the Northern Territory must include a distance to the nearest city of over 250 000.

- 36 Treatment of capital cities, and the permeability of borders, are the two criteria that make SARIA a State-based classification. In the absence of these criteria, we decided to move to using ABS remoteness areas, based upon ARIA scores, as our measure of remoteness.
- 37 Most States supported the move to ABS remoteness areas.
- 38 New South Wales and Queensland did not support the move to ARIA scores. New South Wales considered there was a lack of evidence supporting the change but noted that if the Commission uses ARIA scores, all elements of ARIA should be used. Queensland considered it was preferable for SARIA to be used in the 2015 Review because it considered that ARIA scores imply some aspects of service delivery are not provided in States that do not contain a city of greater than 250 000 people. It considered the permeable borders assumption of ARIA scores is inconsistent with only recognising cross-border disabilities for Canberra and the surrounding areas of New South Wales (discussed in the Attachment 28 – Other disabilities, in relation to cross-border influences).
- 39 As the Regional costs assessment will be based on ARIA scores instead of SARIA, and as neither Tasmania nor the Northern Territory have cities over 250 000 people, their relative remoteness will now reflect their distance from Melbourne and Adelaide respectively. This means that the isolation of Hobart and Darwin from the large centres of manufacturing and importation, and the requirement for their officers to undertake additional and more expensive travel, will be assessed within the Regional costs assessment.
- 40 Quality data to quantify influences that cause particular non-wage costs to be higher in some States than in others – the relative differences in these costs across States and the quantum of expenses affected – are not available. In the last review, the Commission made a heavily discounted assessment of freight and travel costs to attempt to recognise the direction in which the differences in State non-wage costs might influence State expenses.
- 41 State shares of freight were based on Commission judgment, informed by a range of partial information. There were no data associated with these State shares and they were fixed for the 2010 Review period. The freight factor was discounted by 50% to reflect the Commission's strong concerns about data reliability.
- 42 The travel cost assessment was based on Qantas airfare data and State supplied airfare costs for four States. Equal attendees were assumed for each State. A discount of 12.5% was applied to the travel factor to reflect concerns that data on airfares

were available for only four States and that the assumptions about when staff would stay overnight were overly simplistic.

- 43 No other non-wage costs were assessed in the 2010 Review because there was no evidence that we would be closer to achieving equalisation by assessing relative differences in relation to additional types of non-wage costs. We continue to hold this view and, given the on-going paucity of data in this area, now consider there should be no separate assessment of interstate non-wage cost differences.
- 44 While the majority of States supported ceasing the separate assessment of non-wage costs and recognising the major differences through the regional cost assessment, Western Australia and the Northern Territory did not.
- 45 Western Australia was concerned ceasing the assessment would mean its interstate non-wage costs (which it says are significant and above average for travel, freight, electricity and office accommodation) would not be assessed. It suggested that at least a reliable and material assessment of accommodation costs could be made. However, we have not been convinced we should overturn the decision in the last review not to assess a selection of other interstate costs because it is unclear whether partial assessments would move the outcome closer to or further from HFE.
- 46 The Northern Territory said that previous reviews had clearly established the conceptual case that material differences exist in the interstate freight costs faced by States. It did not consider that there has been any significant technological, labour market or pricing changes that diminish the strong conceptual case that has been accepted in the past. In the Northern Territory's view, the regional cost assessment using ARIA scores and the freight assessment capture different disabilities. It noted that ARIA scores capture remoteness from a large urban centre but as this urban centre may not be a centre of manufacturing, true isolation costs are not captured. It also said that, if the Commission assessed freight costs in the regional cost assessment, the proportion of expenses to which the regional cost disability is applied should be increased. The Northern Territory did not consider evidence has been presented to clearly demonstrate that the replacement of SARIA with ABS remoteness areas removed the need to assess interstate freight and interstate travel costs.
- 47 We accept that there is a conceptual case for non-wage costs to be higher in some States than others. We consider that this impact for the States where the impact was greatest will be more reliably captured through the Regional costs assessment as we move from SARIA to ABS remoteness areas. This is because ARIA's use of cities over 250 000 to define 'major city areas' provides a reasonable indicator of cities with significant manufacturing resources and ports as well as where meetings are held. Greater distance from such cities reflects where freight and travel costs will be higher. This indicator stands in contrast to the often partial and incomplete data used in the interstate non-wage costs assessment for previous reviews. Figure 2 shows the

ACARA cost gradient. It shows that the cost weight applied to relevant Hobart and Darwin populations is 1.06 and 1.07 respectively.

- 48 Nonetheless, we note that under this approach some States assessed as having interstate non-wage needs in the 2010 Review will not be similarly assessed in the 2015 Review. While we have not included any allowance for such States in this draft report, before our final report we want to consult further on how well our approach captures the fiscal consequences of interstate non-wage costs.

CALCULATING THE REGIONAL COSTS FACTOR

Regional costs assessment — police

- 49 The Regional costs factor for police has been derived by:
- calculating a police cost gradient that uses 2008-09 police data relating to staffing numbers, wage costs (to which a junior staffing adjustment is applied), non-wage costs and housing costs
 - applying a 2008-09 client base (produced by weighting population in the base year by police use-rates) to population ratio to the population in each remoteness area for the assessment years; this produces an implied police client base
 - applying the police cost gradient to the implied police client base; this produces a cost-weighted police client base
 - calculating the regional cost factor as the ratio of each State's share of cost-weighted police clients to non-cost weighted police clients
 - applying a low level discount to the resulting factors.
- 50 Table 2 shows the results for these steps for the 2012-13 assessment year.

Table 2 Illustrative Regional costs factor, police, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	'000	'000	'000	'000	'000	'000	'000	'000	'000
Implied clients in:									
Major cities	5 126	3 836	2 656	1 731	1 143	0	338	0	14 829
Inner regional	1 493	1 008	952	210	182	345	1	0	4 191
Outer regional	521	241	797	219	200	197	0	221	2 395
Remote	45	5	108	97	42	0	0	97	394
Very remote	19	0	169	133	41	3	0	204	569
Total	7 203	5 089	4 681	2 389	1 608	545	338	522	22 377
Cost-weighted clients	7 417	5 199	5 009	2 546	1 691	603	338	705	23 510
Discounted factor	0.986	0.980	1.020	1.017	1.005	1.051	0.962	1.255	1.000

Source: Commission calculation.

- 51 The same factor was applied to the other components within the Justice category — courts and prisons.

Regional costs assessment — other categories

- 52 The regional cost factor for all other categories has been derived using the ACARA cost gradient and a client base applicable to the category. The steps taken are as follows:
- apply the ACARA cost gradient to the relevant client base for each remoteness area; this produces a cost-weighted client base
 - calculate total weighted and unweighted clients in each State
 - calculate the regional cost factor as the ratio of each State's share of cost-weighted clients to non-cost weighted clients
 - apply a low level discount to the resulting factors.

Summary of Regional costs factors

- 53 Table 3 shows the Regional costs assessment factors.

Table 3 Illustrative Regional costs assessment factors, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Average
Health - outpatients	0.994	0.991	1.007	1.007	1.001	1.036	0.979	1.146	1.000
Housing	0.994	0.991	1.007	1.007	1.001	1.036	0.979	1.146	1.000
Welfare	0.994	0.991	1.007	1.007	1.001	1.036	0.979	1.146	1.000
Services to communities - amenities	0.994	0.991	1.007	1.007	1.001	1.036	0.979	1.146	1.000
Services to communities - development	0.981	0.974	1.026	1.043	1.002	1.018	0.962	1.276	1.000
Justice	0.986	0.980	1.020	1.017	1.005	1.051	0.962	1.255	1.000
Roads - rural road length	0.965	0.928	1.077	1.107	1.032	0.959	0.916	1.190	1.000
Transport - non-urban transport	0.981	0.990	0.995	1.053	1.027	1.008	0.978	1.202	1.000
Services to industry	0.994	0.991	1.007	1.007	1.001	1.036	0.979	1.146	1.000
Other expenses	0.994	0.991	1.007	1.007	1.001	1.036	0.979	1.146	1.000

Source: Commission calculation.

WHAT IS THE IMPACT ON THE GST DISTRIBUTION?

- 54 As a placeholder, the results below show the GST impacts of Regional costs with no adjustment to the ABS remoteness area population distributions. As mentioned, we have observed that the truncation of distance from large towns under ARIA can have a large effect on States' distribution of remote population, and consequently on GST

impacts assessed for Regional costs. For example, in Western Australia's case, we estimate using an ABS remoteness area population distribution compared with a SARIA population distribution has the effect of reducing its GST share by around \$60 million.

- 55 Table 4 shows the extent to which the Regional costs assessment would move the distribution of GST away from an equal per capita distribution. The assessment shows Queensland, Western Australia, South Australia, Tasmania and the Northern Territory are assessed as needing to spend more per capita to deliver services because of Regional costs disabilities. This reflects the greater dispersion of the populations of these States compared with the average.

Table 4 Illustrative impact on the GST distribution of the Regional costs assessment (a), 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Redist
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Health - outpatients	-8	-8	5	3	0	3	-1	6	17
Housing	-5	-5	3	2	0	2	-1	4	11
Welfare	-31	-32	20	12	1	12	-5	23	68
Services to communities	-15	-16	13	11	0	1	-2	7	33
Justice	-73	-84	68	30	6	19	-11	44	167
Roads	-9	-15	13	10	2	-1	-1	2	27
Transport	-9	-4	-1	8	3	0	-1	3	15
Services to industry	-2	-2	2	1	0	1	0	2	5
Other expenses	-22	-23	14	8	1	9	-4	16	48
Total	-173	-189	137	85	13	46	-25	106	388
	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc
Health - outpatients	-1	-1	1	1	0	6	-3	23	1
Housing	-1	-1	1	1	0	4	-2	15	0
Welfare	-4	-6	4	5	1	24	-14	96	3
Services to communities	-2	-3	3	5	0	2	-4	30	1
Justice	-10	-15	15	12	3	37	-28	186	7
Roads	-1	-3	3	4	1	-2	-3	7	1
Transport	-1	-1	0	3	2	0	-1	13	1
Services to industry	0	0	0	0	0	2	-1	7	0
Other expenses	-3	-4	3	3	0	17	-10	68	2
Total	-24	-33	30	34	8	91	-67	446	17

(a) The Regional costs impacts in Schools and Health (other than outpatients) are not shown in this table.

Source: Commission calculation.

CHANGES SINCE THE 2010 REVIEW

- 56 Changes to this disability since the 2010 Review include:
- a move from SARIA to ABS remoteness areas, based upon ARIA scores
 - the use of ACARA data in developing a regional cost gradient.

UPDATE PROCESS

- 57 We recommend data used in these assessments be updated when new data become available to ensure the relativities remain contemporary and consistent with the circumstances of the States. On this basis we expect to annually update the populations in each of the remoteness areas of each State.
- 58 As more recent ACARA data become available we will recalculate the regional costs gradient. This new gradient will be applied in the Schools education assessment and will also be applied to the other categories where the ACARA cost gradient is applied.

FURTHER INFORMATION

- 59 Background material in support of this assessment is published on the Commission's website. That material includes the following documents, released for comment in the development of this assessment, together with State submissions responding to those documents.
- Staff Discussion Paper 2013-01S *Remoteness classification*
 - Staff discussion paper 2013-07S *Proposed assessments*.

ATTACHMENT 24

SERVICE DELIVERY SCALE

Summary of changes since the 2010 Review

- Output from the regression analysis of the ACARA data has been used to assess Service delivery scale disabilities in Schools education.
- The assessment of Service delivery scale for housing and community health expenses, as well as for welfare services, with the exception of family and child expenses, has ceased.

WHAT ARE SERVICE DELIVERY SCALE COSTS?

- 1 The Service delivery scale (SDS) disability assessment recognises that States experience diseconomies in the provision of certain services to small isolated communities. It reflects the higher costs incurred due to relatively higher staffing levels in those communities. States will therefore face higher than average costs in providing those services where a greater than average proportion of their service populations reside in those types of communities.
- 2 The disability reflects both the higher costs per unit of service associated with higher staffing levels and the effect of differences between States in the number of affected communities.
- 3 We have assessed SDS disabilities for the Schools education, police and magistrates courts¹ expenses (within the Justice category) and family and child expenses (within the Welfare category) assessments.

The conceptual case

- 4 Small isolated communities impose above average costs on States because of:
 - the indivisibility of labour
 - unproductive travel time.

¹ We have approximated the expenses relating to magistrates' courts as those for criminal courts.

Indivisibility of labour

- 5 The nature of some services means States must provide facilities in small communities, even if the potential use would not justify a separate facility in a larger community. For example, States establish small primary schools in isolated communities. While the size of the school population may not justify a full time teacher, at least one must be provided. The same may be true of specialised staffing positions. A small school may need specialised staff (such as a principal, teachers for the junior classes, teachers for senior classes, and so on), even if it produces above average teacher to pupil ratios.
- 6 Similar examples arise in police stations, magistrates courts (particularly where provided through circuit courts) and other services that are normally provided in close proximity to where people live.

Unproductive travel time

- 7 Higher staffing may be required in isolated areas with low population density because the time a police officer, for example, spends travelling from one incident to another may be large, reducing the population they can serve.
- 8 A similar case can be made for services such as family and child, where the service is not necessarily delivered by permanently stationed officers in small communities, but where regional staff may fly in to manage individual cases in small communities.

Evidence supporting the conceptual case

- 9 In 2010, the Australian Curriculum, Assessment and Reporting Authority (ACARA) launched the My School website. The data published by ACARA are more detailed and comparable than data previously available.²
- 10 A regression of ACARA data showed that school size is highly predictive of how much funding it will receive. As small schools are generally found in small isolated communities this gave support to the conceptual case for SDS.
- 11 We ran numerous regressions using different combinations of distances from urban centres of different sizes to predict funding per student. These regressions (while controlling for other variables) returned a positive coefficient for all distance and urban centre combinations except when measuring distance from a capital city. This provided strong evidence for the conceptual case for SDS.
- 12 A similar pattern is evident in 2008-09 police data.³ On average, large urban centres and areas close to them have 2.05 staff per thousand 'clients'.⁴ In areas more than 50

² The reliability of the ACARA data is addressed in Attachment 10 — Schools education.

kilometres from a centre of 5 000 people, the average staffing level is 2.26; implying staffing levels are 10% higher than in the large urban centre.

- 13 We do not agree with Victoria's view that the case for SDS in the family and child assessment has not been demonstrated. Queensland data on the Department of Communities (responsible for welfare services) supplied for the 2010 Review provides evidence for the conceptual case for SDS disabilities in family and child services. This data showed that the staffing rate is more than 16 times greater than in highly accessible areas. SDS is likely to explain some, although probably not all, of these higher staffing levels.

MEASURING SERVICE DELIVERY SCALE

- 14 The availability of ACARA data has also changed the way in which higher costs due to Service delivery scale can be measured.
- Regression analysis of the data showed how funding requirements per student vary geographically. This allowed for an analysis of the definition of SDS areas.
 - As detailed staff and student data are included in the ACARA data, the Commission was able to measure differences between the States in the number of service users affected by SDS disabilities.

Definition of Service delivery scale areas

- 15 Using ACARA data we were able to perform regression analysis to evaluate different definitions of SDS affected areas. While controlling for a range of variables, including remoteness and socio-demographic composition, we hypothesised that funding variations due to SDS were best explained by a variable defined by distance from towns of a certain size.⁵
- 16 We initially considered an approach using the regression outputs (in particular the R² value) as an indicator of the model that best defined SDS. From a range of town sizes

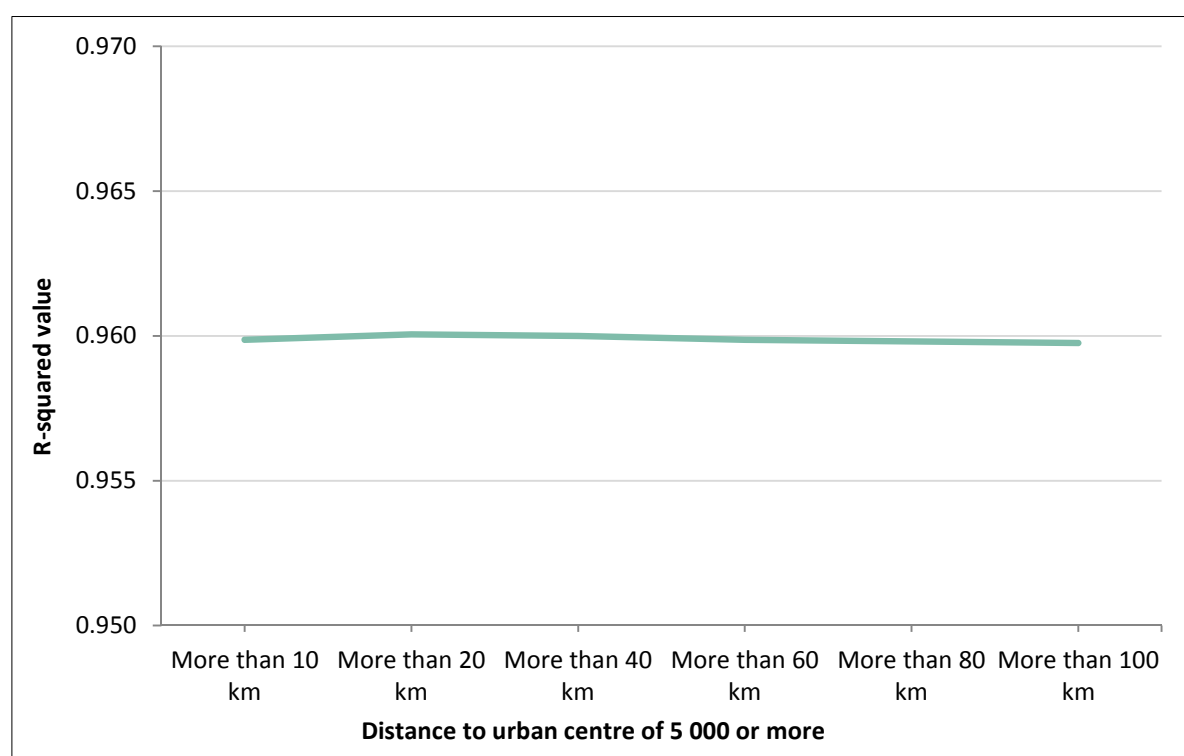
³ State provided data were not for a common year, however we have assumed all State provided data to apply to 2008-09. Data were not available from New South Wales or Victoria at a sufficiently fine level of detail to calculate SDS and non-SDS areas.

⁴ Clients refer to the cost weighted population used in the police component of the Justice services assessment. This is considered to be representative of the size of the policing task in each State at average policy levels.

⁵ The independent variables included for all regressions were State, FTE enrolments, Indigenous students, remoteness area and SEIFA quintile. The regression was weighted by FTE enrolments. The regression analysis referenced in Staff Discussion Paper 2013/07-S *Proposed assessments* used regressions predicting funding per student. We have rerun the analysis using the variables from a revised iteration of the Schools education regression, this regression predicted funding per school. This approach increased the R² values substantially while maintaining the relative importance of the independent variables.

we found SDS most affected schools a certain distance from a town of 5 000 people. While an SDS variable based on a distance of 20 kilometres or more explained more of the variance in funding (had a higher R^2 value) than for other distances, the differences were very small. The results of the regressions using various distances from towns of 5 000 or more are shown in Figure 1.

Figure 1 Regression predicting total school funding – R-squared values



Source: Commission calculation.

- 17 A definition for SDS affected areas as being areas more than 20 km from a town of 5 000 people would be different from the definition used in the 2010 Review (more than 50 km from a town of 5 000 people). A number of States did not support a change.
- 18 Victoria suggested a number of ways in which this definition could be alternatively defined through further regression analysis. Queensland noted that as the R^2 values used to determine the appropriate measure of SDS are close, the redefinition could dilute the cost weights without a corresponding increase in confidence in the new factor. Western Australia said that as the R^2 values are close, it was important to ascertain whether the choice of definition used (particularly with regard to distance to town) will result in materially different GST impacts of Service delivery scale disabilities.
- 19 For all iterations, the R^2 values are high, and we observe the extreme closeness of each of the R^2 values. We consider therefore that a marginally higher R^2 value does not provide a compelling case for selecting one definition over another. As our

existing definition of SDS affected areas is included in the range of highest R^2 values, we consider this to be a reasonable definition that we can continue to use.

- 20 In addition, we have conducted materiality testing and found that there is no material difference in the assessed spending on schools for any State, between applying definitions of 20 km or more from a town of 5 000, and 50 km or more from a town of 5 000. We consider that in total across all the assessments where SDS is applied the materiality threshold is unlikely to be breached.⁶
- 21 However, the level of the SDS effect has been found to be smaller in this review than in the 2010 Review. From the analysis of ACARA data, the additional costs attributable to students in SDS areas represent 10% of base student costs. The equivalent weight applied to school students in the 2010 Review was 40%. In contrast, Attachment 23 — Regional costs, observes that the analysis of ACARA data suggests that regional loadings should be higher in this review than for 2010. We are satisfied that the ACARA data are more comprehensive and more reliable than those data used in 2010. The combined SDS and regional costs results suggest that some portion of costs that were considered to reflect SDS effects in the 2010 Review are now being allocated to regional cost effects. A number of States supported using the ACARA data to quantify the SDS disability, on the basis of their reliability and comprehensiveness.
- 22 As discussed in Attachment 23 – Regional costs, we do not consider that there has been any significant improvement or standardisation of State police staffing data since gathering data for the 2010 Review. A consequence of not changing the definition of SDS is that we do not propose to change the current method of calculating staff to client ratios for this review.
- 23 As part of our quality assurance processes we are having our regression models externally verified. Initial consultations confirmed that the closeness of R^2 values means this is not a compelling determinant for adopting one SDS definition over another. Given our resources, no other method is available in reassessing the definition of SDS.
- 24 We are confident that 50 km from a town of 5 000 people remains a reasonable definition by which to calculate service user populations affected by SDS, and that the ACARA data are reliable and comprehensive and can be used to quantify the SDS effect.

⁶ The SDS weight calculated through the Schools education regression is calculated to be 10.2% when SDS areas are defined as being 50 km from a town of 5 000 and 9.6% when these areas are defined as being 20 km or more from a town of 5 000 is used. Comparing these two definitions, there is no more than a \$12 per capita difference in the redistribution for any State.

Where should the Service delivery scale disability be applied?

- 25 As noted, ACARA data provide evidence of the conceptual case for schools and are also a reliable source which can be used to define SDS areas and to quantify the effects of SDS disabilities. The government school components of the Schools education assessment will therefore encompass an SDS disability that is based exclusively on schools data. The 10% cost weight will be applied to the Schools education student base enrolled in government schools located more than 50 kilometres from a town of 5 000 people to incorporate the SDS effect in the Schools education assessment.
- 26 As we have not changed our definition of areas affected by Service delivery scale disabilities, and we consider there is no more recent data available than the State provided police data from 2008-09, we will continue to adopt the same approach to incorporating SDS for police and magistrates' courts as in the 2010 Review.
- 27 We have also found convincing evidence of SDS effects in the family and child component within the Welfare category. In the absence of comprehensive data relating to these services, we have decided to base an assessment of the SDS disability using the same factor as for police. This is because we consider the delivery of family and child services in SDS affected areas has more in common with the delivery of police services, requiring travel of appropriate officers regardless of location, than it does for schools (where service users travel to the place of service).
- 28 This SDS treatment of family and child services is different to that used in Regional costs. The ACARA regional cost gradient, rather than the police regional cost gradient, is applied to the whole of Welfare. This is because we consider the ACARA gradient to be more reliable than the police gradient. In addition, unlike for SDS, the delivery of welfare services collectively is not obviously closer to the way in which police service services are delivered, compared with schools.
- 29 Table 1 shows the user (client) base and cost weight to be applied for each category component with an SDS disability. The police factors will be applied to the family and child component of Welfare.

Table 1 Client base and cost weights applied to category assessments

Category or component		Client base	SDS weight
Schools education - government schools		Government students	1.10
Justice — police and magistrates courts		Assessed police clients	1.15 (a)
Welfare — family and child			Use police factors
(a)	The SDS weight is calculated from assessed staff/client ratios (of 2008-09) in SDS and non-SDS areas.		

Source: Commission calculation

- 30 Most States support the approach of applying an SDS disability to the assessments identified in Table 1. Some States said that the SDS disability should be applied more

broadly. The Northern Territory said there have not been any significant changes in the provision of welfare and housing services to warrant a different approach with regards to SDS disabilities. It said there was no evidence to support a cessation of SDS disabilities for any components of the Welfare and Housing categories. The Northern Territory also provided data in support of its argument to apply SDS in Health.

- 31 While there is a strong conceptual case for the applicability of SDS to family and child expenses within Welfare, we are not convinced that similar disabilities are experienced in the areas of general welfare (which includes expenses relating to concessions and homelessness) and disability expenses. Child protection case workers, for example, are required to travel to assess each case regardless of location. Given increased distances in SDS areas it can be contended that more staff are required per case than in non-SDS areas. However, this would not be the case for the homelessness component. Accommodation services are provided by non-government organisations, and these tend to be in densely populated, non-SDS areas. Similarly, disability services are generally provided in non-SDS areas, and again, in most cases travel to a service base is required rather than case worker travel.
- 32 In relation to Housing, while services can be provided in SDS affected areas, it is generally undertaken by local groups so that no additional travel is involved. On balance, we are confident that the SDS disability should only be applied to the family and child component of Welfare and should no longer be applied to the Housing category.
- 33 We have now incorporated community health services into a single health category (covering hospital and non-hospital health services) for which we allocate State spending by region. By doing this, we are capturing spending related to SDS effects and by applying an additional SDS disability we would introduce double counting.⁷ Similar arguments apply for not recognising additional regional costs in the community health component of the Health assessment.

Discounting

- 34 We consider the measurement of the Service delivery scale weight for schools to be reliable and as such, a discount will not be applied to the SDS disability in Schools education.

⁷ Using 2011 Census counts we have compared the number of health practitioners per person in SDS and non-SDS areas. This analysis was limited to specific health related occupations employed by State and Territory Governments and working in non-hospital industries. This analysis found that the number of staff per 1000 people in SDS areas (0.19) was lower than in non-SDS areas (0.22). This evidence does not support a conceptual case for Service delivery scale disabilities in community health (non-hospital) settings in any case.

- 35 Such comprehensive and up to date data do not exist for the other categories. We applied a low level discount to the SDS disability in the 2010 Review due to concerns including:
- whether the data from different States were comparable
 - whether the staffing data were representative of the national average pattern because New South Wales and Victoria could not provide data for individual police stations
 - the appropriateness of extrapolating factors from one category to another.
- 36 We consider a low level discount is therefore applicable to incorporating SDS disabilities in the assessment of family and child, police and magistrates courts expenses.
- 37 South Australia, Tasmania and the ACT supported this approach. Tasmania considered this was appropriate to reflect the level of uncertainty regarding the underlying data. The ACT supported this proposal as the schools education SDS factor was being used as a proxy for these welfare costs and the police data are unreliable in nature.
- 38 We do not agree with the positions put by New South Wales, Victoria and the Northern Territory.
- New South Wales considered that given the uncertainties in the calculation of the SDS factor for Schools education – the uncertainties in the State comparability of the ACARA data used for the regression, the uncertainty that SDS explains all the funding variations not explained by the other location and socio-demographic variables considered by CGC staff – the SDS factor for schools education should continue to be discounted by a low level discount (12.5%).
 - New South Wales also considered that the level of discount applied to the family and child and police SDS factors should be at a medium level rather than a low level (25%), to reflect both the uncertainties surrounding the calculation of the Schools education factor and the further uncertainties in extrapolating this factor to other expenses, and in calculating the police SDS factor based on limited and now dated data.
 - Victoria considered a medium discount should be applied to police as the data is out of date.
 - The Northern Territory did not consider a discount should be applied to any component as it considered the cost weights derived from ACARA data are appropriate for use in assessing SDS disabilities in other categories.

CALCULATING THE SERVICE DELIVERY SCALE FACTOR

39 Table 2 shows the data that is used to derive the Service delivery scale factors.

Table 2 Service delivery scale data sources

Data	Source	Distribution by location
Schools		
Student numbers	Schools Australia (a)	2011-12 ACARA data
Police		
Client numbers	2010-11 ERP (b)	2008-09 ERP (c)
Staff	State 2005-06 Special data request	State 2005-06 Special data request

- (a) ABS Cat no. 4221.0 Schools Australia, 2013.
 (b) Weighted to reflect 2008-09 weighted client base.
 (c) With cost weight based on police custody data.

Service delivery scale assessment — Schools education

40 The SDS factor for Schools education has been derived by:

- calculating the number of each State's government students attending schools in areas that experience SDS influences (areas located more than 50 kilometres from an urban centre of 5 000 people or more) from the ACARA data
- deriving the number of government students in non-SDS influenced areas as the balance of students
- applying the ratio of students in SDS and non-SDS areas to the Schools Australia student numbers
- applying the school SDS weight (10%) to the SDS influenced students
- calculating total weighted students for the State as the sum of its non-SDS influenced students and weighted SDS influenced students
- calculating the SDS factors as the ratio of each State's share of total weighted students over its share of total students.

41 Table 3 shows the results for these steps for the 2012-13 assessment year.

Table 3 Illustrative Service delivery scale assessment, Schools education, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Students in SDS areas ('000)	25	15	36	20	24	5	0	10	134
Students in non-SDS areas ('000)	719	527	461	223	138	51	35	19	2175
Total students ('000)	744	542	497	244	162	56	35	29	2308
Total weighted students (a) ('000)	746	543	500	246	164	57	35	30	2322
Factor	0.998	0.997	1.001	1.003	1.009	1.003	0.994	1.029	1.000

(a) Cost weighted government school students with service delivery scale weights applied.

Source: Commission calculation.

Service delivery scale assessment — police and magistrates courts

42 The SDS factor for police has been derived by:

- calculating the number of a State's assessed police client base (based upon ERP - weighted by the likelihood of population groups with certain characteristics to interact with police using the 2008-09 weighted client base) living in areas that experience SDS influences (areas located more than 50 kilometres from an urban centre of 5 000 people or more)
- deriving the assessed number of police clients in non-SDS influenced areas as the balance of police clients
- applying the SDS scale influenced police staffing to client ratio to the clients in SDS influenced areas to determine assessed staff numbers in these areas
- applying the non-SDS influenced police staffing to client ratio to the clients in non-SDS influenced areas to determine assessed staff numbers in these areas
- calculating the SDS factors as the ratio of each State's share of total assessed staff to total assessed clients
- applying a low level discount to the resulting factors.

43 Table 4 shows the results for these steps for the 2012-13 assessment year.

Table 4 Illustrative Service delivery scale assessment, police, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Clients in SDS areas ('000)	285	95	347	248	162	52	0	256	1 444
Clients in non-SDS areas ('000)	6 632	4 875	4 140	2 090	1 408	468	325	248	20 187
Staff in SDS areas	723	241	882	631	412	133	0	650	3 672
Staff in non-SDS areas	14 644	10 765	9 141	4 616	3 110	1 034	718	548	44 575
Assessed clients ('000)	6 916	4 970	4 487	2 338	1 570	520	325	504	21 631
Assessed staff	15 367	11 006	10 023	5 247	3 521	1 167	718	1 198	48 246
Factor	0.997	0.994	1.003	1.007	1.006	1.006	0.991	1.067	1.000
Discounted Factor	0.998	0.995	1.002	1.006	1.006	1.005	0.992	1.059	1.000

Note: Clients refer to use weighted ERP. This is calculated by applying the ratios from the base year use weighted ERP to the ERP of the assessment years.

Source: Commission calculation.

44 We apply the same factor to magistrates courts. However, we do not have data that allow us to accurately determine the level of magistrates courts expenses within the courts component of the Justice category. As defendants overwhelmingly appear in magistrates courts⁸, we have adopted a simplifying assumption and have

⁸ Defendants in magistrates' courts represent more than 90% of total defendants from children's courts, magistrates' courts and higher courts.

approximated applying the SDS disability to magistrates courts by applying it to the criminal courts sub-component of the courts component in the Justice category.

Service delivery scale assessment — family and child services

- 45 We have applied the same discounted Service delivery scale factor for police to the family and child component of Welfare.

Summary of Service delivery scale factors

- 46 Table 5 shows the government schools, police and family and child services factors.

Table 5 Illustrative Service delivery scale assessment factors, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Average
Government schools	0.998	0.997	1.001	1.003	1.009	1.003	0.994	1.029	1.000
Police and magistrates courts	0.998	0.995	1.002	1.006	1.006	1.005	0.992	1.059	1.000
Family and child	0.998	0.995	1.002	1.006	1.006	1.005	0.992	1.059	1.000

Source: Commission calculation.

WHAT IS THE IMPACT ON THE GST DISTRIBUTION?

- 47 Table 6 shows the extent to which the assessment would move the distribution of GST away from an equal per capita distribution. The assessment shows Queensland, Western Australia, South Australia, Tasmania and the Northern Territory are assessed as needing to spend more per capita to deliver services because of SDS disabilities. These States have relatively more of their school students, police 'clients' and population (family and child service users) in areas that experience SDS disabilities.

Table 6 Illustrative impact on the GST distribution of the Service delivery scale assessment, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Redist
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Schools education	-28	-27	11	11	23	3	-3	11	58
Welfare	-3	-6	2	3	2	1	-1	3	10
Justice	-9	-15	5	8	5	1	-1	7	26
Total	-40	-48	18	21	30	4	-5	20	93
	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc
Schools education	-4	-5	2	4	14	5	-9	44	3
Welfare	0	-1	0	1	1	1	-1	11	0
Justice	-1	-3	1	3	3	3	-4	29	1
Total	-5	-8	4	8	18	9	-14	85	4

Note: The difference from an equal per capita assessment based upon 2012-13 assessed expenses.

Source: Commission calculation.

CHANGES SINCE THE 2010 REVIEW

48 Changes to this disability since the 2010 Review include:

- a change in scope of the assessment — SDS disabilities are now assessed in the family and child component of Welfare, but not in any other Welfare components, community health services or Housing
- a change in the way a weight is applied to the client base (students) in Schools education — this weight is now a cost weight rather than a staffing ratio
- a change in the way the SDS factor is calculated for family and child — the discounted police factor (rather than a general factor) will be applied to this category.

UPDATE PROCESS

49 We recommend data used in these assessments be updated when new data become available to ensure the relativities remain contemporary and consistent with the circumstances of the States. On this basis we expect to annually update the populations in areas affected and those not affected by Service delivery scale of each State.

50 As more recent ACARA data become available we will recalculate the SDS weight. If the weight varies sufficiently from 10% to have a material impact on the GST distribution, we would propose (in consultation with States) to apply the more recent weight.

ATTACHMENT 25

ADMINISTRATIVE SCALE

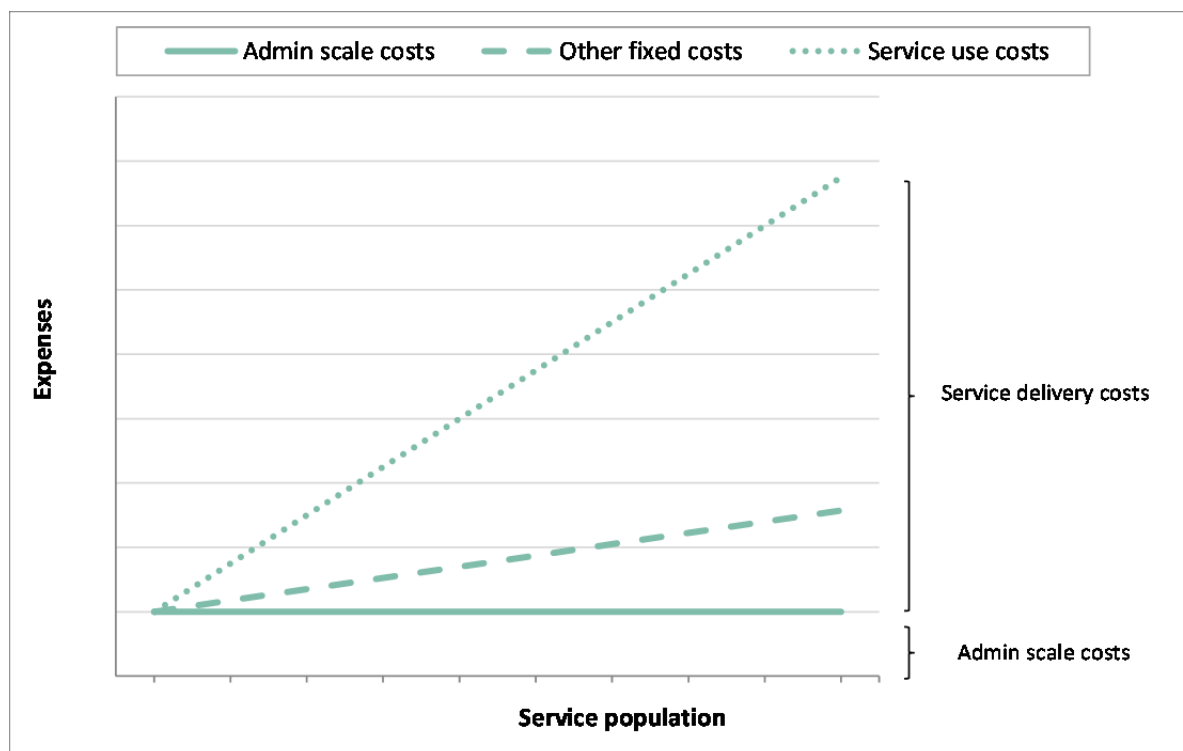
Summary of changes since the 2010 Review

- The assessment method is unchanged.

WHAT ARE ADMINISTRATIVE SCALE COSTS?

- 1 The administrative scale disability assessment recognises those costs incurred by a State in delivering services, whilst acting with average efficiency and following average policy, which are independent of the size of the service population. It includes costs associated with:
 - core head office functions of departments (for example, corporate services, policy and planning functions, but not all staffing and other resources delivering these)
 - services that are provided for the whole of the State (for example, the legislature, the judiciary, the Treasury, the revenue office, and a State museum, but not all staffing and other resources delivering these).
- 2 While the underlying concept we are aiming to measure has not changed, this definition differs slightly from that adopted in the 2010 Review. In that review, the definition referred to minimum administrative costs that would be incurred for a State with the population size of the smallest State. We consider the new definition to be more policy neutral, and to better convey the intention of capturing unavoidable initial service delivery set-up costs, incurred prior to the 'first' service user.
- 3 Administrative scale is not an assessment of all fixed costs or 'non-front line services'. It is an assessment of the fixed cost which does not vary with service populations (the minimum cost). Any remaining fixed costs are included in the service delivery component of each expense assessment and assessed according to the disabilities relevant to that component. Figure 1 illustrates the approach graphically.

Figure 1 Graphical depiction of administrative scale costs



Source: Commission illustration.

- 4 Implicit in the majority of our expense assessments is an assumption that other fixed costs and service use costs combined, increase in a linear fashion as service users increase.¹ That is, while we identify diseconomies of small scale, we generally make no allowance for either economies, or diseconomies, of large scale in our assessments.
- 5 Other fixed costs and service use costs may vary differently. But we are not aware of any way to disentangle these costs simply, and have not generally sought to do so in this review. A regression of ABS GFS data on school expenses and student numbers suggested economies of large scale may exist in the delivery of school services. However, the explanatory power of the linear relationship was only marginally less, so we consider our assumption of linear growth in costs as service users rise to be reasonable. This aspect of State service delivery could be more fully explored in the next review.²

¹ The exception is this is urban transport, which assumes diseconomies of scale are present in providing urban transport services.

² A form of equation that indicates economies of large scale is a negative quadratic. The correlation coefficient (R^2) of this form was 0.991, higher than the linear form (no economies of scale) for the same data, at 0.989, and for the exponential form (diseconomies of large scale) at 0.859.

The conceptual case for diseconomies of small scale

- 6 States with small populations have intrinsically higher per capita costs because the minimum functions of government have to be spread over a smaller number of residents. The Administrative scale assessment provides an allowance for this influence.
- 7 As the Administrative scale assessment is intended to capture the cost of providing services independent of the size of the service population, each State has the same requirement. The appropriate assessment is therefore an equal per State assessment, which implies a greater per capita cost for the less populous States.³

MEASURING ADMINISTRATIVE SCALE EXPENSES

- 8 Assessing administrative scale expenses requires:
 - establishing the quantum of administrative scale expenses
 - indexing the quantum.

Establishing the quantum

- 9 The Administrative scale assessment was the subject of considerable work in the 1999 and 2004 Reviews. This work was aimed at providing estimates of the minimum level of administrative resources for each function. The assessment was based on analysis of the core central office and whole of State functions provided for all States. For each function, assessed costs were set to the lowest constructed cost at which any State could provide the function, without any reference to the volume of service delivery.
- 10 The work in the 1999 and 2004 Reviews suggested that the estimates were robust and that a full review was unlikely to produce a materially different assessment. We therefore used the 2004 estimates, indexed to reflect price level changes, as the basis for the 2010 Review assessment. Following the 2010 Review, revisiting the quantum of administrative scale costs was identified as a priority issue. In conjunction with the States, work commenced through the Data Working Party (DWP) in 2011 to better identify these costs. While the work of the DWP was not able to achieve a way of re-estimating the quantum of administrative scale costs, it did lead to the development, and acceptance by the Commission, of the revised definition used in this review.

³ The ACT receives slightly less because it does not need to provide some services and the Northern Territory slightly more because it requires a dual service delivery mode.

- 11 Through the DWP and since the commencement of this review we have explored a number of options for establishing the quantum:
 - collecting State departmental data that would allow a re-estimation of the quantum for one or more categories
 - an examination of publicly available data (Productivity Commission and States' annual reports)
 - a regression approach
 - the status quo, which would involve indexing the existing quantum.
- 12 The DWP process was used to seek detailed State department data. Despite some support from smaller States, no State was able to provide (due in part to privacy issues) sufficiently detailed workforce data from which new quantum amounts could be derived.
- 13 As a result we have not been able to develop a State data collection that would provide the detailed data allowing us to undertake analysis similar to that undertaken in the 1999 and 2004 Reviews. We have therefore looked at alternative options and data sources for determining the appropriate quantum of administrative scale expenses.

Schools education

- 14 In exploring the options, we chose schools education because we consider this function to be the most homogenous at the State level and, therefore, likely to be the least affected by State policies. Productivity Commission data were obtained on out-of-school staff numbers and expenses. These are shown in Table 1.

Table 1 Schools education staff and wage data, 2010-11

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
In-school staff (No.)	69 501	53 543	48 348	26 070	16 421	6 165	3 594	3 918	227 559
In-school staff expenses (\$m)	6 887	4 374	4 242	2 468	1 493	531	376	342	20 714
Out-of-school staff (No.)	2 072	1 317	2 837	1 349	1 179	301	314	493	9 862
Out-of-school staff expenses (\$m)	240	187	265	155	113	27	18	38	1 043

Note: The data are for government school staff and students.

Source: Productivity Commission, *Report on Government Services, 2013*, Chapter 4, Tables 4A.1 and 4A.9.

- 15 These data show the minimum cost for out-of-school staff expenses across States is \$18 million (for the ACT). The Productivity Commission data contain expenses not considered to be administrative scale type expenses (such as regional office staff expenses). However, the ACT's data would not include those types of expenses.

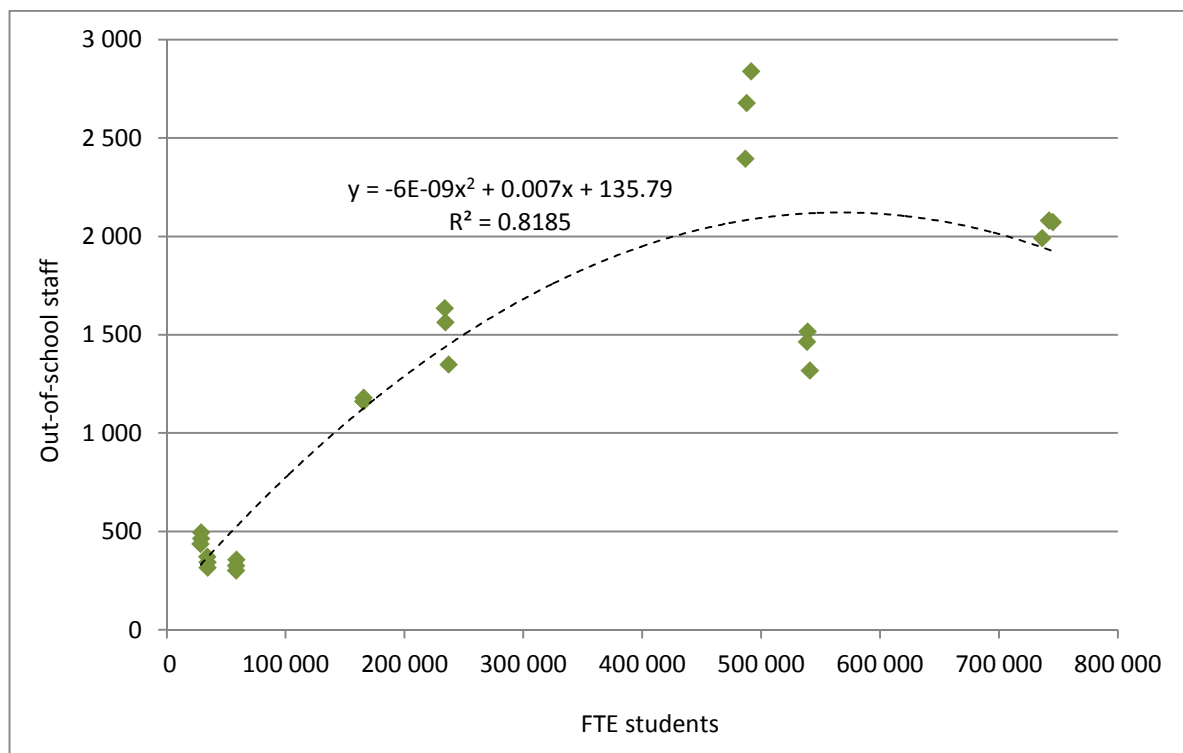
- 16 A regression was used to derive a relationship between Productivity Commission data on out-of-school staff⁴ and student numbers.⁵ The out-of-school data most closely aligns with our administrative scale concept. They encompass staff whose tasks are related to head office type activities, rather than staff engaged on front-line service provision (such as teachers or teachers' aides).
- 17 The results of this regression are shown in Figure 2. The form of regression equation used was one consistent with the Commission's view that there are economies of scale in providing school administrative services.⁶ The intercept of the regression is the point at which there are no students and so would provide an estimate of the minimum number of out-of-school staff required by each State. In this case, 136 out-of-school staff.
- 18 The national average out-of-school staff yearly wage is about \$101 561 (based on Productivity Commission data for the 3 years 2008-09 to 2010-11). When applied to the 136 out-of-school staff estimate, this provides an administrative scale costs estimate for schools education services of \$14 million.
- 19 We consider this regression provides a reasonable indication of school education administrative scale costs. We note the estimate is less than the out-of-school staff expenses for any State (Table 1) and close to our current estimate of \$16 million. However, we also note that the out-of-school data cover a broader range of fixed costs (for example, regional office staff expenses), which would mean the \$14 million estimate may be too high. At this stage, we do not have any way of further disaggregating out-of-school staff data.
- 20 South Australia said that a separate regression analysis of GFS data, on schools education expenses (along with earlier work on total State expenses), supported a 'step' increase in the quantum of administrative scale expenses (of two or three fold) to reflect current circumstances. Tasmania and the ACT also considered that the current quantum was likely understated, although not to the same extent.

⁴ Out-of-school staff are those who usually spend the majority of their time engaged in duties outside schools. These staff may be in State or regional offices and include senior executive staff. Out-of-school employee related expenses represent all salaries, wages awards, allowances and related on costs paid to out-of-school staff.

⁵ The Productivity Commission data are sourced from the ABS Schools Australia (4221.0) data collection for student numbers and The Standing Council on School Education and Early Childhood (SCSEEC), (formerly the Ministerial Council for Education, Early Childhood Development and Youth Affairs (MCEECDYA)), unpublished data for staff and financial data.

⁶ The correlation coefficient (R^2) of this form was 0.8185, higher than for the linear form (no economies of scale) for the same data, at 0.6871, and for the exponential form (diseconomies of large scale) at 0.688. The linear and exponential lines produce substantially higher intercept figures.

Figure 2 Regression using Productivity Commission data on out-of-school staff and students, data for 2008-09 to 2010-11



Note: These data are government school staff and students only.

Source: Data obtained from Productivity Commission, *Report on Government Services, 2013*, Chapter 4, Tables 4A.1 and 4A.9.

- 21 The regression of GFS expense data produced an estimate (\$189 million dollars per State) that we consider is too high to be a realistic estimate of the minimum administrative costs for schools education. From Table 1, the dollar estimate derived from this regression is more than is spent by six out of eight States on out-of-school staff expenses. It is also much higher than our current figure of \$16 million per State. We think the GFS expenses reflect increasing variable fixed costs (education administration grows with increasing numbers of schools and teachers), leading to the regression results being overstated in terms of the concept of administrative scale expenses. Therefore we do not consider this approach suitable to estimate administrative scale costs.
- 22 We also examined States' Department of Education annual reports to determine if the information they contain could assist in estimating a reliable administrative scale quantum. Since our concept is a minimum fixed cost, we examined the annual reports of the three smallest States.
- 23 Our examination of the Department of Education annual reports for Tasmania, the ACT and the Northern Territory encountered considerable difficulties. For example, each State has a different departmental structure and reports using different staffing classifications. We could not locate data on comparisons of teaching versus

non-teaching staff costs in the annual reports or department of education budget documents.

- 24 On balance, our examination of the three smallest States' annual reports and budget documents showed this method would not provide a sound basis for obtaining information on head office staff and costs.

The status quo

- 25 This is the default position. If a reliable method of re-estimating the quantum cannot be found, we can continue to index the existing quantum.
- 26 Most States supported a proposal to retain the existing estimates of the quantum of administrative scale expenses, noting that there was insufficient time in the review to develop an updated assessment. While supporting the proposal, Victoria, Tasmania and the ACT flagged that the development of an updated assessment should be a priority post the 2015 Review.
- 27 New South Wales said that it is not possible to adequately define and reliably measure administrative scale costs and the assessment should be discontinued. Alternatively, it said that if the Commission considered equalisation required an assessment, a discount commensurate with the uncertainty of the data should be applied. Victoria also supported applying the maximum discount to the assessment, in recognition that the age of the data on which the expenses have originally been determined will be over 10 years old in 2015.
- 28 Given the timeframe for this review, there is insufficient time to develop a new method to re-estimate the quantum for this assessment. While the underlying quantum data are old, two of the approaches considered, both based upon Productivity Commission data, provide some support for the existing quantum (for schools education).
- 29 However, we have not been able to find data on front-line versus head office staff for services other than schools education. This means we have been unable to test the reasonableness of our administrative scale estimates for other categories.
- 30 On balance, we intend to retain the status quo and use the existing quantum, indexed to assessment year dollars. We do not consider that applying a discount to the existing quantum will result in an outcome closer to achieving HFE.

Indexing the quantum

- 31 All States that supported retaining the quantum of administrative scale expenses supported using the ABS State and local government final consumption expenditure (SLGFCE) deflator to index the quantum of expenses, with the exception of the Northern Territory. It said that a composite index of changes in the price of goods and

services used in administrative tasks and wage levels, as measured by the consumer price index (CPI) and the labour price index (LPI), better reflected the factors that directly influence administrative scale costs

- 32 Table 2 compares the growth, over the last five and ten years, of the composite index⁷ and the SLGFCE deflator. The table shows there is not much difference between the two deflators. The difference is due to the slower growth in the CPI.
- 33 We consider that using the SLGFCE deflator provides a reasonable indexation of the minimum costs of providing head office type services. It is readily available, reflects State costs and does not require judgment to be made with respect to weightings, as for a composite index.

Table 2 Comparison of methods of indexation

	CPI	LPI	Composite	SLGFCE
	%	%	%	%
5 years	15.0	16.4	15.4	15.1
10 years	28.2	43.6	40.5	42.2

Source: Commission calculation based on: ABS, 6401.0 Consumer Price Index (CPI), Australia, Tables 1 and 2; ABS, 6345.0 Labour Price Index (LPI), Australia, Table 4a.; ABS, 5206.0 Australian National Accounts: National Income, Expenditure and Product, Table 4 Expenditure on Gross Domestic Product (GDP), SLGFCE chain price index.

CALCULATING ADMINISTRATIVE SCALE EXPENSES

- 34 Table 3 shows the non-location adjusted administrative scale expenses for 2012-13 by category. Administrative scale expenses in the table are based on the expenses identified for the 2004 Review, mapped to reflect the 2015 Review categories. They have been indexed by the SLGFCE and adjusted for superannuation.
- 35 As per the 2004 and 2010 Reviews, administrative scale expenses for two States have been adjusted in this review.
 - The ACT does not need to provide the average level of service in areas where it has zero or very low needs — services to Indigenous communities, non-urban transport, primary industry and mining, fuel and energy. Accordingly, its assessment in categories where these services are provided in other States leads to a reduction in 2012-13 of \$10 million.
 - The Northern Territory needs to provide an above average level of service in the areas of education, health, welfare and housing. In these areas, it operates dual service delivery models for its Indigenous and non-Indigenous residents. Its assessment in categories where these services are provided leads to an increase of \$7 million in 2012-13.

⁷ The composite index gave a 20% weight to the CPI and an 80% weight to the LPI.

Table 3 Illustrative assessed expenses, Administrative scale, non-location adjusted, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Schools education	17	17	17	17	17	17	17	18	133
Post-secondary education	9	9	9	9	9	9	9	9	70
Health	22	22	22	22	22	22	22	24	180
Welfare	9	9	9	9	9	9	9	10	72
Housing	9	9	9	9	9	9	9	10	72
Services to communities	4	4	4	4	4	4	3	4	30
Justice	24	24	24	24	24	24	24	24	192
Roads	4	4	4	4	4	4	4	4	36
Transport	4	4	4	4	4	4	3	4	32
Services to industry	25	25	25	25	25	25	17	25	191
Other expenses	115	115	115	115	115	115	115	115	921
Total	241	241	241	241	241	241	231	248	1 928

Note: Administrative scale expenses in the table have been indexed by the SLGFCE, and adjusted for superannuation and for the ACT and the Northern Territory.

Source: Commission calculation.

36 The administrative scale expenses have also been adjusted in recognition of the differential wage pressures faced by States in employing staff to provide the administrative services. The assessment of wage cost differences is discussed in Attachment 22 — Wages costs. Table 4 shows the location adjusted administrative scale expenses for 2012-13.

Table 4 Illustrative assessed expenses, Administrative scale, location adjusted, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Schools education	16	16	16	17	16	16	17	18	133
Post-secondary education	9	9	9	9	9	8	9	10	70
Health	22	22	22	23	22	21	23	25	180
Welfare	9	9	9	9	9	8	9	11	72
Housing	9	9	9	9	9	8	9	11	72
Services to communities	4	4	4	4	4	4	3	4	30
Justice	24	23	23	25	23	23	25	25	192
Roads	4	4	4	5	4	4	5	5	36
Transport	4	4	4	4	4	4	3	4	32
Services to industry	25	24	24	26	24	24	17	26	191
Other expenses	115	112	112	120	112	110	119	121	921
Total	241	235	236	251	235	231	238	260	1 928

Note: Administrative scale expenses in the table have been adjusted by wages costs.

Source: Commission calculation.

WHAT IS THE IMPACT ON THE GST DISTRIBUTION?

- 37 Table 5 shows the extent to which the assessment would move the distribution of GST away from an equal per capita distribution. Because administrative scale expenses are assessed on an equal per State basis, GST is redistributed to the less populous States of Western Australia, South Australia, Tasmania, ACT and the Northern Territory, and away from the more populous States of New South Wales, Victoria and Queensland.

Table 5 Illustrative GST impact, Administrative scale, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Redist.
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Schools education	-26	-17	-11	3	6	13	15	17	54
Post-secondary education	-14	-9	-6	1	3	7	8	9	29
Health	-36	-23	-15	4	9	17	20	23	73
Welfare	-14	-9	-6	1	3	7	8	10	29
Housing	-14	-9	-6	1	3	7	8	10	29
Services to communities	-6	-4	-2	1	2	3	2	4	12
Justice	-38	-24	-15	4	9	19	22	23	77
Roads	-7	-5	-3	1	2	3	4	4	14
Transport	-6	-4	-2	1	2	3	3	4	12
Services to industry	-36	-23	-14	5	10	20	14	24	73
Other expenses	-181	-116	-73	20	45	90	103	111	370
Total	-378	-243	-152	43	96	188	206	240	773
Total (\$pc)	-51	-43	-33	17	57	367	546	1 008	34

Note: The difference from an equal per capita assessment using 2012-13 assessed expenses.

Source: Commission calculation.

CHANGES SINCE THE 2010 REVIEW

- 38 The only change (apart from remapping expenses from the 2010 Review to 2015 Review categories) to this assessment has been as a result of changes to assessing the effects of differences in wage costs between States.
- 39 However there have been presentational changes. All administrative scale expenses are now included in the Other expenses category, rather than being included separately in each expense category. For reasons of transparency, the quantum of administrative scale expenses and their redistributive impact in each expense category will continue to be separately identified.
- 40 While some States did not support this change, we consider it simplifies category assessments. Sufficient information is still available to allow those States to add back category allowances if they so wish.

UPDATE PROCESS

- 41 The quantum of administrative scale expenses will be indexed each year based upon growth in the SLGFCE deflator.

- 42 We consider that the development of an updated assessment should be a priority for the next review. However, we note the difficulties States face in providing data at sufficiently fine detail to enable updating the administrative scale expense quantum.

ATTACHMENT 26

INDIGENEITY

Summary of changes since the 2010 Review

- Where we use a geographic measure of socio-economic status, we will use the Indigenous specific IRSEO, and non-Indigenous specific NISEIFA measures. In the 2010 Review we used a generic SEIFA to measure relative disadvantage for both Indigenous and non-Indigenous.
- 1 In response to the terms of reference requiring us to ‘develop methods to appropriately capture the changing characteristics of the Indigenous population’ we have changed the way we assess the costs of providing services to Indigenous people.
 - 2 Like non-Indigenous people, Indigenous people are not homogenous and different groups of Indigenous people use State services at different rates. To appropriately capture the characteristics of the Indigenous population, we consider it is necessary to identify attributes of Indigenous people that we can use to disaggregate them into those who use State services at a higher than average rate and those that use State services at a lower than average rate. As the profile of the Indigenous population changes, when different groups of people change whether they identify or not as Indigenous, we need our measure to reflect this changing profile.
 - 3 After consulting with the States, we consider that the most viable approach to disaggregating the Indigenous population is to do so geographically.
 - 4 In the 2010 Review, we used the ABS Socio-Economic Indexes for Areas (SEIFA) to differentiate both the Indigenous and non-Indigenous populations into various socio-economic groups. Because Indigenous people generally represent a very small proportion of the population in any area, the socio-economic status of the Indigenous population does not have a significant contribution to the measured SEIFA score of that area. Therefore, SEIFA may not be representative of the socio-economic status of the Indigenous population in each area. In this review we are using a geographic socio-economic index designed specifically for Indigenous people, and another specifically designed for non-Indigenous people.
 - 5 In the 2010 Review, we measured service provision for the populations living in different SEIFA areas. We found, for example, that States spent more on hospital services for people living in low SES areas. Therefore, if a State has more people in such areas it would need to spend more on health services. We still intend to use this

approach, but to use a measure of SES that is targeted at Indigenous and non-Indigenous people separately.

Indigenous Relative Socio-Economic Outcomes (IRSEO) Index

- 6 The Indigenous Relative Socio-Economic Outcomes (IRSEO) Index was developed by the Centre for Aboriginal Economic and Population Research¹ (CAEPR). It is based on the same technique as the ABS uses to produce SEIFA, but uses a reduced suite of contributing variables and is calculated for Indigenous areas, rather than the much finer geography available for SEIFA.
- 7 While some States have concerns with technical aspects of IRSEO, in particular the choice of variables used in its development, most States agreed that it was the best available option given the time available for this review. All States agreed that NISEIFA was the most appropriate area-based measure for the non-Indigenous population.

Non-Indigenous SEIFA

- 8 To complement IRSEO, the CGC commissioned the ABS to produce a version of SEIFA using only the non-Indigenous population. The non-Indigenous SEIFA (NISEIFA) uses the same variables as the Index of Relative Socio-Economic Disadvantage, but is recalculated for the non-Indigenous population.

Other issues

- 9 The ACT is concerned with the use of geographic based measures of socio-economic status generally, but has not identified a viable alternative, or evidence of any bias from those assessments using it.

Impact

- 10 Table 1 shows the different socio-economic profile of Indigenous people in each State using SEIFA or IRSEO. While Tasmania has 2% of the most disadvantaged Indigenous quintile using SEIFA, using IRSEO it has none. Correspondingly, it had 2% of the least disadvantaged quintile using SEIFA, but 6% using IRSEO.
- 11 The shares of the most disadvantaged Indigenous in Western Australia and the Northern Territory have increased considerably.

¹ The Centre is part of the Australian National University.

Table 1 Distribution of Indigenous population by SEIFA and IRSEO

Socio-economic quintile	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
SEIFA	%	%	%	%	%	%	%	%	%
Least disadvantaged	30.9	9.7	27.9	15.8	3.7	2.4	3.4	6.1	100.0
2nd least disadvantaged	31.5	8.4	30.8	13.7	5.0	4.4	0.7	5.6	100.0
Middle quintile	33.7	7.6	30.4	13.0	6.8	4.3	0.3	3.8	100.0
2nd most disadvantaged	37.0	7.2	28.0	12.4	6.8	4.5	0.1	4.1	100.0
Most disadvantaged	22.7	2.5	24.0	10.9	5.7	2.4	0.0	31.6	100.0
Total	31.1	7.1	28.2	13.2	5.6	3.6	0.9	10.3	100.0
IRSEO									
Least disadvantaged	33.6	17.8	29.8	2.5	2.3	6.5	4.5	3.1	100.0
2nd least disadvantaged	41.5	4.5	26.5	6.2	6.4	9.5	0.0	5.3	100.0
Middle quintile	24.3	8.8	40.3	17.8	3.3	1.0	0.0	4.5	100.0
2nd most disadvantaged	39.0	4.1	27.9	18.3	8.9	0.8	0.0	1.0	100.0
Most disadvantaged	17.0	0.0	16.8	21.6	7.0	0.0	0.0	37.5	100.0
Total	31.1	7.1	28.2	13.2	5.6	3.6	0.9	10.3	100.0

Source: ABS ERP and CAEPR.

- 12 Table 2 shows the different socio-economic profile of non-Indigenous people in each State using SEIFA or NISEIFA. As the Non-Indigenous population has a very similar distribution to the total population there is little difference between the SEIFA and NISEIFA distributions.

Table 2 Distribution of non-Indigenous population by SEIFA and NISEIFA

Socio-economic quintile	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
SEIFA	%	%	%	%	%	%	%	%	%
Least disadvantaged	34.7	25.1	16.7	13.0	4.6	0.8	4.3	0.8	100.0
2nd least disadvantaged	27.9	28.0	20.2	12.3	6.9	1.5	2.3	0.9	100.0
Middle quintile	28.6	27.2	21.9	10.6	7.2	2.5	1.1	0.9	100.0
2nd most disadvantaged	32.3	23.6	21.3	9.8	9.0	2.9	0.5	0.7	100.0
Most disadvantaged	38.3	22.8	18.8	6.7	9.2	3.6	0.2	0.5	100.0
Total	32.4	25.3	19.8	10.5	7.4	2.2	1.7	0.7	100.0
NISEIFA									
Least disadvantaged	34.9	24.7	16.8	12.9	4.6	0.8	4.3	1.0	100.0
2nd least disadvantaged	27.7	27.4	20.3	12.6	6.7	1.5	2.3	1.3	100.0
Middle quintile	28.5	26.8	22.2	10.9	7.3	2.5	1.0	0.8	100.0
2nd most disadvantaged	32.5	23.6	21.3	9.8	9.1	2.7	0.5	0.4	100.0
Most disadvantaged	38.2	24.1	18.3	6.0	9.4	3.7	0.2	0.1	100.0
Total	32.4	25.3	19.8	10.5	7.4	2.2	1.7	0.7	100.0

Source: ABS ERP.

RELIABILITY OF THE NEW APPROACH

13 We have identified five State services where we could consider the validity of using these indexes to differentiate the use of State services:

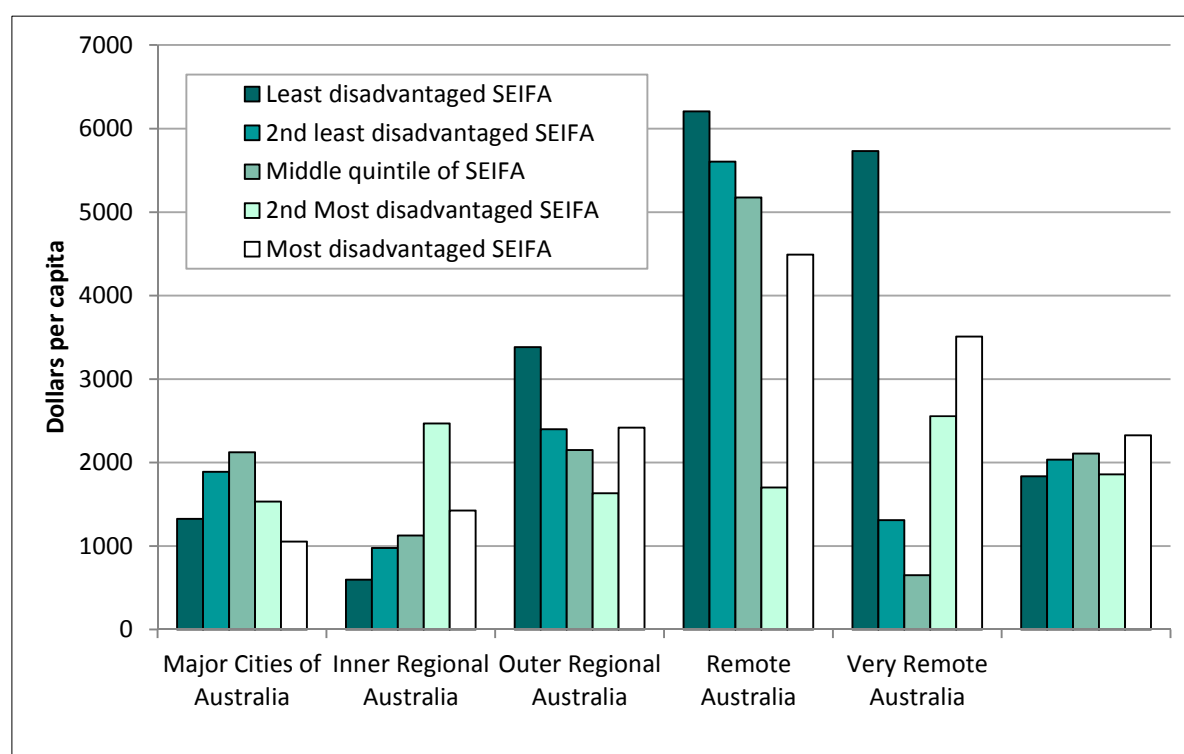
- hospital inpatient services
- vocational education services
- family and child welfare services
- schools education services
- police services

Hospital inpatient services

14 Figure 1 shows that the relationship between standard SEIFA and per capita spending on Indigenous hospitalisation is weak. For example, in major cities, people in both the most disadvantaged and least disadvantaged have low per capita spending on hospital services. The relationship in inner regional areas is very different to that in outer regional areas.

15 In total, there is a general upward relationship. However it is very weak, indicating the SEIFA explains very little of the difference in between Indigenous groups in their use of hospital services.

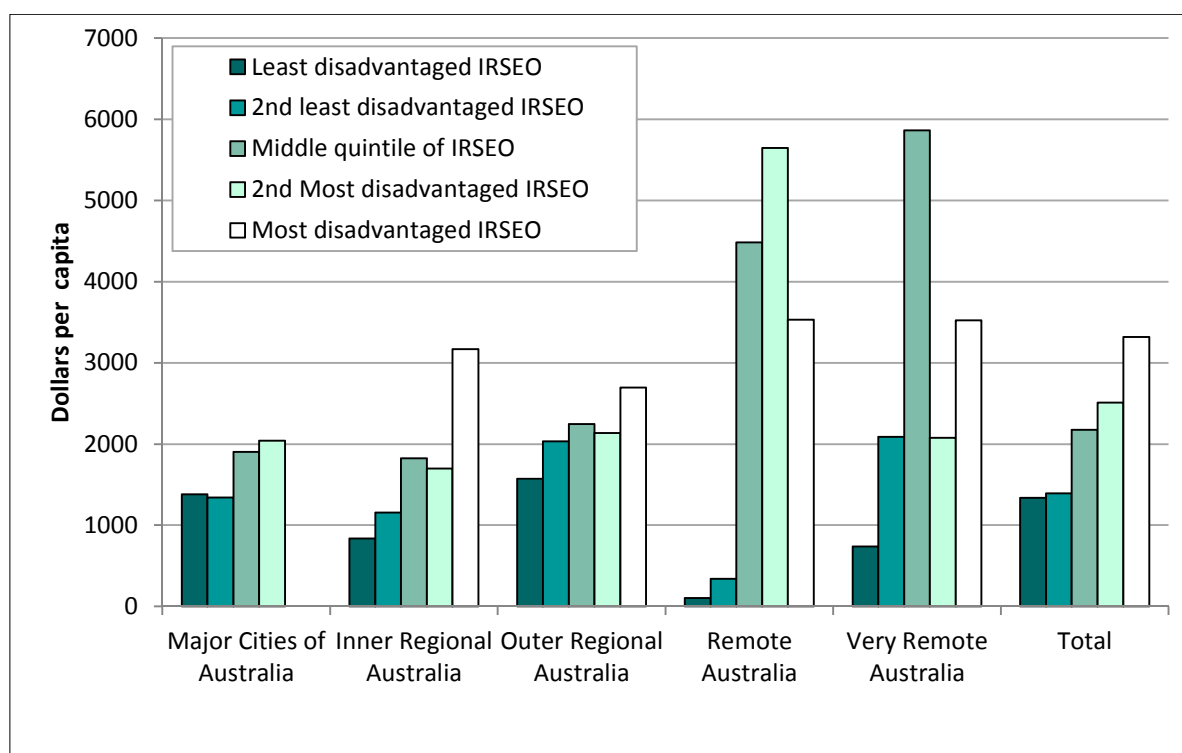
Figure 1 Indigenous inpatient spending per capita by SEIFA and remoteness



Source: Commission calculation using AIHW and ABS population data.

- 16 However, when we undertake the same analysis using an Indigenous specific measure of socio-economic status, we see a much stronger and more consistent relationship. Across non-remote regions, there is a strong relationship between IRSEO quintiles and hospital spending. This can be seen in Figure 2.
- 17 In remote Australia, the relationship appears weaker. The number of people in the least and 2nd least disadvantaged quintiles in remote Australia is very small, leading to greater volatility. However, even in the most disadvantaged 60%, the relationship is not consistent. We do not consider that IRSEO is a useful way of disaggregating the remote-Indigenous populations, at least for explaining differences in hospital spending.
- 18 These data suggest that IRSEO is an appropriate means of assessing the socio-economic profile of the Indigenous population in non-remote areas.

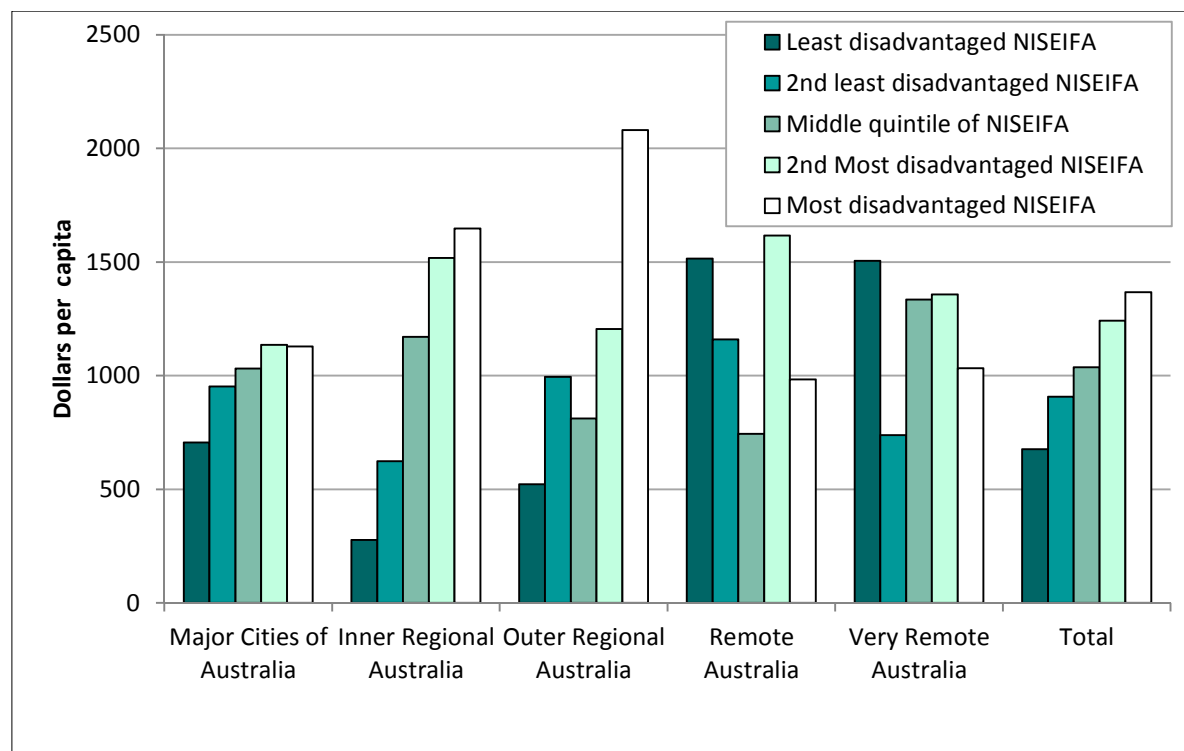
Figure 2 Indigenous inpatient spending per capita by IRSEO and remoteness



Source: Commission calculation using AIHW and ABS population data.

- 19 For the non-Indigenous population, in non-remote Australia, as the Indigenous population is generally relatively small, SEIFA scores are generally very closely related to NISEIFA scores, and the relationship to hospital spending is very similar using the two indexes. However, in Remote areas, neither index is particularly strong at explaining differences in hospital spending per capita. Figure 3 shows the relationship between NISEIFA and hospital spending in different remoteness areas for the non-Indigenous population.

Figure 3 Non-Indigenous inpatient spending per capita by NISEIFA and remoteness



Source: Commission calculation using AIHW and ABS population data.

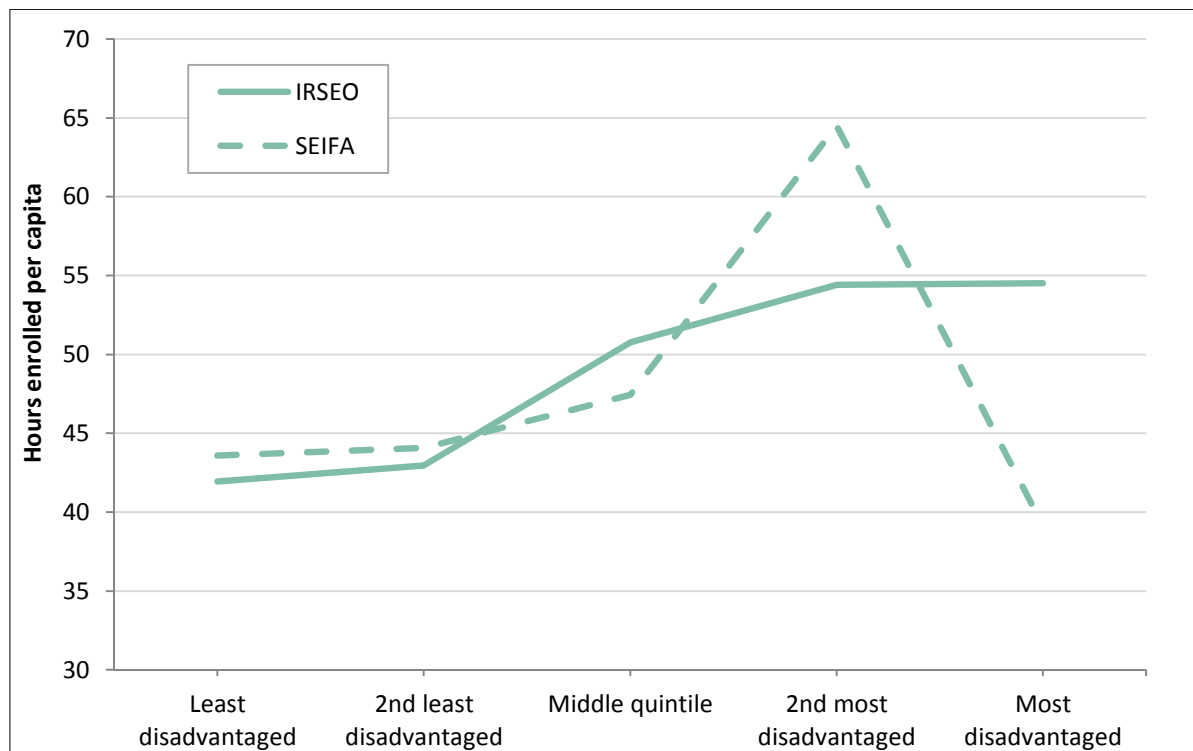
- 20 It is worth noting that the analysis has been conducted on AIHW admitted patient data, rather than the IHPA data used in the admitted patient assessment. This is because IHPA data are not yet available using both classifications.
- 21 **Conclusions.** In non-remote areas, IRSEO and NISEIFA are highly effective at grouping Indigenous and non-Indigenous people into groups that reflect their use of hospital services. This change represents a significant improvement in defining comparable communities of Indigenous people in different States. However, in remote areas, these measures of socio-economic status add little. While the classifications we use will depend on similar analysis using IHPA data, on the basis of AIHW data, we would be inclined to use the following classifications in the health assessments:
- Major cities
 - Most disadvantaged quintile
 - Middle 3 quintiles
 - Least disadvantaged quintile
 - Inner regional
 - Most disadvantaged quintile
 - Middle 3 quintiles
 - Least disadvantaged quintile

- Outer regional
 - Most disadvantaged quintile
 - Middle 3 quintiles
 - Least disadvantaged quintile
- Remote and very remote.

Post-secondary education

22 Our Post-secondary education assessment is based on hours enrolled in vocational education. This is a very different service, targeting a very different clientele from admitted patients. However it also shows that the relationship between IRSEO and use by Indigenous people is stronger than between SEIFA and use by Indigenous people. Post-secondary education use rates in non-remote areas increase consistently and plausibly with increased disadvantage using IRSEO, while with SEIFA, the relationship is more erratic and less plausible. This can be seen in Figure 4. As with admitted patients, the relationship breaks down in remote areas.

Figure 4 Indigenous post-secondary enrolled hours per capita in non-remote areas



Source: Commission calculation using NCVER and ABS population data.

- 23 We consider that IRSEO combines Indigenous people into comparable communities better than SEIFA does. We consider an appropriate classification for both Indigenous and non-Indigenous people would be:
- Non-remote

- Most disadvantaged 40%
- Middle quintile 20%
- Least disadvantaged 40%
- Remote.

Welfare — family and child

- 24 Substantiations of child abuse, being based on only five States, are not sufficiently robust to allow the detailed analysis undertaken for post-secondary education and admitted patient services. Instead, we have aggregated the data into two groups, and compared the impact of using IRSEO/NISEIFA and SEIFA.
- 25 Table 3 shows that, for the Indigenous population, the most disadvantaged three IRSEO quintiles have use rates 27% higher than the least disadvantaged two quintiles. Using SEIFA, the difference is only 14%. Similarly, for the non-Indigenous population, NISEIFA captures more of the difference in use rates than SEIFA, and as such IRSEO and NISEIFA are better proxies of the underlying socio-economic drivers of child abuse and neglect substantiation and hence of State spending on child and family welfare.

Table 3 **Child abuse and neglect substantiation rates**

	Indigenous		Non-Indigenous	
	IRSEO	SEIFA	NISEIFA	SEIFA
Least disadvantaged 60% (Rate per 1,000 children)	40.5	40.9	4.8	5.0
Most disadvantaged 40% (Rate per 1,000 children)	51.5	46.7	12.1	11.9
Ratio (%)	127	114	252	237

Source: Commission calculation using AIHW and ABS population data.

Schools education

- 26 In School education, the data are available to enable us to attempt to use IRSEO and NISEIFA. In undertaking our regression of ACARA data to identify the attributes of students who attract higher costs, we found that States spend less on more disadvantaged Indigenous students than on less disadvantaged Indigenous students. This pattern was inconsistent with the pattern derived from raw cross-classified tables of ACARA data.
- 27 The inconsistent relationship could reflect:
- difficulty in the model attributing costs of schools to complex interactions of attributes of different students
 - that the NISEIFA and IRSEO scores relate to the location of the school, and not to the residence of the student

- there may be an inconsistent relationship between socio-economic profile of Indigenous students and the funding received by their schools.
- 28 Because of our uncertainty concerning what the underlying cost drivers associated with IRSEO, we have excluded the IRSEO quintile of Indigenous students from our model, and do not differentially assess the socio-economic status of students in the Schools education assessment.

Justice

- 29 Data are now available on residence of offender by Indigeneity of offender. However, we have not yet analysed this data.

Other State services

- 30 While data for some services allow us to use this new approach to measuring the socio-economic status of Indigenous, data are not available for other services. For conceptual or data availability reasons, we have not been able to apply this technique in all areas.
- **Welfare — other than family and child services.** We use a range of indicators of use of welfare services. These indicators do not distinguish between Indigenous and non-Indigenous people, but should appropriately reflect total needs in each State, including any higher use of these services by Indigenous people generally, or those in specific States. The indicators are:
 - Number of younger people who meet the (full coverage) access requirements of the National Disability Insurance Scheme
 - Concession card holders
 - Socio-Economic Index for Individuals.
 - **Housing.** The SEIFA, or equivalent, profile of people in public housing is determined by the choices of State governments on where to locate housing, not by the socio-economics of the clients. Therefore our proposed approach is not appropriate. We use income as our measure of socio-economic status, and this should distinguish between different groups of Indigenous people.
 - **Services to communities.** We have no data on spending on individual communities. As such, we cannot determine whether disadvantaged communities attract more or less per capita than less disadvantaged communities.

CONCLUSIONS

- 31 We have been able to identify a method for addressing the terms of reference for health, post-secondary education, family and child welfare, and police services. These categories represent about 40% of direct spending on Indigenous people.
- 32 For other categories, we have retained, or adopted the most reliable measure of spending on the Indigenous population in each State. In some categories we have used other measures to differentiate the Indigenous populations in different States, such as pension types (Welfare), or household income (Housing). However, in other areas, such as prisons and courts, we have not been able to assess differences between the Indigenous populations in different States as we have no reliable basis on which to differentiate them.

IMPACT ON THE GST

- 33 Table 4 shows the redistribution for the admitted patient assessment, using two different approaches. These are illustrative. There will be differences when IHPA data are employed, possibly including a change in the way groups are aggregated. This does not examine the impact on other health components, nor on the Post-secondary education or Welfare categories.

Table 4 Redistribution of admitted patient expenses, 2014-15

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc
IRSEO / NISEIFA	4	-44	5	-43	72	216	-207	628
SEIFA	4	-39	4	-47	81	236	-232	483
Impact of changing to IRSEO	0	-5	1	4	-9	-20	25	145

Note: Illustrative redistribution based on AIHW data, rather than IHPA data.
The SEIFA approach reflects using the same classification structure as IRSEO/NISEIFA. It does not reflect the classification used in the 2014 Update.

CHANGES SINCE THE 2010 REVIEW

- 34 Where we use a geographic measure of socio-economic status, we will use the Indigenous specific IRSEO and non-Indigenous specific NISEIFA measures where appropriate. In the 2010 Review we used a generic SEIFA to measure relative disadvantage for both Indigenous and non-Indigenous.

ATTACHMENT 27

IMPACT OF POPULATION GROWTH ON FISCAL CAPACITIES

- 1 During the 2015 Review, States have made many arguments about whether the Commission understates or overstates the effects of population growth on State GST requirements. This attachment considers those arguments.

BACKGROUND

- 2 Changes in State populations have an immediate impact on the GST distribution because each State's share is derived by applying its relativity factor to its population. Population growth also affects the relativity factors because it has a major effect on the assessments for infrastructure spending and the acquisition of financial assets. This attachment deals only with this effect.
- 3 In most of the attachment, we assume there are no differences among States in the infrastructure per capita required to provide the average services (that is, there are no capital stock disabilities). This allows us to focus on the population growth effects.
- 4 With this assumption, total capital spending (new investment plus depreciation) can be broken into three elements.¹
 - **Investment to accommodate growth.** The amount is estimated as the average infrastructure stock per capita multiplied by the growth in population. It is assessed in accordance with a State's share of the population growth.
 - **Spending to replace infrastructure.** The amount is estimated as the depreciation expenses recorded by all States. It is assessed equal per capita.
 - **Investment to increase average infrastructure stock per capita.** The amount is total capital spending less the replacement and growth components. It is assessed equal per capita.

¹ Without the assumption, there would be a fourth element of total capital spending to fund the effects of changes in State demographic and economic circumstances on infrastructure per capita required to provide the average services. It is assessed by reference to changes in the capital stock disabilities.

- 5 Under this scenario, 77% of recorded capital spending in 2010-11 to 2012-13 is assessed equal per capita and the rest is assessed differentially according to relative population growth.
- 6 The acquisition of financial assets has a similar structure, but there is no replacement spending. Some 90% of net borrowing in 2010-11 to 2012-13 is assessed equal per capita and the rest is assessed differentially according to relative population growth.
- 7 The 2010 Review methods were controversial and still are. States with above average population growth support them because they receive extra GST to help them cope with growth at the time it occurs. Other States prefer approaches which redistribute funds more slowly as the infrastructure is used.
- 8 Table 1 shows the differences between the States in their population growth rates. Recognising the effects of population growth moved GST towards States with above average growth in the 2014 Update.

Table 1 State population growth rates

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Average
Population growth rates (a) (%)									
2010-11	1.1	1.4	1.6	2.4	0.9	0.7	1.9	1.1	1.4
2011-12	1.1	1.6	1.8	3.1	0.9	0.3	1.7	1.0	1.6
2012-13	1.3	1.8	2.1	3.6	0.9	0.1	1.9	2.3	1.8
Growth relative to average									
2010-11	0.8	1.0	1.1	1.7	0.6	0.5	1.4	0.8	1.0
2011-12	0.7	1.0	1.2	2.0	0.6	0.2	1.1	0.7	1.0
2012-13	0.7	1.0	1.2	2.0	0.5	0.1	1.0	1.3	1.0

(a) These are growth rates between State estimated resident populations at 30 December.

Source: Commission calculation.

- 9 The GST Review said ‘the changes to the capital assessment in the 2010 Review — including the population growth needs assessment — were a positive step forward’. However, it thought the assessment could be simplified.
- 10 Some States continue to oppose this approach, but we have decided to retain it.
- 11 Before considering the State submissions, it is worth noting the following.
 - The Commission has not built a model of what investment a State needs to undertake given its demographic and other characteristics. It has:
 - observed that States invest in infrastructure each year and that the recorded average stock per capita changes
 - built an assessment which would give all States the fiscal capacity to have the average stock per capita at the end of a fiscal year if it started the year with the then average stock per capita.

- The Commission has assumed the average stock of infrastructure is required to give States the capacity to deliver the average level of services.
 - The Commission has not sought to capture the different age profiles of assets under average policy, and what the fiscal implications of such differences might be on repair and maintenance expenses and operating efficiency.
- 12 The State arguments illustrate the evolutionary nature of Commission processes. The 2010 Review created assessments that capture the main effects of population growth and States are now seeking refinements. While the arguments have some validity, they are only partial, they would add to the detail and complexity of the assessments and their likely impacts are difficult to quantify and are of a second order. The emphasis on simplification in the references for this and the 2010 Reviews, and the reliability and materiality guidelines developed by the Commission, were intended to constrain these types of enhancements to the methodology.

STATE ARGUMENTS IN THE 2015 REVIEW

- 13 States made many arguments about the population growth effects.
- Arguments seeking to accentuate the effects of population growth
 - Western Australia said States build ahead of growth which leads to excess capacity and growing States incur greater costs of underutilised capital. But other States said the extent of any unused capital is unknown because investment is lumpy and may occur in anticipation of growth or to overcome crowding from past growth.
 - Western Australia said the assessment understates the investment they require because it only provides the capacity to acquire stock with the average depreciated values which are lower than current prices.
 - Arguments seeking to reduce the effects of population growth
 - Some States, such as New South Wales and Victoria, said infrastructure does not respond to annual population changes and some of the effects of population growth are met by making capital 'work harder'.
 - Many States said population growth provides benefits in the form of greater asset revaluations (especially revaluations of State equity in their public non-financial corporations), which offset some of the dilution effects of growth on infrastructure stock per capita. Population growth also benefits the faster growth States by diluting the per capita value of their outstanding borrowings.
 - Victoria said the population growth allowances understate the needs of slower growing States where investment is needed to support development. Faster growing States have high levels of private investment and less need to support growth.

- Arguments about the costs of intrastate migration and stranded capital.
 - Queensland said intrastate migration creates an infrastructure burden, even if the total population does not increase. It said while the location factors allow for the extra costs per unit of infrastructure, the additional infrastructure need itself is not recognised. Others said intrastate migration results in existing facilities in some places being larger than the current population requires but they cannot sell part of a facility and population dispersion prevents consolidation of service delivery.
- 14 It has also been noted that rapid population growth may create broader issues, especially congestion, which are not adequately recognised by the Commission.

DO THE ASSESSMENTS UNDERSTATE THE NEEDS OF GROWTH STATES?

The assessments do not allow for future growth

- 15 Western Australia argued States build infrastructure to cater for future growth (growth infrastructure) because larger facilities are cheaper per person served than smaller ones. It said this leads to underutilised capital and growth States have a higher proportion of unused growth infrastructure.
- 16 This argument implies the infrastructure assessment should aim to give growth States the capacity to hold more infrastructure per capita than average.
- 17 To quantify the size of this effect Western Australia turned to a consultancy which found there is an optimum 14 year cycle between episodes of new construction. On that basis, Western Australia concluded that at any time there will be underutilised capacity catering for seven years population growth. Western Australia argues the value of this component of infrastructure could be allocated properly if each State's population is increased by its trend growth rate for the past seven years. In essence, Western Australia seeks a magnification of the population growth effects.
- 18 This proposal stands or falls on the proposition that there is significant excess infrastructure in each year. There is no way of ascertaining if that is true, in part because there is no way of accurately measuring the utilisation of infrastructure to decide if there is over or under utilisation. Anecdotal evidence suggests backlogs exist in some areas and in some States, while excess capacity might exist in other areas. While, it appears conceptually reasonable to assume that when infrastructure is built it provides for future growth, it is also possible the decision to build is deferred until existing infrastructure is over utilised. Where the balance lies in any year is unclear.
- 19 Because we are unsure of the conceptual case, we have not closely analysed the quantification proposed by Western Australia. We note, however, it appears unlikely

that all States would agree they had the capacity now to cater for seven years of population growth (at the current infrastructure utilisation rate).

- 20 The GST Distribution Review also concluded it is not necessary to provide capacity for States to invest in advance of population growth.

The Panel understands that changes to the assessment of capital in the 2010 Review were designed to ensure that the needs of States experiencing rapid population growth (such as Queensland and Western Australia) are recognised as population growth occurs. The Panel does not agree that further changes are required to create capacity for States in advance of actual population growth. The Panel recognises that there is a risk that State funded social and economic infrastructure related to mining activity may not be fully utilised in the future if the level of mining activity declines. However, this type of risk exists for all States undergoing structural change, and the Panel has no basis for concluding that the resource States face relatively greater risk, or for assigning a value to this risk.²

The assessments do not provide adequately for new infrastructure

- 21 Western Australia noted the assessments only give it the capacity to provide its new people with the depreciated value of infrastructure. It said a weighting should be applied to recognise the infrastructure provided to the new population is unavoidably less depreciated (and more expensive) than the average stock.
- 22 The argument centres on the concept of there being a quantum of infrastructure needed to deliver the average level of services. As that quantum ages, its service delivery capacity is unimpaired because it is maintained and refurbished as necessary, but it loses financial value. New people need that quantum of infrastructure for service delivery, but States have to fund it at new, not depreciated, values.
- 23 This argument raises both conceptual and analytical issues. We can recognise that acquiring new assets may be more expensive than the value of similar assets recorded on State balance sheets. However, any recognition of this would need to allow both the additional fiscal burden and any offsetting fiscal benefits.
- 24 Such a process would recognise that, on average, faster growing States would have younger assets. This could give rise to the following fiscal benefits.
- Lower than average repairs and maintenance expenses. In the past States have argued older infrastructure raises these costs.
 - Faster growing States may be able to capture scale economies in infrastructure not available to others. This may offset its higher cost.

² GST Distribution Review Panel, Final Report, October 2012, p.118.

- Modern infrastructure usually provides greater functionality or efficiency than older infrastructure, further reducing the quantum needed for average service delivery capacity and providing savings in operating costs.
- 25 It is because of these complexities that the Commission has not attempted to recognise that States may have different asset age profiles under average policy.
- 26 Recognising this argument would require information on: differences between the average value of existing infrastructure used to deliver services and new infrastructure of the same capacity; and how repairs, maintenance and refurbishment spending varies with infrastructure age. This will require further consultation with the States.

DO THE ASSESSMENTS OVERSTATE THE NEEDS OF GROWTH STATES?

The assessments overstate the need for extra infrastructure

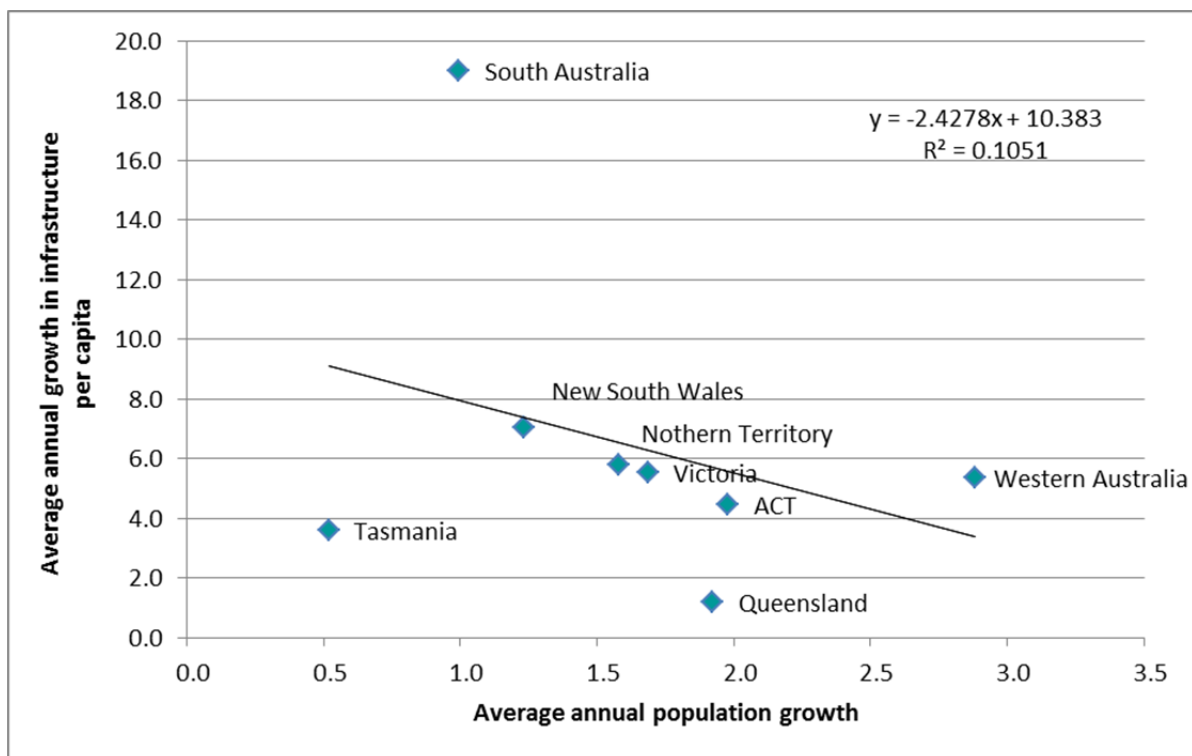
- 27 Some States have argued some infrastructure needs are met by making capital ‘work harder’ (that is, improving infrastructure efficiency). Consequently, infrastructure requirements do not increase proportionately with service use. They want the growth allowances discounted.
- 28 The assessments already take account of any improvements in infrastructure efficiency because it is part of the annual changes in per capita infrastructure stocks reflected in the calculations. Since the population growth allowances give States the capacity to provide only the average per capita infrastructure for their new population, it presumes that infrastructure has the average efficiency.
- 29 Any discounting of the population growth allowances would result in per capita infrastructure in growth States being below the average. Providing the average level of services would require them to adopt above average policies, which would be inconsistent with equalisation.

Population growth may provide revaluation benefits

- 30 Most States accept that, other things being equal, population growth dilutes the value of non-financial assets (such as land and infrastructure), financial assets (such as equity in public corporations) and financial liabilities. Faster growing States incur an above average reduction in the per capita value of their assets which reduces their fiscal capacity. But that is partly offset by the benefit they gain from the above average reduction in their financial liabilities. The net impact of those effects is reflected in the GST distribution under the 2010 Review methods.

- 31 However, some States argue there is a positive link between population growth and the value of State assets such as land and equity in public corporations (part of which is land). As a result, faster growing States receive financial benefits through above average asset revaluations which offset the effects of population dilution. These States argue a revaluation disability should be assessed.
- 32 The conceptual case for this argument is weak and we have not introduced any revaluation disabilities.
- Most assets where revaluations might be greatest (land) are assessed in a way that does not affect the GST distribution.
 - There is no clear link between the average annual growth in per capita infrastructure values and population (see Figure 1). The fitted line would be virtually horizontal if the South Australian data (which are largely driven by an accounting change in 2009-10) were omitted. Also, the effect on the GST distribution of the revaluations of infrastructure would be immaterial.

Figure 1 Average annual growth in infrastructure per capita and population, 2008-09 to 2011-12



Source: Commission analysis based on ABS GFS and population data.

- Similar analysis of the link between population growth and revaluations of equity in public corporations could not be done reliably because it was not possible to separate the effects of revaluations from those of State actions (such as capital injections, capital grants and privatisations) or State pricing and

other regulatory policies. Any effects on the GST distribution of revaluations of equity would be also immaterial.

- 33 We also note our decision to include the activities of housing and public transport corporations in the general government sector in this review has reduced the GST impact of any effects of population growth on State equity. It has reduced the value of equity used in the assessments.

Slower growing States need to invest to support development

- 34 Victoria said the current assessments do not recognise the need of slower growing States to invest to support and stimulate growth. Western Australia and Queensland argue the assessments understate their need to invest to cope with the economic and social implications of growth which is occurring.
- 35 The investment assessments provide States with the capacity to make the average response to population growth and other changes in State circumstances affecting the use of services and related infrastructure. The amounts States invest may also be affected by other policy aims, including the provision of assistance to support and develop their economies. We observe there is no common policy on why States provide that support, when it is provided or how it is provided, and there is no agreement on what drives it. We consider all States invest in a way that reflects their population and economy. We have concluded these considerations should not have differential effects on the GST distribution.

OTHER GROWTH RELATED ISSUES

Migration and risks of stranded capital

- 36 The Infrastructure assessments provide each State with the capacity to hold the average per capita amount of infrastructure for every person in the State. If total population does not change but people move between regions, the assessment implies the extra infrastructure required in gaining regions is offset by reducing the stocks in losing regions — either by selling some or letting it depreciate. Each State follows its own policies on the management of that capacity, including how it allocates resources across regions, how it deals with stranded capital and how it minimises the inefficient use of infrastructure.
- 37 Difficulties of reducing infrastructure stocks in regions suffering population losses may constrain the capacity of States to operate in this way, especially if the population losses exceed the depreciation rate. However, any impact on the GST distribution would be immaterial. Analysis of rural statistical areas which experienced a decline in population over the three years 2009 to 2012 revealed a total decline of

only 14 231 people. Queensland and Western Australia had the lowest shares of population decline relative to their total population and the Northern Territory, Tasmania and South Australia the biggest shares.

- 38 We recognise the volatile nature of mining development may lead to changes in where people work and live and, as a consequence, where services are provided. But this is not unique to the mining industry. We have not identified any data that would allow us to conclude mining States face more risk of stranded or inefficiently used infrastructure than other States or to quantify the level of risk. Given the low level of population decline in rural areas and the absence of other data to establish a conceptual case we have decided not to make an assessment of the effect of intrastate migration and the risks of stranded capital.

Congestion costs

- 39 It has been argued that the Commission's processes do not adequately take account of the costs of congestion associated with rapid population growth.
- 40 In a simplified way, congestion is a function of infrastructure capacity and the level of use. Our processes aim to allow for the effects of interstate differences in the underlying drivers of service use on the level of infrastructure States require and the services they need to provide, assuming they respond in the average way. That is, the processes give each State the capacity to have the average level of congestion. How each State chooses to use that capacity is a matter for its policies.
- 41 For example, if a State's road use increases at an above average rate, it receives the capacity to make above average investment in new road capacity. In the 2014 Update, the allowances for the effects of changes in road use on investment redistributed about \$80 million to Queensland and Western Australia. Similarly, States with increasing school enrolments per capita are given the capacity to increase their stock of schools and have average levels of crowding.
- 42 The adequacy of our processes depends on whether we have captured the main elements of the links between road use (or enrolments) and investment (which appears to be the case) and whether States have applied the average policies. Equalisation should not address any congestion which arises from a State's policy choices.

CONCLUSION

- 43 Population growth has a significant effect on the GST distribution under the methods adopted in this and the 2010 Reviews. During this review, there have been many arguments seeking changes in our methods to increase or decrease the allowances for population growth.

- 44 Some of the arguments, such those relating to asset revaluations and intrastate migration, are not conceptually strong.
- 45 There may be some validity in some of the other competing arguments, especially the use of depreciated values. However, we currently have no evidence on what States do on average or the extent of the relevant costs and benefits. This issue will require further consultation.
- 46 We consider our methods capture the bulk of the relevant population growth effects in a neutral, reliable and simple way. The methods provide growth States with the capacity to make above average investments when growth occurs but States make their own policy choices on when investments are made.

ATTACHMENT 28

OTHER DISABILITIES

Summary of changes since the 2010 Review

- For presentational purposes only, and with no impact on the GST, we have moved:
 - The National capital allowance for roads to the Other expenses category
 - All Native title and land rights expenses into the Other expenses category.
- There has been a small change to the geography used in the cross-border assessment, reflecting changes made by the ABS.
- No assessment is made for Cultural and linguistic diversity in any assessment. This means that we no longer:
 - Assess a CALD allowance in Other expenses
 - Use language spoken at home in the Post-secondary category.

- 1 This chapter contains a description of four small expense disabilities that we have assessed or considered. These are:
 - National capital allowances
 - Cross-border effects
 - Native title and land rights
 - Cultural and linguistic diversity.

NATIONAL CAPITAL ALLOWANCES

- 2 National capital allowances recognise the unavoidable extra costs incurred by the ACT because of Canberra's status as the national capital or because of legacies inherited from the Commonwealth at self-government.
- 3 In 1989, when the ACT was granted self-government, the Commonwealth established the National Capital Authority (NCA) to manage its continuing interest in the strategic planning and development of Canberra as the nation's capital. It did so, in part, through the development and management of the National Capital Plan. This plan places restrictions on some of the planning and development decisions in the ACT

and can lead to higher costs for the ACT Government. These additional costs are not incurred by other States.

- 4 The National capital assessments also allow for additional costs incurred by the ACT as a result of the following cost legacies inherited at self-government.
 - The ACT has no practical alternative but to use the Australian Federal Police (AFP) as the provider of its policing services. This leads to higher costs because the AFP pays above average salaries to its employees.
 - Some of the arterial roads the ACT inherited from the Commonwealth at the time of self-government are wider than those in other States which leads to higher maintenance costs.
- 5 National capital allowances are calculated by directly assessing the impact of the national capital circumstances on the costs of providing services in the ACT.

Police

- 6 We accept that the ACT has no power to influence the terms and conditions of AFP employees and has no practical alternative but to use the AFP as the provider of its policing services.
- 7 We consider the above average wages paid by the AFP have increased the costs of providing the assessed level of policing services in the ACT by \$9.4 million. As shown in Table 1, that amount has been calculated by:
 - deriving a nominal level of ACT police staffing by applying an adjusted national average per capita level of police staff (sworn and unsworn officers combined) to the ACT population
 - multiplying by the difference between average AFP and average State police staff salaries (sworn and unsworn officers combined) discounted for the wages costs factor to avoid double counting the higher underlying wage levels in the ACT.
- 8 We adjusted the national average staffing level because in the Justice services assessment we assess the ACT as needing less than the average police staff to population ratio as a result of its demographic characteristics. The ACT staffing level is calculated by multiplying the national average per capita level of police staff by the ACT's police socio-demographic composition factor and its population.
- 9 Data used in the assessment are taken from the Productivity Commission's Report on Government Services, which is considered to be a reliable and comparable third party source. As these data will be available annually, we will use them to update the assessment. However, due to the time lag in production and availability of these data, we have indexed the most recently calculated allowance using ABS's national public sector wage price index (since the allowance is for salaries).

Table 1 National capital allowance — police

	2009-10	2010-11	2011-12	2012-13
A. Total staff	64 830	66 514	67 156	
B. Total population	21 862 635	22 169 380	22 517 166	
C. Average staff [C = A / B]	0.00297	0.00300	0.00298	
D. ACT population	357 859	364 833	371 211	
E. Assessed staff [E = C * D]	1 061	1 095	1 107	
F. ACT police SDC factor(b)	0.886	0.885	0.881	
G. Adjusted assessed staff [G = E * F]	940	969	975	
H. Average State salary (a) \$	95 321	100 562	107 527	
I. ACT wages factor	1.036	1.033	1.033	
J. Adjusted State salary [J = H * I] \$	98 722	103 914	111 038	
K. Average ACT salary (a) \$	109 175	108 972	120 426	
L. Difference [L = K - J] \$	10 453	5 057	9 388	
M. Assessed allowance [M = G * L] \$	9 828 459	4 900 641	9 155 858	9 442 748

(a) Excludes payroll taxation because the AFP is exempt from paying payroll tax.

(b) This data is yet to be updated.

Source: Productivity Commission, *Report on Government Services 2013*, Justice, statistical attachment.
ABS, *Wage Price Index*, Australia, 2013, Cat. No. 6345.0, Table 4a.

Roads and planning allowances

- 10 We accept that the wider roads inherited from the Commonwealth at the time of self-government result in higher maintenance costs for the ACT. The allowance for wider roads will continue to be assessed until 2017-18 by which time roads existing at the time of self-government will have reached the end of their useful life.
- 11 We accept that the National Capital Plan does constrain planning and development decisions in the ACT and, as a result, imposes higher costs on the ACT.
- 12 In past reviews, a comprehensive exercise was undertaken by the ACT Treasury to estimate the additional maintenance costs arising from the wider arterial roads and the additional costs arising from the National Capital Plan. We believe those estimates are robust and reliable and, when appropriately indexed, remain acceptable. These allowances total \$20.0 million in 2012-13 and are combined and assessed in the Other expenses category.
- 13 The allowances for the impact of the National Capital Plan and for Roads are in part labour related and should be indexed using a price index that takes account of both labour and non-labour costs. We have used the State and local general government final consumption expenditure chain price index for this purpose and will continue to use this approach in updates. This is the national accounts aggregate that best reflects the expenditures of States.

National capital assessment summary

- 14 National capital assessments are not brought together into a single category, they are assessed in Justice or Other expenses. Table 2 shows the National capital allowances assessed for 2009-10 to 2012-13.

Table 2 National capital assessment, 2009-10 to 2012-13

Category	2009-10	2010-11	2011-12	2012-13
	\$m	\$m	\$m	\$m
Justice services (AFP salary effect)	10	5	9	9
Roads	3	4	4	4
National Capital Plan	15	16	16	16
Total	28	24	29	29

Source: Commission calculation.

What is the impact on the GST distribution?

- 15 Table 3 shows the extent to which the assessment moves the distribution of the GST away from an EPC distribution. As the ACT is the only State that is assessed to incur national capital expenses, GST is redistributed to the ACT from the other States.

Table 3 Illustrative GST impact, National capital assessment, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Redist
Dollars per million	-9	-7	-6	-3	-2	-1	29	0	29
Dollars per capita	-1	-1	-1	-1	-1	-1	76	-1	1

Note: This table has updated numbers from the 2015 Review.

Source: Commission calculation.

CROSS-BORDER

- 16 Cross-border costs are incurred when residents of one State use the services provided in another. Usually, the cross-border flow of services is in both directions. For example, some New South Wales residents use ACT services and some ACT residents use New South Wales services. If the incoming and outgoing flow of services were exactly the same, the net effect would be zero and neither State would incur additional service delivery costs. However, the flow of some ACT services to New South Wales residents exceeds the flow of New South Wales services to ACT residents and the ACT incurs additional service delivery costs for which it may not be reimbursed by New South Wales.
- 17 A cross-border disability is assessed when a net cross-border flow of services results in a State incurring a material level of extra costs and it is not reimbursed by other

States. The disability factor increases the number of people deemed to access services in one State and reduces the number deemed to access services in the other.

- 18 Cross-border flows can occur across any border (for example, the New South Wales-Queensland border around the region of Tweed Heads-Coolangatta, or the New South Wales-Victoria border around Albury-Wodonga). However, we have assessed separate cross-border disabilities to recognise the additional costs incurred by the ACT only. This is because Canberra acts as a major regional centre for south eastern New South Wales and the net costs incurred by the ACT are material. There is no evidence to suggest the net impact of other cross-border flows is material.

The conceptual case for cross-border costs

- 19 Canberra is the principal service centre for government, commercial, tertiary education, retail and transport services for residents of the surrounding local government areas. Significant numbers of New South Wales residents regularly use ACT Government education, health and welfare, recreational and transport services. Reasons include convenience, employment in the ACT, unavailability of service in the local area, and a higher quality service provided by the ACT relative to that in surrounding New South Wales areas. Since these residents do not reside in the ACT, they do not generally contribute to ACT Government revenue through the payment of ACT taxes and charges.
- 20 A considerable and growing number of people live in the towns, rural sub-divisions and rural areas surrounding the ACT. For example, the population within about an hour's drive of the ACT is about 119 000 and that population grew by 4.8% over the last 4 years. While they choose to live in New South Wales, many people have close connections to the ACT, often revolving around employment, retail and service facilities or family connections. People also come to the ACT expressly to use the State government services (especially education, hospital and related health facilities). The result is that there are substantial flows of traffic into and out of the ACT on a daily basis.

Measuring cross-border costs

- 21 We accept there is a strong conceptual case for assessing a cross-border factor based on net flows. However, while records of the place of residence of users for some services are very good, in others the nature of the service means records of service use are often not feasible or those that are taken may not be accurate. In the face of this variability in the amount and quality of data available, we have adopted a number of methods to calculate cross-border factors where a conceptual case for a net flow has been established. We adopted different approaches when:
 - reimbursement arrangements are in place

- reliable data on net flows are available
- only partial data are available.

Where reimbursement arrangements already exist

- 22 We consider that when reimbursement arrangements exist there is no need to assess a cross-border allowance.
- 23 This is the case for hospitals where the National healthcare agreement provides for bilateral agreements between States covering reimbursement of the costs of cross-border use of services. An individual bilateral health agreement has been negotiated between New South Wales and the ACT covering costs, including an allowance for the opportunity cost of capital, associated with services provided to admitted and non-admitted patients.
- 24 As a result, we recognise that cross-border costs for hospital services have already been addressed and a separate cross-border assessment will not be made.

Where reliable data are available

- 25 In a few cases where service use is based on actual use, cross-border effects are automatically captured. For example, in the Roads category, the allowance for road use measures the actual use of roads by residents and cross-border travellers alike. Also, in the Schools category, service use is measured using actual enrolments, regardless of where the students live. In these cases, there is no need to assess a separate cross-border factor.
- 26 However, in most cases we assess service use on the basis of the characteristics of each State's population and a separate factor must be assessed if there is a strong conceptual case that there is a material net cross-border use. Where reliable data on the cross-border use of services are available, we have used them. This is the case for Post-secondary education, where the assessment uses National Centre for Vocational Education Research (NCVER) data on the number of hours the ACT training system supplies to New South Wales residents and the number of hours the New South Wales training system supplies to ACT residents.

Where only partial data are available

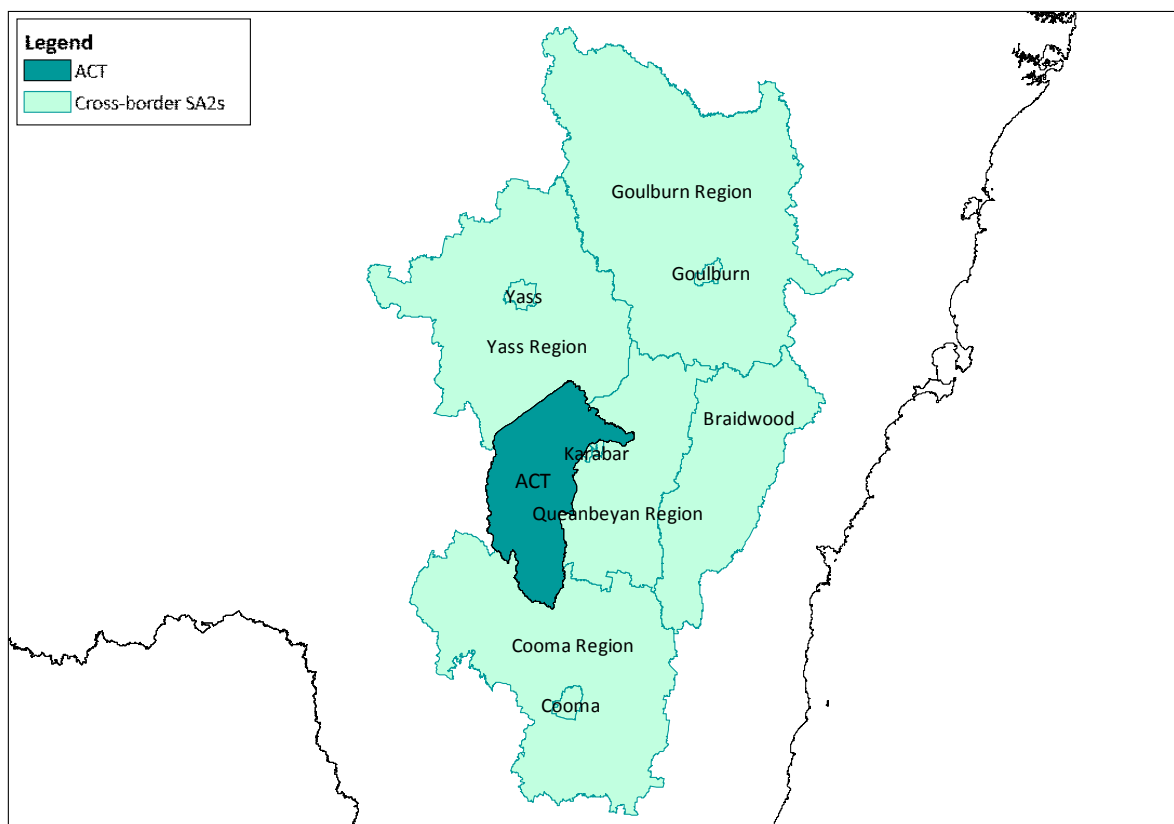
- 27 In other cases, the ACT used illustrative information for some services to mount a conceptual case that there are material levels of cross-border use of those and related services. These include the following:
- Community health
 - Welfare
 - Library and information services.

- 28 Data supplied by the ACT in the 2010 Review indicated that around 10-12% of community health services in the ACT were provided to non-ACT residents. This ranged from around 40% of the post-natal services provided in the Queen Elizabeth II facility to 6% of alcohol and drug programs.
- 29 While we acknowledge that the figures do not allow for the use by ACT residents of community health services provided by New South Wales, we expect those numbers would be small. Overall, we conclude that, on a net basis, approximately 7-10% of ACT community health services are used by New South Wales residents.
- 30 Indicative evidence provided by the ACT in the 2010 Review pointed to the cross-border flow for some welfare services having a material impact on ACT costs. However, collecting data on the address of the users of welfare services from New South Wales residents is difficult. Many had concerns that their eligibility for access to services would depend on their address and were unwilling to provide an accurate response.
- 31 As such, we believe that, despite the lack of actual data, there is a conceptual case that some welfare services provided by the ACT are used by New South Wales residents and that the reverse flow is significantly smaller.
- 32 Data provided by the ACT Library and Information Services in the 2010 Review indicated that there were large numbers of interstate members of ACT libraries and this represented 4% of all ACT library memberships. However, it noted that the majority of library services available to the public do not require a user to be a member of the library.
- 33 ***The general method.*** Taken together, the conceptual arguments and the available information suggest that, on a net basis, between 7-10% of community health, some welfare, and cultural and recreational services provided by the ACT are used by New South Wales residents.
- 34 We have used a simple general method to allow for cross-border use of ACT services. Under this method, we increased the ACT population by an amount which, given national average use rates, would be equivalent to use of 7-10% of ACT services. That is, for services where we consider there is material net cross-border use, the assessed use of services in the ACT will be determined on the basis of the ACT population plus a proportion of the population of surrounding areas of New South Wales. The population of New South Wales is reduced by the same amount.
- 35 With an ACT population of 380 000 and national average use rates, a 7-10% cross-border use of ACT services is equivalent to approximately 36 000 extra residents. This equates to about 30% of the population of the following Statistical areas level 2 (SA2s) in the surrounding parts of New South Wales and which are shown in Figure 1:
- Queanbeyan and Queanbeyan region

- Karabar
- Braidwood
- Cooma and Cooma region
- Goulburn and Goulburn region
- Yass and Yass region.

- 36 The SA2s we have used were chosen on the basis that they are within around an hour's drive of the ACT and it is not unreasonable to assume that many of their residents travel to the ACT on a daily or weekly basis for various purposes. While many New South Wales residents from outside this catchment area may also use ACT services, they would tend to do so on a less frequent basis. In the absence of better data, we consider the areas chosen reflect a reasonable compromise.
- 37 Basing the assessment on a proportion of the population of surrounding areas is a relatively simple approach which has the added advantage of recognising that the demand for ACT services may increase in the future as new developments occur in these areas as their population grows. We propose to update the population estimates of the surrounding regions annually.

Figure 1 Catchment for the Cross-border assessment



Source: Commission illustration.

- 38 By simply adjusting the ACT population, the method implies the socio-demographic profile of the cross-border users is the same as that of the ACT population. We acknowledge there might be a case to say the population of areas surrounding the ACT has a different socio-demographic profile and the actual profile should be reflected in the calculation. However, that would add complexity to the assessment and would imply more precision than is justified by other aspects of the assessment. We have decided, therefore, not to make such an adjustment.
- 39 The general method has been used in the following categories.
- Health — the cross-border factor is weighted so that it does not affect the hospital expenses in the category because they are covered in the bilateral agreement between New South Wales and the ACT for public hospital services.
 - Welfare— the cross-border factor is weighted to ensure it is not applied to the child protection or aged care services expenses in the category because, normally, people must be a resident of the ACT to receive those services.
 - Other expenses — the cross-border factor is weighted to ensure it only applies to the culture and recreation expenses in this category.
- 40 Table 4 details the general method to calculate the raw cross-border factor for 2012-13. These factors are then weighted to reflect the proportion of expenses affected by cross-border costs.

Table 4 Raw cross-border factor calculations, 2012-13

	NSW	ACT
	No.	No.
A. State population	7 356 011	378 018
B. Total population of catchment area (a)	119 214	
C. Cross-border weight (30%)		
D. Cross-border population [D = B * C]	-35 764	35 764
E. Adjusted population [E = A + D]	7 320 247	413 782
F. Raw factor [F = E / A]	0.995	1.094

(a) Total cross-border population includes residents of these SA2s: Queanbeyan, Karabar, Braidwood, Yass, Cooma and Goulburn.

Source: Total State population December ERP, ABS.
New South Wales surrounding region population, June ERP, ABS.

Where are cross-border effects assessed?

- 41 Table 5 shows the 2015 Review categories where cross-border influences affect the use of State services, and how we have assessed them.

Table 5 Cross-border assessment, 2015 Review

Category	Expenses	Method
Schools education	All expenses	Implicit in assessment
Post-secondary education	All expenses	Use measure
Health	Out-of-hospital health services	General method
Welfare	Out-of-home welfare services	General method
Roads	Expenses driven by urban road use	Implicit in assessment
Other expenses	Culture and recreation	General method

Source: Commission calculation.

What is the impact on the GST distribution?

- 42 Table 6 shows the extent to which the assessment moves the distribution of the GST for the 2015 Review away from an equal per capita distribution. As New South Wales and the ACT are the only States affected by this assessment, GST revenue is redistributed to the ACT from New South Wales. The impact on the distribution of GST for the Schools education, Post-secondary education and Roads categories are not included in the table because the measure of cross-border use is implicit in the assessment, and cannot be separately identified.

Table 6 Illustrative GST impact, Cross-border assessment, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Redist
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Health	-16	0	0	0	0	0	16	0	16
Welfare	-6	0	0	0	0	0	6	0	6
Other expenses	-4	0	0	0	0	0	4	0	4
Total	-25	0	0	0	0	0	25	0	25

Source: Commission calculation.

NATIVE TITLE AND LAND RIGHTS

- 43 This assessment recognises the additional costs incurred by the States due to the operation of:
- the Commonwealth's Native Title Act 1993
 - the Commonwealth's Aboriginal Land Rights (Northern Territory) Act 1976.
- 44 The Native Title legislation (Native Title Act 1993) was the result of a High Court decision which recognised Indigenous people's traditional rights on their land as common law.

- 45 Native title expenses include the costs of administering the legislation, compensating holders of native titles in the settlement of claims, and any on-going costs associated with joint management of land.
- 46 The expenses incurred in each State due to native title matters vary, depending on the number and type of native title claims made in the State and the compensation awarded in settling a claim.
- 47 The Aboriginal Land Rights (Northern Territory) Act 1976 only applies in the Northern Territory and recognises the traditional connection and the ongoing cultural and social connection Indigenous Australians have to the land. It allows for areas of Crown Land (excluding land in towns) to be transferred to Indigenous Australians as a result of claims accepted by the Aboriginal Land Commissioner.
- 48 The Northern Territory incurs costs in negotiating claims and preparing submissions to the Commissioner and in challenging claims through the Federal and High Courts. Compensation or other arrangements relating to the settlement of a claim can also lead to on-going costs. Although there is a sunset clause in the legislation, with no new claims made since 1997, it is expected that costs associated with ongoing claims will proceed for many years.

Measuring Native title and land rights expenses

- 49 Native title and land rights expenses are small. They represent less than 1% of total combined State expenses. However, they are concentrated heavily in the Northern Territory and Western Australia and potentially can have a material effect on State budgets.
- 50 Table 7 shows the combined per capita expenses on native title and land rights for the period 2009-10 to 2012-13. It shows that the Northern Territory is the only State for which per capita expenses are material.

Table 7 Native title and land rights expenses, 2009-10 to 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc
2009-10	2	2	6	30	4	0	0	95	6
2010-11	1	2	6	39	4	0	0	96	7
2011-12	1	2	7	27	4	0	0	105	6
2012-13	1	1	6	27	7	0	0	130	7

Source: State data returns.

- 51 We consider the simplest and most reliable way of assessing what States need to spend because of Commonwealth native title and land rights legislation is to use data on what they actually spend. We consider that State spending is due to

Commonwealth legislation and States have adopted uniform policies in response to their individual circumstances, including:

- the size of their remote Indigenous populations
- the number of Indigenous groups living traditional life styles who have retained a continuing connection to the land
- the history of land development and economic activity in a State
- the location of claims and competing interests in the areas claimed.

52 These factors influence the likely number of claims made and their nature and complexity.

53 We have assessed native title and land rights disabilities using their actual spending. We consider State spending to be the result of Commonwealth policies and States have adopted common policies in response. Consequently, a State's actual expenses are used as the estimate of the amount it would spend under average policy.

54 The assessment for both land rights and native title expenses will be undertaken together in the Other expenses category.

55 Data on native title and land rights expenses will be collected from States every year. These collections will be subject to the Commission's quality assurance protocol, whereby any large or unexpected changes in expenses will need to be explained by the State providing the data. This will ensure data of sufficient quality are provided and the assessment remains contemporaneous.

What is the impact on the GST distribution?

56 Table 8 shows the extent to which the native title and land rights assessment moves the distribution of the GST away from an equal per capita distribution.

Table 8 Illustrative GST impact, Native title and land rights assessment 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Redist
Dollars per million	-42	-31	-2	51	1	-3	-3	29	81
Dollars per capita	-6	-5	0	21	1	-7	-7	123	4

Source: Commission calculation.

57 The assessment is based on data from 2012-13. It shows that Western Australia and the Northern Territory are assessed as needing to spend more than the average per capita amount to cover the costs imposed by the Commonwealth legislation. It is expected these States would have above average expenses given their circumstances, such as the above average remote Indigenous populations, the characteristics of those populations, land development history, economic activity and claim numbers.

CULTURAL AND LINGUISTIC DIVERSITY (CALD)

- 58 There is a strong conceptual case that people with poor English skills impose a higher cost in using State services than those with English as a first language. New South Wales and Victoria have both provided significant evidence supporting this conceptual case. For example:
- Data from Centrelink show a 30% higher cost of servicing people from non-English speaking backgrounds.
 - In the NSW Department of Community Services (DoCs), on average, caseworkers spend 40% more time dealing with non-English speaking background clients than on other cases.
 - The New South Wales Housing department spent \$1.4 million on interpreters and its average weekly subsidy to non-English speaking tenants was \$134 compared with \$118 for other tenants.
 - Victoria's analysis of hospital data found that patients requiring an interpreter had around 5% higher cost per separation.
- 59 However, there is also a strong conceptual case that people with poor English skills use services less than people with English as a first language. This can occur for a variety of reasons, including:
- AIHW has identified a 'healthy migrant effect' whereby Australia's immigration policies exclude people with chronic health conditions, therefore migrants may have less demand on Australia's health system
 - people with poor English may receive some services from within their community rather than as part of a State government service.
- 60 This conceptual case for lower use is supported by evidence:
- from AIHW that people born in Australia have higher use than the overseas born in hospitals after controlling for SES and age
 - from the census that people born in Australia have higher use than the overseas born in public housing, after controlling for household income
- 61 In this review, we have attempted to determine the net effect of these two potentially offsetting influences.

Classifying cultural groups

- 62 The first step in determining the net cost of different population groups is to identify them appropriately. The Commission has, for several reviews, attempted to measure the impact that migrants and people with poor English skills have on State budgets. States have recommended, and we have attempted, various ways of defining this group. Most of these attempted definitions have not yielded reliable material assessments. In particular, it has been difficult to identify an objective definition of

CALD that can be applied to both administrative and population data. We have considered the following groups.

- **Humanitarian refugees.** This is a very small population, with little information on either service use, or State of residence.
- **People born in non-main-English speaking countries.**¹ People born in non-main-English speaking countries are a very heterogeneous population, with large numbers of people with proficient English, and cost patterns very like the Australian born population.
- **People with low proficiency in English.** It is very difficult to relate the concept of self-assessment of proficiency in English in the census, with the definition used in service use, where service providers assess a person's proficiency.
- **People who need assistance from translators.** There is no data on the number of these people in the population, only on their use of services.

- 63 We consider the most reliable way of consistently identifying different cultural groups is to use country of birth. To use detailed country of birth, rather than aggregating to a broad concept like 'people born in a non-main-English speaking country' allows us to identify the subtle differences between different population groups.
- 64 Victoria considers that country of birth does not accurately reflect the underlying driver of higher costs: language proficiency. However, we consider the language based measures (requirement for a translator, self-assessed proficiency in English, preferred language) are not consistent. It is very difficult to ensure that people are consistently identifying these attributes in different settings.
- 65 We acknowledge that country of birth is not an ideal measure of the driver of higher cost. However, we consider that if people with poor English do systematically incur higher use and cost of State services, that should be evident in birthplace groups with low levels of English fluency.

Cost and use

- 66 We have analysed Victorian data to determine the nature and extent of CALD influences on admitted patient services. We have also considered New South Wales data on public housing and community services.
- 67 We consider that there is a conceptual case that in a range of functions, people with poor English skills increase the costs to States of providing services. However, we consider that birthplace groups have significantly greater differences in use. The

¹ Mainly English speaking countries include, as well as Australia, the UK, New Zealand, USA, Canada and South Africa. All other countries are classified as non-main English speaking countries.

largest single birthplace group, those born in the United Kingdom, have 9% higher than average use of public housing, and 16% lower than average use of hospitals.

- 68 There is evidence that while some birthplace groups have higher than average use and/or cost for at least some services, other birthplace groups have lower use and/or costs. However, there is no strong evidence about which States' mix of birthplace groups would lead to a higher than average cost profile, and which would lead to a lower than average cost profile.
- 69 The Victorian data on all admitted patient separations found that use and cost varied considerably for people born in different countries. We found the net effect of this is that disaggregating by country of birth has a virtually negligible effect on New South Wales (+\$3 per capita) and Victoria (-\$4 per capita). For a very large component of State expenses, New South Wales and Victoria have a mix of migrants that include some high cost groups and some low cost groups. The net effect is negligible.
- 70 The regression of ACARA data we undertook for the Schools assessment showed the students from a language background other than English had lower costs per student than those from an English speaking background.
- 71 In the post-secondary education assessment used in the 2014 update, we found the enrolment in post-secondary education was 3% higher for non-Indigenous non-remote people who spoke English at home than for similar people who did not speak English at home.

Conclusions

- 72 We accept the contention by Victoria and New South Wales that people with poor English have a higher cost of using services than people proficient in English. It was our acceptance of this contention that led us, in 2010, to make an assessment of the additional costs faced by this group.
- 73 However, in attempting to find strong evidence for a CALD disability, we have identified that while costs are often higher for CALD populations, use rates are generally lower. In 2010 we considered that we had a strong conceptual case that having a large CALD population increased the costs for State governments. We now consider that it may have an impact, but it is not clear whether having a large CALD population increases or decreases the overall cost of delivering State services.
- 74 As such, we no longer make an assessment of CALD populations in any assessment.

CHANGES SINCE THE 2010 REVIEW

- 75 For presentational purposes only, and with no impact on the GST, we have moved:
- The national capital allowance for roads to the Other expenses category

- All native title and land rights expenses to the Other expenses category.
- 76 There have only been minor changes to the Cross-border assessment in this review. The ABS has changed its geography for the 2011 Census and as a result, we have changed our geography from Statistical local areas (SLAs) to SA2s. The impact of this change is very minor. In 2011, the relevant SLAs in the surrounding areas had a total population of 110 000. The relevant SA2s had a total population of 119 000.
- 77 No assessment is made for Cultural and linguistic diversity in any assessment. This means that we no longer
- Assess a CALD allowance in other expenses
 - Use language spoken at home in the post-secondary category.

ATTACHMENT 29

NET BORROWING

Summary of changes since the 2010 Review

- Infrastructure assets of urban transport and housing PNFCs are excluded from State net financial asset bases used in this assessment.
- The 25% discount has been removed because the change in the treatment of housing and urban transport assets has reduced the possibility that not all non-policy influences on net lending requirements are assessed.

- 1 As noted in the Main report Chapter 3 — Implementing Equalisation, the Commission intends to continue equalising State net financial worth per capita. This is done through the net borrowing assessment.

WHAT IS IN THE NET BORROWING ASSESSMENT?

- 2 Net borrowing reflects the acquisition/disposal of financial assets and liabilities by the State general government sector. A State borrows or liquidates assets, thereby reducing its net financial worth, when its total outlays on service delivery and investment in infrastructure exceed its total revenue. Conversely, it saves and increases its net financial worth when its total revenue exceeds total outlays.
- 3 Net financial worth consists of cash, deposits and equity in public corporations less liabilities. While our decision to treat the services provided by State housing and urban transport corporations as general government activities, has left State net worth unchanged, it has changed its composition. State non-financial assets have been increased by the inclusion of housing and urban transport infrastructure assets and net financial assets have been reduced accordingly.
- 4 Table 1 shows total net borrowing was \$18.7 billion in 2012-13. Net borrowing varied between 2.8% of total outlays in South Australia and 16.9% in the ACT. The average was 8.7%.

Table 1 Net borrowing, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Net borrowing (\$m)	3 450	3 917	7 023	2 594	402	225	784	333	18 728
Net borrowing (\$pc)	469	689	1 522	1 047	242	440	2 074	1 397	817
Share of total outlays (%)	5.2	8.1	15.4	9.5	2.8	4.9	16.9	6.8	8.7

Source: Commission calculation using State data.

- 5 Table 2 shows State net borrowing funded 7.9% of their total outlays on service provision and investment in infrastructure in 2009-10 and 8.7% in 2012-13.

Table 2 Net borrowing as a proportion of total State outlays, 2009 10 to 2012-13

	2009-10	2010-11	2011-12	2012-13
Total net borrowing (\$m)	15 347	22 555	16 577	18 728
Total outlays (\$m)	193 318	205 390	208 389	215 960
Proportion of total outlays (%)	7.9	11.0	8.0	8.7

(a) State total outlays are the sum of total operating expenses and investment.

Source: Commission calculation based on ABS GFS data and, for the last year, State provided data.

- 6 Table 3 shows how net financial worth has varied since 2009-10.

Table 3 Net financial worth (a), 2009 10 to 2012-13

	2009-10	2010-11	2011-12	2012-13
	\$m	\$m	\$m	\$m
Financial worth	248 121	274 253	262 813	n/a
Less: liabilities	228 718	252 607	315 594	n/a
Net financial worth	19 408	21 645	-52 780	-20 569

(a) GFS net financial worth as adjusted to treat housing and urban transport public corporations as part of the general government sector.

Source: ABS GFS and State provided data for 2012-13.

ASSESSMENT APPROACH AND CATEGORY STRUCTURE

- 7 This assessment aims to give States the capacity to hold the average per capita value of net financial worth at the end of each year, assuming they began the year with the average value at that time. It estimates how much each State would need to save or borrow in the year.
- 8 Each State's assessed net borrowing is the difference between:
- its population share of total State net financial worth at the end of the year
 - its population share of total State net financial worth at the start of the year.
- 9 Population growth is the only disability recognised in the assessment. Most States accept that, other things being equal, population growth dilutes the value of net

financial worth. However, some also argue there is a positive link between population growth and the value of State equity in public corporations which provides financial benefits that partly offset the effects of population dilution.

- 10 As noted in Attachment 27 — Impact of Population Growth on Fiscal Capacities, there is neither a strong conceptual case nor reliable empirical evidence that States with higher population growth experience greater increases in the value of their per capita equity. We, therefore, have not assessed a revaluation disability.
- 11 Table 4 shows the assessment structure, the disabilities assessed and the size of the assessment, using 2012-13 data.

Table 4 Category structure, Net borrowing, 2012-13

Component	Net borrowing	Disability	Influence measured by disability
	\$m		
Net borrowing	18 728	Population growth	Recognises the per capita value of State net financial worth is reduced by population growth.

Source: Commission calculation.

BRINGING THE ASSESSMENT TOGETHER

- 12 Table 5 shows each State's illustrative assessed net financial worth and the Australian total at the end and the start of 2012-13 was negative (liabilities exceed financial assets). In this circumstance, States with below average population growth are assessed to require below average borrowing if the per capita value of their liabilities at the end of the year is not to exceed the average.⁷²

Table 5 Illustrative assessed net borrowing, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Assessed net financial worth at end of year (\$m)	-6 601	-5 100	-4 140	-2 224	-1 492	-460	-339	-214	-20 569
Assessed net financial worth at start of year (\$m)	-594	-456	-369	-196	-135	-42	-30	-19	-1 841
Assessed net borrowing (\$m)	6 007	4 644	3 770	2 028	1 357	418	309	195	18 728
Assessed net borrowing (\$pc)	817	817	817	818	816	816	817	817	817

Source: Commission calculation.

- 13 The Net borrowing assessment will not materially affect the GST distribution. We, nevertheless, intend to retain it because the total effect of population growth on

⁷² In circumstances where net financial worth is positive, States with below average population growth need to save less per capita to keep their net financial worth per capita in line with the national average. Failing that, their net financial worth per capita, and their capacity to earn interest and dividend income, would rise relative to the others.

investment and net borrowing is material. Furthermore, equalising the capacity of the State's to hold net financial worth is fundamental to our interpretation of fiscal equalisation.

- 14 In the 2010 Review, the Commission was not confident it had assessed all the factors affecting net financial worth and discounted the assessment by 25%. Those concerns are reduced by the changes in the treatment of housing and urban transport. Moreover, since the assessment as a whole is immaterial, the effect of a discount would be small. The assessed needs have not been discounted.

WHAT IS THE IMPACT ON THE GST DISTRIBUTION?

- 15 Table 6 shows the extent to which the illustrative Net borrowing assessment moves the GST distribution away from an equal per capita distribution.

Table 6 Illustrative GST impact, net borrowing, 2012-13

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Redist
Dollars million	3	0	-1	-4	1	1	0	0	5
Dollars per capita	0	0	0	-1	1	1	0	0	0

Source: Commission calculation.

- 16 This redistribution reflects the interstate differences in population growth rates and the negative net financial worth in 2012-13. The GST requirements of States with above average population growth are reduced and those for States with below average growth are increased. Those effects are, however, largely offset in the Infrastructure assessment.

CHANGES SINCE THE 2010 REVIEW

- 17 The Net borrowing assessment methods have changed in several ways.
- 18 ***The treatment of housing and urban transport.*** In this review, those activities and their associated infrastructure are treated as general government services with fiscal needs assessed directly, whereas they were previously treated as public corporations with State holdings treated as part of their net financial worth. This change, together with the net borrowing outcomes of States in recent years, has changed States from being holders of net financial assets to holders of net financial liabilities.
- 19 ***Discounting for uncertainty.*** The 25% discount for uncertainty included in the 2010 Review methods has been discontinued because all material factors have been assessed and a discount would have an immaterial effect on the GST distribution.

UPDATE PROCESS

- 20 The data on net borrowing, net financial worth and population used in the assessment will be updated annually.