




Australian Government  
Commonwealth Grants Commission

# 2025 Methodology Review

Schools consultation paper

June 2023

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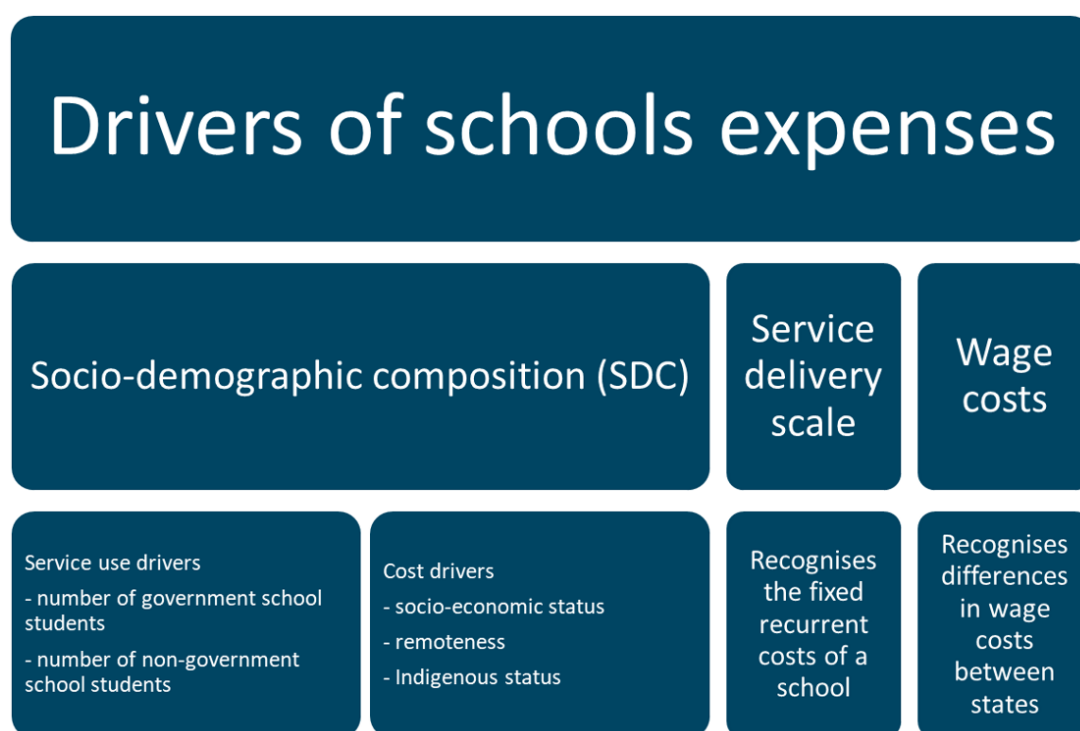
## Overview of category

- 11 The schools assessment covers state spending on government pre-schools, primary and secondary schools and non-government schools. In 2021-22, states spent \$34.7 billion of discretionary spending on government schools, and \$6 billion on non-government schools. They spent an additional \$9.7 billion from a Commonwealth payment on government schools governed under the Quality Schools funding agreement.
- 12 \$16.9 billion of Commonwealth funding for non-government schools is paid through the state governments, again under the Quality Schools funding agreement. States have no discretion on how this money is spent, and it does not relieve them of the need to fund their schools. As such, the Commission regards it as a Commonwealth own-purpose outlay, and out of scope of the GST calculations.

## Current assessment method — 2020 Review

- 13 In assessing state spending, Figure 1 shows that in the 2020 Review, the Commission recognised that there were differences in:
  - shares of school students across states, noting a state with a greater share of school students in its population faces above-average costs
  - the cost of students from different socio-demographic groups, so a state with more socio-educationally disadvantaged students and First Nations students needs to spend more than average
  - geographic dispersion of populations, noting a state with more students in more remote areas needs to spend more than average
  - the proportion of students in government schools, which cost states more per student, resulting in a state with a higher proportion of students attending government schools facing above-average costs
  - wage levels between states.

**Figure 1 Drivers of schools expenses, 2020 Review**



## Data used in the assessment

- 14 The following data sources are used to determine the socio-demographic and service delivery scale cost weights and to obtain annual student numbers by socio-demographic composition:
  - Australian Bureau of Statistics (ABS) data for total students, school sector, and Indigenous status
  - Australian Curriculum, Assessment and Reporting Authority data for student socio-economic status and remoteness
  - Australian Curriculum, Assessment and Reporting Authority data for calculating the cost weights.
- 15 Data on relative wage costs between states and data from the Commonwealth on the Schooling Resource Standard are also used in the assessment.

## Socio-demographic composition

- 16 A state's spending on government schools is primarily affected by the size of its government school student population. The socio-demographic composition of the student population also affects spending.
- 17 The Commission has run a regression explaining differences in per student funding of all government schools, and identified the groups with higher costs:
  - students in secondary education
  - students in outer regional schools

- students in remote or very remote schools
- low socio-economic status students
- First Nations students.

18 A similar, but separate, regression has identified that state spending on non-government schools is primarily affected by the size of its non-government school student population. The groups in non-government schools with additional costs are the same as for students in government schools, except there is no cost weight for First Nations students. Regression results indicated a lower cost for First Nations students. In the absence of a conceptual case for this pattern, the Indigenous status of students was not included in the determination of the cost weights for students in non-government schools.

### **Service delivery scale**

- 19 The regressions also identified that there is a fixed cost per school, with higher fixed costs for secondary schools. This means that smaller schools cost more per student than larger schools.
- 20 State policies are a major determinant of school size. To capture the non-policy drivers of variation in school size, the Commission considers states could provide the average school size in each remoteness area.

### **Wage costs**

- 21 The Commission applies its general method for measuring the influence of wage costs.

### **Treatment of Commonwealth spending on government schools**

- 22 The Commonwealth provides funding to the states through the Quality Schools funding agreement (previously known as the National Education Reform Agreement and as Students First). This funding is based on the Schooling Resource Standard, which is made up of a base amount for all primary and secondary students and up to 6 needs-based loadings for student priority cohorts and disadvantaged schools. In the 2015 Review, the Commission received terms of reference directing it not to unwind the measures of educational disadvantage embedded in the National Education Reform Agreement payments. State spending on government schools, which is funded by this Commonwealth payment, is assessed using the Commonwealth's measure of educational disadvantage, with the wage costs assessment also applied.
- 23 In the 2020 Review, the Commission retained the 2015 Review approach of not unwinding the funding of educational disadvantage in the National Education Reform Agreement by making a separate assessment of Commonwealth funding of government school expenses. This assessment is based on the Commonwealth

Department of Education’s figures on each state’s funding entitlement based on its student profile in each assessment year.

## Category and component expenses

24 Table 1 shows the total expenses captured in the schools assessment. After health, this is the second largest category of state expenditure.

**Table 1 Schools expenses, 2018-19 to 2021-22**

	2018-19	2019-20	2020-21	2021-22
Total expenditure (\$m)	43,597	46,028	46,759	50,382
Proportion of total expenditure (%)	18.2	20.2	18.4	17.3

Source: Commission calculation, 2023 Update.

25 The schools category is assessed in 3 components:

- state spending on government schools
- state spending on non-government schools
- Commonwealth funding of government schools.

26 Table 2 shows the structure of the schools assessment.

**Table 2 Structure of the schools assessment, 2021-22**

Component	Component expense	Driver	Influence measured by driver
	\$m		
<b>State spending on government schools</b>	34,710	Socio-demographic composition	Recognises that student numbers, adjusted for Indigenous status, low socio-economic status, and remoteness, affect the cost of providing services.
		Service delivery scale	Recognises the diseconomies of smaller schools with increasing remoteness.
		Wage costs	Recognises differences in wage costs between states.
<b>State spending on non-government schools</b>	5,999	Socio-demographic composition	Recognises that the number of students in non-government schools, adjusted for low socio-economic status and remoteness, affects the cost of providing services.
		Service delivery scale	Recognises the diseconomies of smaller schools with increasing remoteness.
		Wage costs	Recognises differences in wage costs between states.
<b>Commonwealth funding of government schools</b>	9,673	Socio-demographic composition	Recognises the 2015 Review terms of reference instruction not to unwind the funding allocated for educational disadvantage by the Commonwealth.
		Service delivery scale	Recognises the diseconomies of smaller schools with increasing remoteness.
		Wage costs	Recognises the differences in wage costs between states.

Source: Commission calculation, 2023 Update.

## GST distribution in the 2023 Update

27 Table 3 shows the GST impact of the schools assessment. In the 2023 Update, Queensland, Western Australia, Tasmania and the Northern Territory were assessed to need, in aggregate, \$1.7 billion (\$67 per capita) more than an equal per capita distribution.

**Table 3 GST impact of the schools assessment**

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total effect
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
State funded government schools	-204	-992	750	328	-155	52	-71	293	1423
State funded non-government schools	-14	28	-5	-12	3	-18	11	6	49
Commonwealth funded government schools	-50	-244	174	53	-25	3	-23	112	341
<b>Total (\$m)</b>	<b>-269</b>	<b>-1,208</b>	<b>919</b>	<b>369</b>	<b>-177</b>	<b>36</b>	<b>-83</b>	<b>411</b>	<b>1,736</b>
<b>Total (\$pc)</b>	<b>-33</b>	<b>-184</b>	<b>175</b>	<b>134</b>	<b>-98</b>	<b>63</b>	<b>-183</b>	<b>1,648</b>	<b>67</b>

Source: Commission calculation, 2023 Update.

28 Further detail on service provision arrangements, the range of services included within this category and the underlying conceptual cases for the assessment methods are explained in volume 2, chapter 13, [Report on GST Revenue Sharing Relativities, 2020 Review](#).

## What has changed since the 2020 Review?

### Schooling of year 7 students has become consistent

29 From 2022, year 7 became universally incorporated into high schools across all states and territories in both government and non-government schools, which might provide an opportunity to improve the Commission's regressions. Between 2019 and 2022, South Australia transitioned from having year 7 as part of primary school to being part of high school. Most South Australian non-government schools transitioned in 2019 or 2020, with most South Australian government schools switching in 2022. This follows a similar move in Queensland and Western Australia in 2015, and the Northern Territory in 2008. All other states already had year 7 in high school.

### Data on students with disabilities have matured

30 Since 2015, the Commonwealth has been collating data as part of the Nationally Consistent Collection of Data on School Students with Disability. In the 2020 Review, the Commission concluded that the data were not nationally consistent; and that, while they may be fit for other purposes, they were not suitable for the Commission's assessment purposes. Since the 2020 Review, the framework underpinning the data has matured, with uniform questions, processes

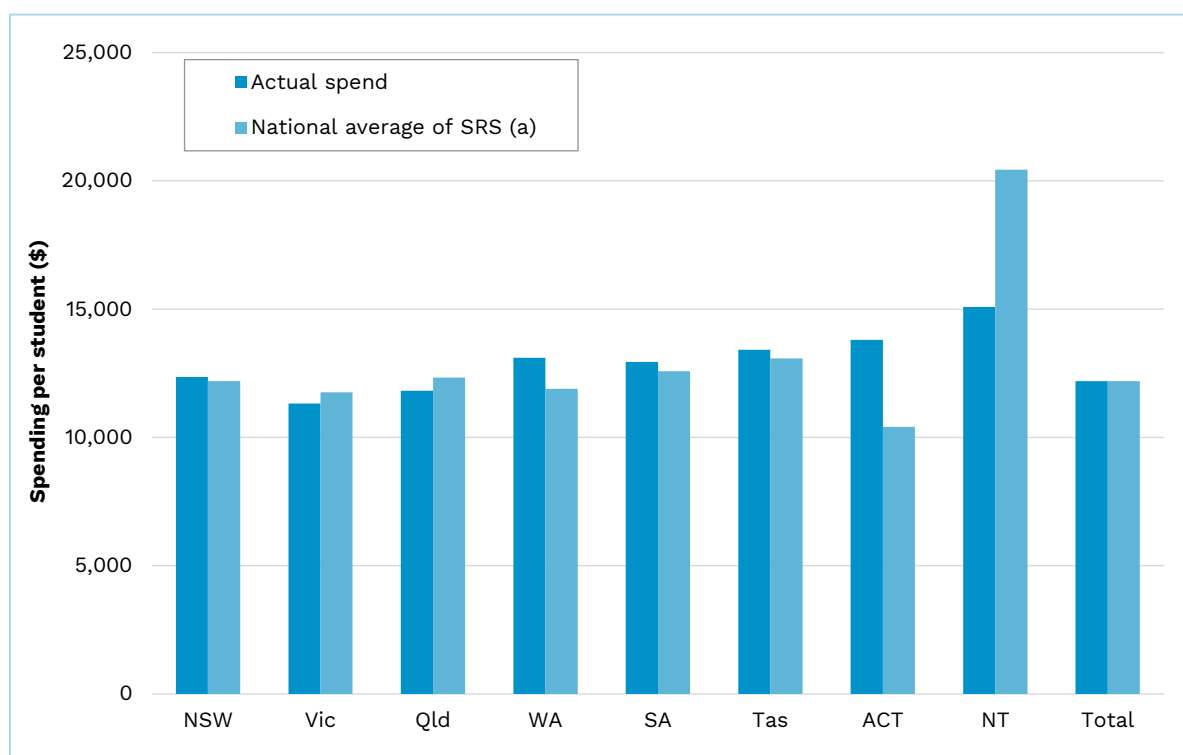


and instructions, although there remains some doubt as to the national comparability of the data.

## State funding models have not converged with the Commonwealth Schooling Resource Standard funding model

- 31 The Quality Schools funding agreement included a period of transition as states moved from school funding levels that met their own funding models to one that required a minimum percentage of the Commonwealth ‘recommended’ Schooling Resource Standard for government schools. The minimum proportion of the Schooling Resource Standard each state must meet increased between 2018 and 2023 in accordance with Section 22A of the *Australian Education ACT 2013*. Each state is on a different, increasing, path.
- 32 This transition should mean that states’ funding formulas now more closely reflect the Commonwealth’s Schooling Resource Standard. However, Figure 2 suggests significant policy difference when it comes to school funding between the states.

**Figure 2 Schooling Resource Standard (SRS) and actual state spending on government schools, 2020**



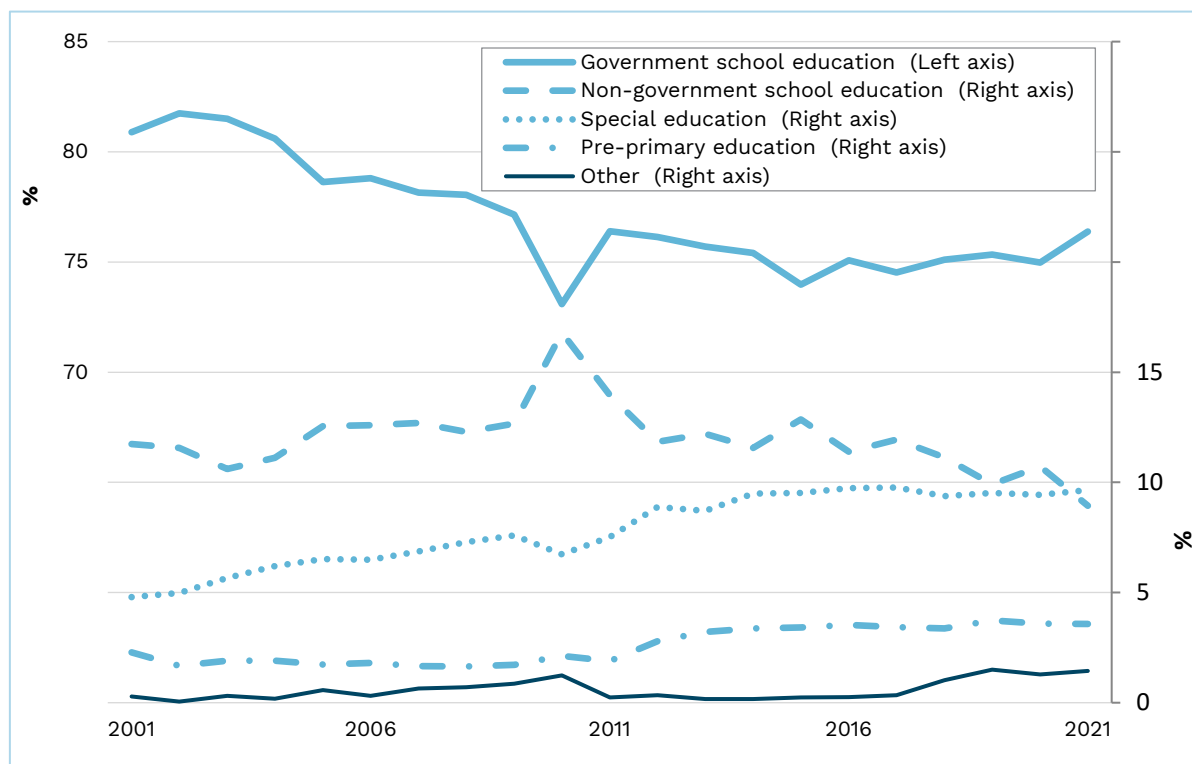
(a) Spending if each state spent the national average proportion of the average Schooling Resource Standard for their state.

Source: Commission calculation using Australian Curriculum, Assessment and Reporting Authority and Department of Education data.

## Spending allocations have changed

- 33 State allocations within school education have changed in recent years. Nominal state spending on non-government schools grew by only 5% between 2016 and 2021 and fell as a proportion of total school spending. This relative decline coincided with Commonwealth spending on non-government schools increasing considerably in this period.
- 34 Spending on government schools between 2016 and 2021 increased by 36%. Pre-primary education and special education have grown at a similar rate, and therefore have remained around 3.5% and 10% respectively of total category spending.
- 35 Special school funding makes up 10% of school expenses, and about 1% of enrolments. State shares of both enrolments and funding differ significantly. New South Wales has long had above-average use of and funding for special schools. Between 2017 and 2021 New South Wales increased from 40% to 45% of all spending on special schools. In the absence of a reliable measure of differential need for special schools, the Commission applies the assessment of spending needs for government schools to special schools. This is despite the regressions used in the assessment of school spending excluding special schools.

**Figure 3 State spending on elements of the schools category**



Source: ABS Government Finance Statistics.

## Implications for assessment

- 36 The Commission has identified several issues for consideration.
- Can the 2020 Review regression model be improved now that there is consistent schooling for year 7 students across state jurisdictions?
  - Is the Nationally Consistent Collection of Data on School Students with Disability sufficiently consistent between states to be used in the assessment?
  - Should the Commission adopt the Schooling Resource Standard splits instead of using an in-house model?

### Should the consistent treatment of year 7 students change the Commission's assessments?

- 37 States spend more per student on secondary school students than primary school students, and states have different mixes of the two groups, reflecting different retention rates and different age structures.
- 38 In the 2020 Review the Commission did not distinguish between primary and secondary school students in the regression determining the cost of different groups of students. This was because differences between states as to whether Year 7 students were treated as high school or primary school students meant that a cost weight for secondary students could not readily be applied in a policy neutral manner.
- 39 Since 2022 all states now educate year 7 students in secondary schools. This raises the prospect of a differential assessment of primary and secondary schools. The Commission has explored the implications of including a school level variable in its regression below.

### New regression model specification

- 40 Based on the newly nationally consistent definitions of primary and secondary schools, variables on these attributes have been included in the model of state spending. The model being proposed by the Commission is shown in Table 4. It includes the variables used in the 2020 Review with the addition of variables for the fixed cost of secondary schools and the additional costs of a secondary school student. The process of selecting and validating all included variables is described in Attachment 1. Assessed needs are calculated for each state based on the number of students with certain attributes. For example, each remote, First Nations secondary student in a state would be assessed as requiring \$16,687 ( $\$8,238 + \$2,901 + \$4,742 + \$806$ ). The number of schools each state requires is calculated based on the national average school size in each remoteness area, and the number of students in those areas in each state. More remote areas tend to have smaller schools, and hence more schools for a given number of students.

**Table 4 Cost weights based on regression 2020 data**

	Government schools	Non-government schools
Fixed cost of a school	314,400	63,513
Additional fixed cost of a secondary school	1,309,000	142,790
Base cost per student	8,238	1,843
Additional cost of:		
Secondary student	806	285
Student in outer regional school	491	163
Student in remote school	2,901	107
Socio-educationally disadvantaged student	4,694	3,714
First Nations student	4,742	

Source: Commission calculation.

- 41 The Commission’s preliminary view is to distinguish between primary and secondary school students in the regression model and to include variables to account for differences in the fixed cost of secondary schools and the additional costs of secondary school students.

### Consultation question

- Q1. Do states support a differential assessment of primary and secondary school students and if so, support including in the regression model variables to account for differences in the fixed cost of secondary schools and the additional costs of secondary school students?

### Are fit for purpose data available on students with a disability?

- 42 The number of students with a disability in a school is a significant driver of the Schooling Resource Standard, and a significant driver of funding formulas in at least some states. Conceptually, there is a case that educating students with a disability is a driver of states’ spending on schools that is beyond their control.
- 43 To assess needs for this, the Commission requires:
- aggregate state data showing each state’s share of students with a disability
  - school level data to both estimate cost weights (via a regression model) and to test the comparability of the aggregate state data.
- 44 The Commission would also need to be confident that the data were fit for purpose, in particular that the data were nationally consistent and comparable.
- 45 States provide data to the Commonwealth under the Nationally Consistent Collection of Data on School Students with Disability. The Commission has access to publicly available state aggregate data and has requested the school level data from the Commonwealth Department of Education. However, the Commission is still in discussions with the Department on whether the school level data are able to be provided.

- 46 Should the school level data become available, and subject to further analysis determining it fit for purpose, the Commission’s preliminary view is that it would use the data to assess needs for educating students with a disability.
- 47 The Commission is not aware of an alternative data source that is sufficiently detailed to derive a relevant cost weight. Therefore, should the school level data not be available, the Commission would continue with the current approach of not assessing needs for educating students with a disability.

### **Consultation question**

Q2. Do states agree that, if relevant school level data are available and determined fit for purpose, an assessment of needs for educating students with a disability should be included in the schools assessment?

## **Should the Commission use the Schooling Resource Standard to assess school needs?**

- 48 To assess state needs for education spending, the Commission has developed a national average school funding formula. The Commonwealth has also produced a national funding formula, which if followed by states, could be used by the Commission. If states fund their schools following the Schooling Resource Standard, this would allow the Commission to adopt a simplified assessment which better reflects the complexity of educational disadvantage.
- 49 With state funding increasing to a higher proportion of the Schooling Resource Standard recommendation for each school, there may have been some convergence between the Commonwealth’s Schooling Resource Standard and the funding that states actually provide to each school. However, this convergence does not appear sufficient to allow the Commission to use the Schooling Resource Standard to assess needs, as it does not sufficiently reflect what states do.
- 50 The Commission’s preliminary view is that the continued use of its model to determine the national average policy for schools funding is still necessary.

### **Consultation question**

Q3. Do states agree that the average state funding of schools is not sufficiently based on the Schooling Resource Standard funding to be adopted in place of the Commission’s funding model?

## Proposed assessment

### Differences from the 2020 Review approach

- 51 Subject to state views, the Commission proposes 2 changes for the schools assessment:
- change the specification of the government schools regression model to distinguish between primary and secondary school students
  - change the specification of the non-government schools regression model to distinguish between primary and secondary school students.
- 52 Experimentation with different regression model specifications, as prompted by changes in the treatment of year 7 students, has yielded improved model specifications that better explain state funding for government and non-government schools. For further information on the regression model see Attachment A.
- 53 The main change to the regression models is to include variables to account for the difference in cost between primary school students and secondary school students and differences in the fixed costs between primary and secondary schools. This change has improved the explanatory power and robustness of both models (government and non-government). It also accounts for state differences in circumstances with regards to student attrition, creating different balances of primary and secondary school students.
- 54 Any potential changes relating to disability will be tested with states should suitable data become available.

### Proposed assessment structure

- 55 Subject to state views, Table 5 shows the proposed structure of the schools assessment.

**Table 5 Proposed assessment structure for schools**

Component	Driver	Influence measured by driver	Change since 2020 Review?
State spending on government schools	Socio-demographic composition	Recognises that student numbers, adjusted for Indigenous status, low socio-economic status, and remoteness, primary or secondary school, affect the use and cost of providing services.	Yes
	Service delivery scale	Recognises the diseconomies of smaller schools with increasing remoteness and differences between primary or secondary school.	Yes
	Wage costs	Recognises differences in wage costs between states.	No
State spending on non-government schools	Socio-demographic composition	Recognises that the number of students in non-government schools, adjusted for low socio-economic status and remoteness, primary or secondary school, affect the use and cost of providing services.	Yes
	Service delivery scale	Recognises the diseconomies of smaller schools with increasing remoteness and differences between primary or secondary school.	Yes
	Wage costs	Recognises differences in wage costs between states.	No
Commonwealth funding of government schools	Socio-demographic composition	Recognises the 2015 Review terms of reference instruction not to unwind the funding allocated for educational disadvantage by the Commonwealth.	No
	Service delivery scale	Recognises the diseconomies of smaller schools with increasing remoteness.	No
	Wage costs	Recognises the differences in wage costs between States.	No

## Consultation

56 The Commission welcomes state views on the consultation questions identified in this paper (outlined below) and the proposed assessment. State submissions should accord with the 2025 Review framework. States are welcome to raise other relevant issues with the Commission.

- Q1. Do states support a differential assessment of primary and secondary school students and if so, support including in the regression model variables to account for differences in the fixed cost of secondary schools and the additional costs of secondary school students?
- Q2. Do states agree that, if relevant school level data are available and determined fit for purpose, an assessment of needs for educating students with a disability should be included in the schools assessment?
- Q3. Do states agree that the average state funding of schools is not sufficiently based on the Schooling Resource Standard funding to be adopted in place of the Commission's funding model?

## Attachment A: Development of the regression estimating average state funding models

57 In the 2020 Review, the Commission used 2 regression equations to model state spending on schools: one for government schools, and one for non-government schools. These models, using 2022 data, are shown in Table A1.

**Table A1 2020 schools regressions, 2022**

	Government school model			Non-Government school model		
	Estimate	Standard error	Significance	Estimate	Standard error	Significance
(Intercept)	8,750	54	***	2,014	20	***
Inverse School Size	273,549	6,818	***	46,786	5,226	***
Outer Regional	894	115	***	171	56	**
All Remote	3,478	245	***	143	140	
Socio-educational advantage – Quartile 1	6,392	184	***	3,910	117	***
First Nations student	2,917	403	***	NA	NA	NA
Adjusted R squared	0.5102			0.3640		
Sample size	6,236			2,649		

Significance: \*\*\* 99.9%, \*\* 99%, \*95%.

Source: Commission calculation.

58 Since the 2020 Review, all states have included year 7 in secondary school. School level is therefore now a nationally consistent attribute, and explains significant variation in school funding. Because the model of education varies between primary and secondary school, each of the cost weights calculated in Table A1 could be different between the different levels. Table A2 shows the 2020 Review model specifications run separately for primary, secondary and combined school levels.

59 In the 2020 Review, the Commission tested a range of potential drivers that some states included in their funding models. It found these were not significant, or had a sign not explained by a strong conceptual case, and so were excluded.

60 It is possible that the exclusion of school level as a variable contributed to this. Including school level could mean that a revised model would more appropriately attribute the driver of differences in spending than the 2020 Review models did. To test for such possibilities, all variables tested for in the 2020 Review process are included in Table A2.



**Table A2 Government school regressions with greatest potential detail, 2022**

	Primary school	Secondary schools	Combined schools	All schools
Intercept (a)	8,764	9,357	9,010	9,321
Inverse school size (b)	300,181	2,011,100	587,768	273,281
Additional cost per student:				
Inner regional	-261	-65	883	-12
Outer regional	-131	-225	202	879
Remote	2,082	1,624	1,997	3,752
Very remote	3,502	2,342	103	3,690
Socio-educational advantage— Quartile 1	5,224	4,354	4,101	6,777
Socio-educational advantage— Quartile 2	-2,581	-2,736	503	-2,807
First Nations student	5,380	3,096	22,283	4,465
First Nations students squared (c)	-494	6,683	-19,630	-3,310
Adjusted R squared	0.6974	0.6903	0.5369	0.5143

(a) Base cost per student.

(b) Fixed cost per school.

(c) A positive factor represents increased cost per First Nations student in schools with higher concentrations of First Nations students. A school with close to 0% First Nations students is allocated the First Nations coefficient per First Nations student. In a school with close to 100% First Nations students, each such student is allocated the First Nations coefficient plus the First Nations students squared coefficient.

Source: Commission calculation.

- 61 The conceptual case for all the variables in these models predicts positive values. As in the 2020 Review, the Commission has removed variables from the model which are inconsistent with the conceptual case.
- 62 For most variables, there are statistically significant differences in coefficients between the models. It would be possible to use this level of detail in the schools assessment. However, this would reflect a significant increase in complexity of the assessment. To avoid this, the Commission has developed a single model for each sector (government and non-government), with variables reflecting interaction between a concept and school type being included only where they make a considerable improvement to the R squared of the model. On this basis, the Commission has separately included the fixed and base per student costs of secondary schools and other schools.
- 63 As in 2020, the non-government school model was based on the government school model. The First Nations coefficient was again negative and so was removed from the model. The remote coefficient was insignificant, and may be expected to change from year to year, but has been retained.

**Table A3 Proposed 2025 Schools regressions, 2022**

	Government school model			Non-government school model		
	Estimate	Standard error	Significance	Estimate	Standard error	Significance
Intercept	8,238	50	***	1,843	32	***
Secondary	806	79	***	285	44	***
Inverse school size	314,400	5,961	***	63,513	5,670	***
Inverse secondary	1,309,000	46,710	***	142,790	19,418	***
Outer regional	491	98	***	163	55	**
All remote	2,901	207	***	107	139	
Low Socio-economic status Q1	4,694	159	***	3,714	118	***
First Nations student	4,742	341	***	..	..	..
Adjusted R squared	0.6471			0.4091		
Sample size	6,278			2,649		

Note: \*\*\* represents statistically significant coefficients at a 0.001 confidence, \*\* at a 0.01 confidence.

Source: Commission calculation.