Australian Government
Commonwealth Grants Commission

Commission's Assessment Methodology

March 2025

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ISBN: 978-0-6485912-8-3

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Secretary
Commonwealth Grants Commission
73 Northbourne Avenue
CANBERRA ACT 2601
Telephone (02) 6218 5700
Email secretary@cgc.gov.au

Internet

A copy of this report can be obtained from the Commission's website www.cgc.gov.au.

Glossary

A glossary is available from the Commission's website www.cgc.gov.au/publications/glossary.

Quality Assurance Framework

The Commission's Quality Assurance Framework is available on the Commission's website www.cgc.gov.au/publications/quality-assurance-framework.

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Australian Government
Commonwealth Grants Commission

Chairperson
73 Northbourne Avenue
CANBERRA ACT 2601

Telephone: 02 6218 5700
Mike.Callaghan@cgc.gov.au
https://cgc.gov.au

28 February 2025

The Hon Dr Jim Chalmers MP
Treasurer
Parliament House
CANBERRA ACT 2600

Dear Treasurer

As Members of the Commonwealth Grants Commission appointed under the *Commonwealth Grants Commission Act 1973*, and in response to the terms of reference provided by you, we are pleased to provide you with the outcomes of the Commission's 2025 Methodology Review. This comprises the *Review Outcomes* and the Commission's recommended *GST Relativities 2025-26*. Accompanying these documents is the *Commission's Assessment Methodology* containing a comprehensive description of the methods used by the Commission to assess state fiscal capacities, incorporating the changes from the 2025 Review.

The terms of reference asked the Commission to consider the case for the flexibility to consider alternative assessment methods between methodology reviews where there is a significant unanticipated shock, such as a pandemic, or where major policy reforms are enacted. After consulting the states and territories, the Commission considers that it would be beneficial for it to have additional flexibility to consider alternative methods between reviews in very limited circumstances. Additional detail on the issues raised by states on this matter, and the Commission's responses, can be found in the relevant chapter of *Review Outcomes*.

In accordance with the terms of reference, we will be providing the 2025 Review documents to the states and territories under embargo on 28 February 2025. The documents will remain under embargo until they are published on the Commission's website (www.cgc.gov.au) on Friday 14 March 2025.

Yours sincerely

Mike Callaghan AM PSM
Chairperson

Dr L S Williams AM
Member

Dr A Jackson
Member

Prof A Tiernan
Member

Acknowledgements

The Commission appreciates the co-operation extended to the Commission and its staff during this review by staff of the Commonwealth Treasury, state and territory treasuries and other agencies.

The Commission greatly appreciates the dedication and commitment of its staff, and thanks them for their extensive work in undertaking the 2025 Methodology Review.

Terms of reference

The Commission received terms of reference requiring it to review the methods used to calculate the relativities for distributing Goods and Services Tax (GST) revenue among the states and territories to apply from 2025-26.

List of acronyms

AASB	Australian Accounting Standard Board
ABS	Australian Bureau of Statistics
ACT	Australian Capital Territory
AIHW	Australian Institute of Health Welfare
ARIA+	Accessibility/Remoteness Index of Australia Plus
CGC	Commonwealth Grants Commission
COFOG	Classification of Function of Governments
COFOG-A	Classification of Function of Governments - Australia
EPC	Equal per capita
GFS	Government Finance Statistics
GP	General practitioner
GST	Goods and Services Tax
IRSEO	Indigenous Relative Socioeconomic Outcomes Index
NDIS	National Disability Insurance Scheme
NISEIFA	Non-indigenous Socio-Economic Index for Areas
pc	Per capita
PLIDA	Person Level Integrated Data Asset
R2020	2020 Methodology Review
R2025	2025 Methodology Review
SA1 / SA2	Statistical Area Level 1 / Statistical Area Level 2
SDC	Socio-demographic composition
SEIFA	Socio-Economic Indexes for Areas
U2024	2024 Update

Notes

State(s): Unless the context indicates otherwise, the term ‘state(s)’ includes the ACT and the Northern Territory.

n/a: Unless indicated otherwise, n/a refers to not applicable.

Introduction

The *Commission's Assessment Methodology* describes the Commission's framework and assessment methods, including changes following the 2025 Methodology Review, for each category the Commission uses to assess states' relative fiscal capacities. This includes assessment methods for the geography, socio-economic status and wage costs drivers that apply across a number of assessment categories.

The first chapter outlines the Commission's approach to horizontal fiscal equalisation, supporting principles and assessment guidelines.

There is then a chapter outlining the Commission's assessment method for each assessment category and for the geography, socio-economic status and wage costs drivers. The structure of each chapter is:

- overview of the assessment
- breakdown of revenue/expenses
- outline of the structure of the assessment
- outline of the data used in the assessment
- description of the assessment method
- GST impact of the assessment.

These chapters use data from 2022–23 for illustrative purposes except for the GST impact tables. GST impacts are calculated by applying the method changes to the 3 assessment years of the GST revenue sharing relativities for 2025–26.

Part A

Revenue Assessments

1. Payroll tax

Overview

1 The payroll tax assessment covers revenue from taxes levied on remuneration paid or payable by an employer to its employees when the total taxable remuneration of an employer (or group of employers) exceeds a threshold amount. It includes payroll tax surcharges applied by some states and territories (states) such as mental health levies.

2 The assessment recognises a state's capacity to raise payroll tax revenue is influenced by the total remuneration paid by employers in the private sector and the non-general government public sector, where those employers' total Australian remuneration exceeds an average tax-free threshold. States with above average remuneration above the average threshold will have greater revenue raising capacity.

Actual state revenue

3 The first step in calculating assessed revenue is identifying state revenue.[1] Payroll tax accounted for 18.8% of total own-source revenue in 2022–23 (Table 1).[2]

Table 1 Payroll tax revenue by state, 2022–23

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Payroll Tax ($m)	11,594	8,421	5,850	5,007	1,693	494	733	273	34,066
Payroll Tax ($pc)	1,406	1,254	1,086	1,766	922	863	1,589	1,087	1,295
Proportion of total own-source revenue (%)	**22.2**	**21.1**	**12.7**	**18.1**	**20.7**	**21.4**	**20.8**	**16.0**	**18.8**

Structure of assessment

4 Table 2 shows the driver that influences each state's revenue capacity.

Table 2 Structure of the payroll tax assessment

Component	Driver	Influence measured by driver
Payroll tax	Value of taxable remuneration	States with greater private sector and non-general government public sector remuneration above an average threshold have greater revenue raising capacity.

[1] Adjusted budget calculations use ABS Government Finance Statistics data to determine actual state revenue. For further details see the adjusted budget chapter of the *Commission's Assessment Methodology*.

[2] Tables in this chapter, unless otherwise stated, use 2022–23 data.

Data

5 The data used in the assessment are outlined in Table 3.

Table 3 Data used in the payroll tax assessment

Source	Data	Updated
ABS	Compensation of employees – private and public sectors, National Accounts	Annually
	Total Public sector employment and earnings	Annually
	Public sector employment and earnings, selected industries and higher education institutions (customised data)	Annually
	Private sector wages and salaries data, Quarterly Business Indicators Survey (customised data)	Annually

Note: The adjusted budget data sources are outlined in the adjusted budget chapter of the *Commission's Assessment Methodology*.
Data for 2021-22 from the Commonwealth departments of Defence, and Foreign Affairs and Trade were used to remove remuneration of Australian Defence Force and embassy personnel. Data for 2021-22 from the Commonwealth Department of Education were used to split remuneration of higher education employees in Tasmania, the ACT and the Northern Territory. Changes to ABS data mean these adjustments are unnecessary from the 2022–23 assessment year.

Assessment method

6 A state's assessed capacity to raise payroll tax revenue is calculated by applying the Australian average payroll tax rate to the total taxable remuneration in that state.

7 The assessment uses ABS National Accounts data on compensation of employees since it broadly aligns with the forms of remuneration liable for payroll tax (including wages and salaries, superannuation, allowances and fringe benefits). However, ABS compensation of employees data are unable to be dissected by size of payroll. Therefore, ABS wages and salaries data are used to split private and public sector compensation of employees above and below an average tax-free threshold. ABS wages and salaries are also used to remove remuneration paid by the general government sector in each state.

8 There are 4 main steps in calculating assessed payroll tax revenue:

- determining the average tax-free threshold
- determining the assessed revenue base
- determining the average tax rate
- applying the average tax rate to each state's assessed revenue base.

9 The average tax-free threshold is a weighted average of individual states' thresholds, with weights based on each state's share of total compensation of employees. Table 4 shows this calculation for the 2022–23 assessment year. The weighted threshold is scaled so that it can be applied to wages and salaries in the private and public sectors. The scaling proportion is based on ABS data for 2017–18 to 2022–23

and will remain fixed until the next review. The scaled thresholds are rounded to the nearest $10,000 before being provided to the ABS.

Table 4 Calculating weighted threshold, 2022–23

	State shares of total CoE (public & private)	State thresholds	Weighted threshold
		$	$
New South Wales	0.323	1,200,000	387,164
Victoria	0.245	700,000	171,753
Queensland	0.193	1,300,000	250,510
Western Australia	0.124	1,000,000	123,983
South Australia	0.059	1,500,000	88,696
Tasmania	0.017	1,250,000	21,731
Australian Capital Territory	0.028	2,000,000	55,406
Northern Territory	0.011	1,500,000	16,649
Total weighted average threshold			**1,115,893**
Threshold scaled to wages and salaries portion of total CoE in the private sector (90%)			**1,004,304**
Threshold scaled to wages and salaries portion of total CoE in the public sector (85%)			**948,509**

Note: CoE is Compensation of Employees

10 Figure 1 illustrates the calculation of the revenue base. For each state, taxable proportions of wages and salaries are applied to compensation of employees in the private and public sectors. The taxable public sector excludes the general government sector at all levels of government.

11 Figure 2 illustrates the calculation of each state's assessed revenue. The average payroll tax rate is calculated by dividing the total Australian payroll tax revenue by the total Australian assessed revenue base. The average payroll tax rate is applied to each state's assessed revenue base to calculate its assessed revenue.

Figure 1 **Calculating payroll tax assessed revenue base**

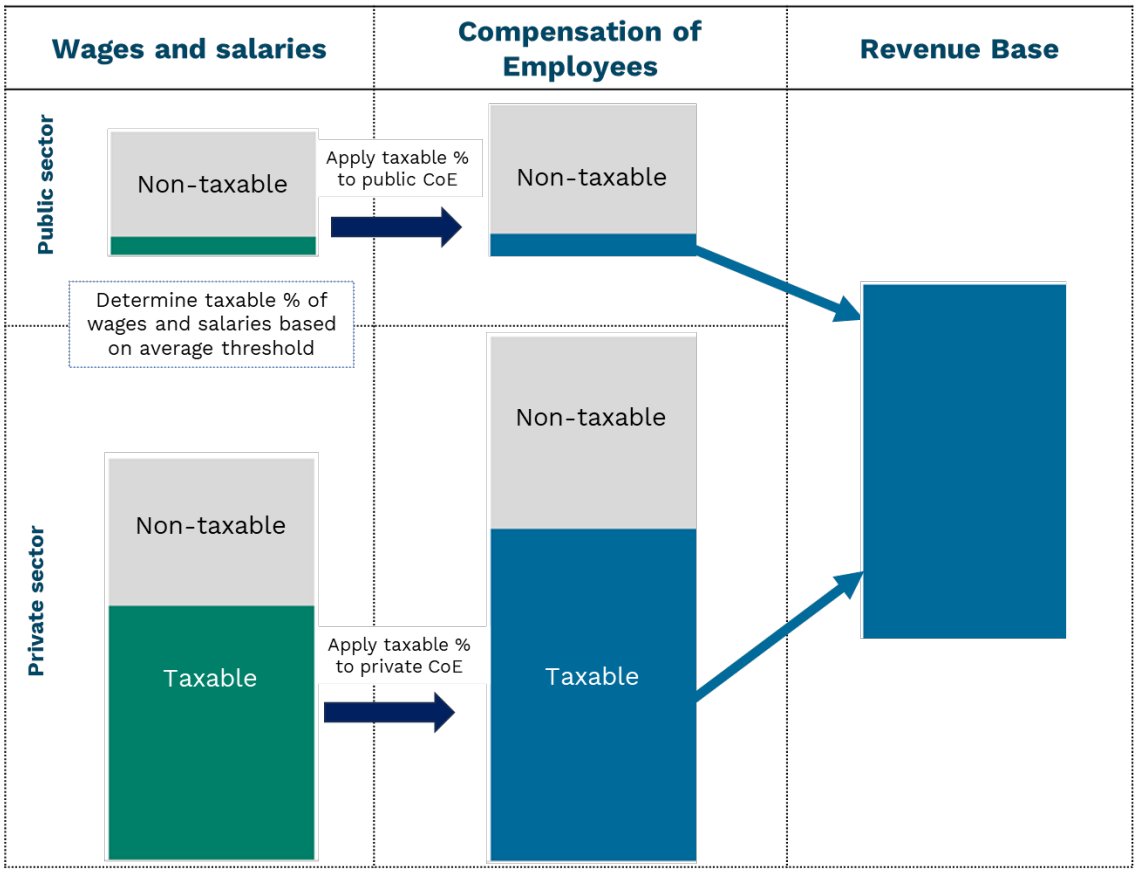
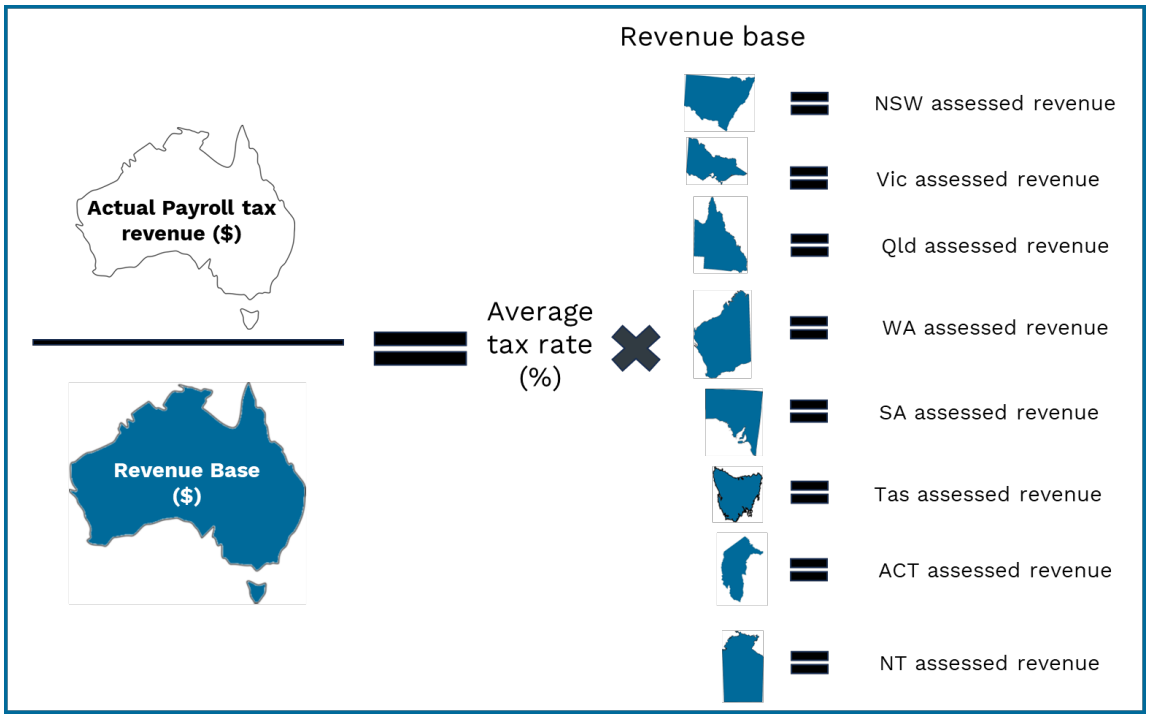


Figure 2 **Calculating average tax rate and assessed revenue for each state**



GST distribution in the 2025 Review

12 Table 5 shows the GST impact of the assessment in the 2025 Review.

Table 5 GST impact of the payroll tax assessment, 2025–26

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total effect
	$m	$m	$m	$m	$m	$m	$m	$m	$m
Payroll Tax	-586	178	859	-1,485	713	274	51	-4	2,075
Total ($m)	**-586**	**178**	**859**	**-1,485**	**713**	**274**	**51**	**-4**	**2,075**
Total ($pc)	**-68**	**25**	**150**	**-486**	**375**	**474**	**105**	**-15**	**75**

Note: Magnitude and direction of GST impact can change from year to year.

2. Land tax

Overview

1 The land tax assessment covers state and territory (state) revenue from annual charges on the value of taxable land holdings, excluding principal places of residence.[1]

2 The category excludes some state land-based taxes.

- Stamp duty on the transfer of land ownership is assessed in the stamp duty on conveyances category.
- Other state land-based taxes are assessed in the other expenses or other revenue categories. Specifically:[2]
  - property-based fire and emergency services levies are offset against spending on emergency services, which is assessed in the other expenses category
  - the remaining other land-based taxes are assessed equal per capita in the other revenue category.

3 The assessment recognises that a state's capacity to raise land tax revenue is influenced by the following.

- Total value of taxable land holdings — states with an above average share of taxable land holdings will have greater revenue raising capacity.
- The distribution of taxable land holdings across value ranges — states with a higher proportion of holdings in higher value ranges will have greater revenue raising capacity.

Actual state revenue

4 The first step in calculating assessed revenue is identifying actual state revenue.[3] Land tax accounted for 8.1% of total own-source revenue in 2022–23 (Table 1).[4]

Table 1 Land tax revenue by state, 2022–23

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Land tax ($m)	5,961	5,367	1,732	779	575	155	184	0	14,754
Land tax ($pc)	723	799	322	275	313	271	400	0	561
Proportion of total own-source revenue (%)	**11.4**	**13.4**	**3.8**	**2.8**	**7.0**	**6.7**	**5.2**	**0.0**	**8.1**

[1] States generally exempt principal places of residence and land used for primary production, general government and charitable purposes.

[2] Other land-based taxes comprise property-based fire and emergency services levies, Victoria's Growth Areas Infrastructure Contribution, metropolitan levies, parking space levies and the ACT's Safer Families levy. Property-based fire and emergency services levies are the largest of these revenues, with states raising $2.0 billion from them in 2022–23.

[3] Adjusted budget calculations use ABS Government Financial Statistics data to determine actual state revenue. For further details see the adjusted budget chapter of the *Commission's Assessment Methodology*.

[4] Tables in this chapter, unless otherwise stated, use 2022–23 data.

Structure of assessment

5 Table 2 shows the drivers that influence each state's revenue raising capacity.

Table 2 Structure of the land tax assessment

Component	Driver	Influence measured by driver
Land tax	Value of taxable land holdings	States with a greater total value of taxable land holdings have greater revenue raising capacity.
	Value distribution adjustment	States with proportionally more high-value taxable land holdings, which attract higher rates of tax, have greater revenue raising capacity.

Data

6 The data used in the assessment are outlined in Table 3.

Table 3 Data used in the land tax assessment

Source	Data	Updated
State revenue offices	Value of taxable land holdings by value range	Annually
	Revenue from land tax by value range	Annually
ABS	Total value of residential and commercial land	Annually
	Share of residential occupants that are renters	As the publication is made available (typically biannually)

Note: The adjusted budget data sources are outlined in the adjusted budget chapter of the *Commission's Assessment Methodology*.

Assessment method

7 The land tax assessment measures a state's capacity to raise land tax revenue using its proportion of the total value of taxable land holdings. The total value of taxable land holdings is disaggregated into 17 value ranges to capture the progressivity of states' land tax rates.

8 State revenue offices provide annual data on the value of taxable land holdings and the revenue from land tax. States provide these data in 17 value ranges. The ranges are in $100,000 increments up to $1 million, $0.5 million increments from $1 million to $3 million, then from $3 million to $5 million, $5 million to $10 million, and $10 million plus.

9 The Commission rescales the land tax revenue in each range proportionately, such that each state's land tax revenue equals its audited land tax revenue. The Commission applies the same rescaling ratio to the value of taxable land holdings

data. This reflects that if any revenue is missing from the state provided data, the corresponding land values are also assumed to be missing.

10 The Commission receives the value of taxable land holdings data from the 7 states that impose land tax. The Northern Territory does not impose land tax. The Commission estimates the Northern Territory's value of taxable land holdings using the Northern Territory's proportion of total residential and commercial land values in ABS National Accounts data.[5] The estimate of the Northern Territory's total share of taxable land holdings is then apportioned across the value ranges to match the average share in each value range of the 3 smaller states, South Australia, Tasmania and the ACT.

11 A state's assessed revenue is the revenue it could raise if it applied the average effective rate of tax to its own value of taxable land holdings. To derive the average effective rate of tax, the national revenue is divided by the national value of taxable land holdings. This process is repeated using the average tax rate and value of taxable land holdings in each value range over $300,000. Revenue from taxable land holdings below $300,000 is assessed equal per capita. This reflects concerns over the ability of states to reliably separate taxable and non-taxable land at value ranges below their tax-free-thresholds.

12 The assessed revenues for each value range are summed together. The total is then scaled to match category revenue in the adjusted budget. Details on the adjusted budget calculations are in the adjusted budget chapter of the *Commission's Assessment Methodology*.

13 Total assessed revenue is discounted by 12.5%. The discount recognises the low level of uncertainty as to the accuracy of the adjustments made by states to improve the comparability of taxable land values data.

GST distribution in the 2025 Review

14 Table 4 shows the GST impact of the assessment in the 2025 Review.

Table 4 GST impact of the land tax assessment, 2025–26

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total effect
	$m	$m	$m	$m	$m	$m	$m	$m	$m
Land tax	-2,945	-627	1,687	777	613	223	180	93	3,572
Total ($m)	**-2,945**	**-627**	**1,687**	**777**	**613**	**223**	**180**	**93**	**3,572**
Total ($pc)	**-340**	**-87**	**294**	**254**	**322**	**386**	**372**	**360**	**128**

Note: Magnitude and direction of GST impact can change from year to year.

[5] Only a subset of residential land values are included, equal to the rental share of residential occupants in each state.

3. Stamp duty on conveyances

Overview

1 The stamp duty on conveyances assessment covers state and territory (state) revenue from stamp duties collected when property is transferred. The concept of property is broad, comprising both real and non-real property.[1]

2 The category excludes revenue from some state land-based taxes.

- Taxes on land ownership are assessed in the land tax category.
- Other land-based taxes are assessed in the other expenses and other revenue categories.[2] Specifically:
  - property-based fire and emergency services levies are offset against spending on emergency services, which is assessed in the other expenses category
  - the remaining other land-based taxes are assessed equal per capita in the other revenue category.

3 The assessment recognises a state's capacity to raise stamp duty on conveyances revenue is influenced by the following.

- The total value of property transferred — states with an above average share of properties transferred will have greater revenue raising capacity.
- The distribution of property transferred across value ranges — states with a higher proportion of properties in higher value ranges will have greater revenue raising capacity.

Actual state revenue

4 The first step in calculating assessed revenue is identifying actual state revenue.[3] Stamp duty on conveyances accounted for 15.1% of total own-source revenue in 2022–23 (Table 1).[4]

Table 1 Stamp duty on conveyances revenue by state, 2022–23

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Stamp duty on conveyances ($m)	9,700	8,991	4,419	2,275	1,210	364	387	162	27,507
Stamp duty on conveyances ($pc)	1,176	1,338	820	803	659	636	838	643	1,046
Proportion of total own-source revenue (%)	**18.5**	**22.5**	**9.6**	**8.2**	**14.8**	**15.8**	**11.0**	**9.4**	**15.1**

[1] Real property is land and buildings (including houses, apartments, shops and factories). Non-real property comprises property that is not land or buildings. Examples of non-real property include non-fixed plant and equipment, receivables, goodwill, business assets, statutory licences, intellectual property, aquaculture leases, copyright, patents, partnership interests and options to purchase.

[2] Other land-based taxes comprise property-based fire and emergency services levies, Victoria's Growth Areas Infrastructure Contribution, metropolitan levies, parking space levies and the ACT's Safer Families levy. Property-based fire and emergency services levies are the largest of these revenues, with states raising $2.0 billion from them in 2022–23.

[3] Adjusted budget calculations use ABS Government Financial Statistics data to determine actual state revenue. For further details see the adjusted budget chapter of the *Commission's Assessment Methodology*.

[4] Tables used in this chapter, unless otherwise stated, use 2022–23 data.

Structure of assessment

5 Table 2 shows the drivers that influence each state's revenue raising capacity.

Table 2 Structure of the stamp duty on conveyances assessment

Component	Driver	Influence measured by driver
Stamp duty on conveyances	Value of property transferred	States with a greater total value of property transferred have greater revenue capacity.
	Value distribution adjustment	States with proportionally more high value property transferred, which attract higher rates of duty, have greater revenue capacity.

Data

6 The data used in the assessment are outlined in Table 3.

Table 3 Data used in the stamp duty on conveyances assessment

Source	Data	Updated
State revenue offices	Value of property transferred by value range and class of property transferred	Annually
	Revenue from stamp duty on conveyances by value range and class of property transferred	Annually

Note: The adjusted budget data sources are outlined in the adjusted budget chapter of the *Commission's Assessment Methodology*.

Assessment method

7 The stamp duty on conveyances assessment calculates a state's capacity to raise stamp duty revenue using its share of the total national value of property transferred. The total value of property transferred is disaggregated into 18 value ranges to capture the progressivity of states' stamp duty rates.

8 State revenue offices provide annual data on the value of property transferred and the revenue from stamp duty on conveyances. The data are provided for 5 different classes of property transfers. This includes revenues differentially assessed (duty from transactions involving the acquisition of interests in listed entities and other transactions) and revenues assessed equal per capita (duty from the sale of major state assets, corporate reconstructions and non-real property transactions).[5]

Revenues differentially assessed

9 Revenues from transactions involving the acquisition of interests in listed entities and other transactions are differentially assessed using the states' value of property

[5] Other transactions include residential and commercial property transactions.

transferred. States provide these data and the revenue from stamp duty on conveyances in 18 value ranges. The ranges are in $100,000 increments up to $1.5 million, then from $1.5 million to $3 million, $3 million to $5 million, and $5 million plus.

10 The Commission rescales the revenue from other transactions, so the total state provided other transactions revenue equals the total audited revenue. The Commission applies the same rescaling ratio to the value of property transferred data. This reflects that if any revenue is missing from the state provided data, the corresponding transaction values are also expected to be missing.

11 The Commission includes only 10% of the value of transactions involving the acquisition of interests in listed entities. This is because most states apply a landholder duty rate that is 10% of their general stamp duty rate. The adjusted value of transactions involving the acquisition of interests in listed entities and the rescaled other transactions are added together by value range.

12 A state's assessed revenue is the revenue it could raise if it applied the average effective rate of tax to its own value of property transferred. To derive the average effective rate of tax, the national revenue is divided by the national value of taxable land holdings. This process is repeated using the average tax rate and value of property transferred in each value range.

13 The assessed revenues for each value range are summed together. The total is then scaled to match category revenue in the adjusted budget. Details on the adjusted budget calculations are in the adjusted budget chapter of the *Commission's Assessment Methodology*.

Revenues assessed equal per capita

14 The remaining conveyance duties are assessed equal per capita. Revenue from corporate reconstructions and non-real property transactions are classified in the stamp duty on conveyances category in ABS Government Finance Statistics. These revenues are moved to the other revenue assessment.

15 Some revenues from the sale of major state assets are initially classified in the stamp duty on conveyances category in ABS Government Finance Statistics and some are initially classified in the other revenue category. The Commission compares the revenues provided by states to the revenue included in other stamp duties on financial and capital transactions (ABS tax classification 465). If the revenue appears to be included in ABS tax classification 465 the Commission makes no adjustment. If it is not included, the Commission moves the revenue from the stamp duty on conveyances assessment to the other revenue assessment. Details on the adjusted budget calculation are in the adjusted budget chapter of the *Commission's Assessment Methodology*.

16 Duties from corporate reconstructions are assessed equal per capita because most states exempt these duties or refund the duties collected.

17 Duties from the sale of major state assets are assessed equal per capita because they reflect different state policies on the ownership of assets, including which assets to hold and for how long.

18 Duties from non-real property transactions are assessed equal per capita for 2 reasons. Firstly, the interstate distribution of non-real property transactions is very different from the interstate distribution of real property transactions. Secondly, as only 2 states continue to impose this duty, the Commission has no reliable way to estimate the value of non-real property in the 6 states that do not impose these duties.[6]

GST distribution in the 2025 Review

19 Table 4 shows the GST impact of the assessment in the 2025 Review.

Table 4 GST impact of the stamp duty on conveyances assessment, 2025–26

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total effect
	$m	$m	$m	$m	$m	$m	$m	$m	$m
Stamp duty on Conveyances	-2,755	-206	679	964	867	319	-30	163	2,991
Total ($m)	**-2,755**	**-206**	**679**	**964**	**867**	**319**	**-30**	**163**	**2,991**
Total ($pc)	**-318**	**-29**	**119**	**316**	**455**	**552**	**-63**	**633**	**107**

Note: Magnitude and direction of GST impact can change from year to year.

[6] While New South Wales has abolished duties on most non-real property, it still imposes duty on plant and equipment.

4. Insurance tax

Overview

1 The insurance tax assessment covers state and territory (state) revenue from duties levied on the premiums paid for a range of insurance products. Insurance tax is generally collected from insurance companies but passed onto consumers.

2 The category excludes revenue from insurance-based fire and emergency services levies, which are offset against emergency services expenses in the other expenses category.

3 The assessment recognises a state's capacity to raise insurance tax revenue is influenced by the following.

- The total value of premiums paid to general insurers (known as gross earned premiums) for insured risks in each state — states with an above average share of taxable general insurance premiums will have greater revenue raising capacity.

Actual state revenue

4 The first step in calculating assessed revenue is identifying actual state revenue.[1] Insurance tax accounted for 4% of total own-source revenue in 2022-23 (Table 1).[2]

Table 1 Insurance tax revenue by state, 2022–23

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Insurance Tax ($m)	2,196	1,875	1,409	965	613	132	61	69	7,321
Insurance Tax ($pc)	266	279	262	340	334	230	131	275	278
Proportion of total own-source revenue (%)	**4.2**	**4.7**	**3.1**	**3.5**	**7.5**	**5.7**	**1.7**	**4.0**	**4.0**

Structure of assessment

5 Table 2 shows the driver that influences each state's revenue raising capacity.

Table 2 Structure of the insurance tax assessment

Component	Driver	Influence measured by driver
Insurance tax	Value of premiums	States with a greater total value of taxable insurance premiums have greater revenue raising capacity.

[1] Adjusted budget calculations use ABS Government Financial Statistics data to determine actual state revenue. For further detail see the adjusted budget chapter.

[2] Tables in this chapters, unless otherwise stated, use 2022–23 data.

Data

6 The data used in the assessment are outlined in Table 3.

Table 3 Data used in the insurance tax assessment

Source	Data	Updated
Australian Prudential Regulation Authority	Total premiums paid for general insurance in each state.	Annually

Note: The adjusted budget data sources are outlined in the adjusted budget chapter of the *Commission's Assessment Methodology*.

Assessment method

7 The assessment calculates a state's capacity to raise insurance tax revenue as its proportion of the national value of premiums paid to general insurers (known as gross earned premiums).[3] Premiums relating to workers' compensation and insurance-based fire and emergency levies are excluded. Premiums paid to publicly owned insurers are also excluded.

8 Three adjustments are made to the total general insurance premiums data to remove premiums that are heavily policy influenced and to improve the comparability of the capacity measure across states.

- Workers' compensation premiums are removed as, while they are only taxed by one state, they represent a large proportion of total premiums across all states.[4] Including these premiums would misrepresent states' capacities to raise insurance tax.
- Compulsory third-party premiums are removed as they are significantly influenced by state policy choices, including whether schemes are publicly or privately underwritten.[5]
- Insurance-based fire and emergency services levies are removed, so as not to overstate the capacities of states that impose them. Revenue from these levies is not assessed in the insurance tax category and is instead offset against emergency services in the other expenses category.

9 Insurance duty is imposed on life insurance in 4 states. Revenue from life insurance duty is not easily removed from the category because this revenue is not reported consistently, but available data suggest it represents less than 5% of insurance tax revenue. Further, data on life insurance premiums are not included in the Commission's total premiums data and are not available by state. On practicality

[3] Due to changes in its reporting framework, the Australian Prudential Regulation Authority was unable to provide general insurance premiums data for the September quarter of 2023–24. The Commission, in consultation with states, decided to impute these data using September quarter proportion of taxable premiums in each state on average over the previous 5 years. More information is available in *New Issues for the 2025–26 GST Relativities*.

[4] Only Queensland imposes duty on workers' compensation.

[5] Privately underwritten compulsory third-party premiums are removed. Publicly underwritten compulsory third-party premiums are not included in the Australian Prudential Regulation Authority data.

grounds, the Commission leaves life insurance tax revenue in the category and assesses it using the general insurance premiums revenue base.

10 On practicality grounds, revenue from duty on workers' compensation and duty on compulsory third-party insurance (imposed by 4 states) is also left in the general insurance category and assessed using adjusted general insurance premiums revenue base. These revenues are not reported consistently, but available data suggest they are small relative to total insurance tax revenue.

11 Data on the revenue raised by states are sourced from the ABS Government Finance Statistics.

12 Data on the total premiums paid for general insurance in each state are sourced from the Australian Prudential Regulation Authority.[6]

GST distribution in the 2025 Review

13 Table 4 shows the GST impact of the assessment in the 2025 Review.

Table 4 GST impact of the insurance tax assessment, 2025–26

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total effect
	$m	$m	$m	$m	$m	$m	$m	$m	$m
Insurance Tax	-198	134	22	92	-120	38	24	9	318
Total ($m)	**-198**	**134**	**22**	**92**	**-120**	**38**	**24**	**9**	**318**
Total ($pc)	**-23**	**19**	**4**	**30**	**-63**	**65**	**50**	**34**	**11**

Note: Magnitude and direction of GST impact can change from year to year.

[6] The Australian Prudential Regulation Authority data cover general insurers in the private sector. They are insurers regulated by Australian Prudential Regulation Authority. The data does not include premiums for reinsurance or private health insurance, which are not liable for insurance tax in any state.

5. Motor taxes

Overview

1 The motor taxes assessment covers state and territory (state) revenue from annual registration fees and associated charges, and from stamp duty on motor vehicles levied on the transfer of vehicle ownership.[1]

2 The category excludes revenue from stamp duty collected on compulsory third-party motor vehicle insurance, which is assessed in the insurance tax category.

3 The assessment recognises a state's capacity to raise motor taxes revenue is influenced by the following.

- Total number of vehicles registered in each state (light and heavy vehicles) — states with an above average share of registered vehicles will have greater revenue raising capacity.
- Total value of new vehicles registered and used vehicles transferred — states with an above average share of the total value of vehicle transfers will have greater revenue raising capacity.

Actual state revenue

4 The first step in calculating assessed revenue is identifying actual state revenue.[2] Motor taxes accounted for 7.7% of total own-source revenue in 2022–23 (Table 1).[3]

Table 1 Motor taxes revenue by state, 2022–23

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Motor taxes ($m)	4,311	3,201	3,017	1,982	860	252	210	90	13,923
Motor taxes ($pc)	523	477	560	699	469	439	455	358	529
Proportion of total own-source revenue (%)	**8.2**	**8.0**	**6.6**	**7.2**	**10.5**	**10.9**	**6.0**	**5.3**	**7.7**

[1] Associated charges include number plate fees, inspection fees, administration or recording fees and road safety levies. It does not include driver licence and permit fees.

[2] Adjusted budget calculations use ABS Government Finance Statistics data to determine actual state revenue. For further detail see the adjusted budget chapter of the *Commission's Assessment Methodology*.

[3] Tables in this chapter, unless otherwise stated, use 2022–23 data.

Structure of assessment

5 Table 2 shows the drivers that influence each state's revenue raising capacity.

Table 2 Structure of the motor taxes assessment

Component	Driver	Influence measured by driver
Light vehicle registration fees and charges	Number of light vehicles	States with greater numbers of light vehicles have greater revenue raising capacity.
Heavy vehicle registration fees and charges	Number of heavy vehicles	States with greater numbers of heavy vehicles have greater revenue raising capacity.
Stamp duty on motor vehicle transfers	Value of motor vehicle transfers	States with greater value of vehicle transfers have greater revenue raising capacity.

Data

6 The data used in the assessment are outlined in Table 3.

Table 3 Data used in the motor taxes assessment

Source	Data	Updated
Bureau of Infrastructure and Transport Research Economics	Number of light and heavy vehicles registered in each state	Annually
State revenue offices	Total value of vehicle transfers in each state	Annually

Note: The adjusted budget data sources are outlined in the adjusted budget chapter of the *Commission's Assessment Methodology*.

Assessment method

7 Capacity to raise revenue from motor taxes is assessed in 3 components:

- light vehicle registration fees and charges[4]
- heavy vehicle registration fees and charges[5]
- stamp duty on motor vehicle transfers.

Light vehicle registration fees and charges component

8 The basis on which light vehicle registration fees are collected varies across states, according to vehicle weight, engine capacity, vehicle use and level of emissions.[6] The assessment does not adjust for the complexity of these differences. Instead, it

[4] Light vehicles are vehicles with a gross vehicle mass up to 4.5 tonnes.

[5] Heavy vehicles are vehicles with a gross vehicle mass of 4.5 tonnes or more.

[6] States provide a range of concessions or exemptions from fees and charges to some vehicle owners or vehicle types. These vary by state.

recognises that average policy is to impose registration fees at set amounts per vehicle per year. The assessment uses the number of registered light vehicles in each state as a proxy measure of states' capacity to raise light vehicle registration fees and charges.

9 Data on the revenue raised by states from light vehicle registration fees are sourced from the ABS Government Finance Statistics.

10 Data on the number of light vehicles are obtained from the Bureau of Infrastructure and Transport Research Economics *Road Vehicles, Australia* publication.[7] The capacity measure is the number of passenger vehicles and the number of light commercial vehicles. These vehicles account for 94% of light vehicle registrations.[8]

11 The national average registration charge is calculated as the national revenue raised by states divided by the national number of light vehicles. Assessed revenue is calculated by applying the national average registration charge per light vehicle to the number of light vehicles in each state.

Heavy vehicle registration fees and charges component

12 The National Transport Commission sets the heavy vehicle registration fees states are to apply.[9] The fees vary by vehicle weight, number of axles, body type and trailer use. The assessment does not adjust for the complexity of these differences. Instead, it uses the number of registered heavy vehicles in each state as a proxy measure of states' capacity to raise heavy vehicle registration fees and charges.

13 Data on the revenue raised by states from heavy vehicle registration fees are sourced from the ABS Government Finance Statistics.

14 Data on number of heavy vehicles are obtained from the Bureau of Infrastructure and Transport Research Economics' *Road Vehicles, Australia publication*. The capacity measure is the number of heavy rigid trucks and the number of articulated trucks. These vehicles account for 79% of heavy vehicle registrations.[10]

15 The national average registration charge is calculated as the national revenue raised by states divided by the national number of heavy vehicles. Assessed revenue is calculated by applying the national average registration charge per heavy vehicle to the number of heavy vehicles in each state.

[7] *Bureau of Infrastructure and Transport Research Economics, Road Vehicles, Australia, January 2024, Canberra, Australia, accessed 1 August 2024.*

[8] The remaining 6% relate to motorcycles (4.7%), light rigid trucks (0.9%) and campervans (0.4%).

[9] National Transport Commission, Heavy vehicle registration charges, accessed 1 October 2024.

[10] The remaining 21% relate to buses (15.2%) and non-freight carrying vehicles (5.8%).

Stamp duty on motor vehicle transfers component

16 Stamp duty on motor vehicles is collected on new motor vehicle registrations and used motor vehicle transfers. All states impose duty on the dutiable value of the vehicle. The dutiable value is the greater of the purchase price or the market value. The rate of duty varies across states according to vehicle type and use, whether the vehicle is new or used, engine capacity and level of emissions.[11] Most states apply higher rates of duty to higher value vehicles. The assessment does not adjust for the complexity of these differences. Instead, it uses the total dutiable value of vehicle transfers as a proxy measure of states' capacity to raise stamp duty on motor vehicles.

17 Data on the total dutiable value of vehicles in each state are obtained from state revenue offices. To improve the comparability of the data, states have been asked to exclude from the data the value of vehicles that were exempt from duty.

18 Data on the revenue raised from stamp duty on motor vehicles are sourced from ABS Government Finance Statistics.

19 The national average rate of duty on motor vehicle transfers is calculated as the national revenue raised by states divided by the national dutiable value of vehicle transfers. Assessed revenue is calculated by applying the national average rate of stamp duty to the total dutiable value of vehicle transfers in each state.

GST distribution in the 2025 Review

20 Table 4 shows the GST impact of the assessment in the 2025 Review.

Table 4 GST impact of the motor taxes assessment, 2025–26

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total effect
	$m	$m	$m	$m	$m	$m	$m	$m	$m
Light Vehicles	215	-12	-103	-56	-43	-30	13	17	245
Heavy Vehicles	92	13	-18	-97	-4	-7	27	-6	132
Stamp Duty	106	54	-86	-118	20	-6	29	1	209
Total ($m)	**413**	**54**	**-208**	**-271**	**-27**	**-44**	**69**	**12**	**549**
Total ($pc)	**48**	**8**	**-36**	**-89**	**-14**	**-76**	**144**	**48**	**20**

Note: Magnitude and direction of GST impact can change from year to year.

[11] States provide a range of concessions or exemptions from duty to some vehicle owners or vehicle types. These vary by state.

6. Mining revenue

Overview

1 The mining revenue assessment covers state and territory (state) revenue from state royalties, non-royalty revenue associated with mining production and revenue from revenue sharing agreements with the Commonwealth.[1]

2 The category excludes Commonwealth royalties, including its share of royalties collected under the *Petroleum (Submerged Lands) Act 1967*, the Barrow Island (resource rent royalty) and some onshore oil and gas production in Western Australia from pre-1979 leases.

3 The assessment recognises a state's capacity to raise mining revenue is influenced by the following.

- For most minerals, the total value of mining production — states with a greater share of value of production have greater revenue raising capacity.
- For onshore oil and gas, the total volume of mining production — states with a greater share of volume of production have greater revenue raising capacity.
- For brown coal and grants in lieu of royalties, the revenue raised or received respectively — states with a greater share of revenue raised or received have greater revenue raising capacity.

[1] The Commonwealth collects royalties under the *Offshore Petroleum (Royalty) Act 2006* in respect of the North West Shelf oil and gas project. It shares these royalties with Western Australia. It also provides revenue to Western Australia to compensate it for the loss of royalty revenue resulting from the removal of the exemption of condensate from crude oil excise.

Actual state revenue

4 The first step in calculating assessed revenue is identifying actual state revenue.[2] Mining royalties accounted for 20% of total own-source revenue in 2022–23. Table 1 shows actual revenue broken down by component and Table 2 shows actual revenue by state.[3] Royalties are more volatile than other revenues and their share of total own-source revenue can vary significantly year to year. Mining revenue is concentrated in 3 states: New South Wales (13%), Queensland (50%) and Western Australia (34%).

Table 1 Mining revenue by component, 2022–23

	2022-23	
	$pc	**$m**
Grants in lieu of royalties	56	1,482
Coal	758	19,944
Gold	28	733
Copper	13	336
Lithium	40	1,043
Nickel	5	138
Other minerals	136	3,571
Iron ore	346	9,095
Total	**1,381**	**36,342**
Proportion of total own-source revenue (%)		**20.0**

(a) For confidentiality reasons, the Commission does not publish data on its bauxite and onshore oil and gas assessments. This assessment is an aggregation of the bauxite, onshore oil and gas and other minerals assessments.

Table 2 Mining revenue by state, 2022–23

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Mining revenue ($m)	4,658	129	18,214	12,468	379	62	0	432	36,342
Mining revenue ($pc)	565	19	3,381	4,398	207	108	0	1,720	1,381
Proportion of total own-source revenue (%)	**8.9**	**0.3**	**39.6**	**45.2**	**4.6**	**2.7**	**0.0**	**25.3**	**20.0**

[2] Adjusted budget calculations use ABS Government Financial Statistics data to determine actual state revenue. For further details see the adjusted budget chapter of the *Commission's Assessment Methodology*.

[3] Tables used in this chapter, unless state otherwise, use 2022–23 data.

Structure of assessment

5 Table 3 shows the drivers that influence each state's revenue raising capacity.

Table 3 Structure of the mining revenue assessment

Component	Driver	Influence measured by driver
Iron ore	Value of production	States with a greater total value of production have greater revenue raising capacity.
Coal	Actual per capita (revenue raised)	The revenue raising capacity of states with brown coal is equal to the royalties raised.
	Value of production	States with a greater total value of production have greater revenue raising capacity.
	Value distribution adjustment	States with a greater proportion of high value coal have greater revenue raising capacity.
Bauxite	Value of production	States with a greater total value of production have greater revenue raising capacity.
Onshore oil and gas	Volume of production	States with a greater total volume of production have greater revenue raising capacity.
Gold	Value of production	States with a greater total value of production have greater revenue raising capacity.
Copper	Value of production	States with a greater total value of production have greater revenue raising capacity.
Lithium	Value of production	States with a greater total value of production have greater revenue raising capacity.
Nickel	Value of production	States with a greater total value of production have greater revenue raising capacity.
Other minerals	Value of production	States with a greater total value of production have greater revenue raising capacity.
Grants in lieu of royalties	Actual per capita (revenue received)	The revenue raising capacity of states is equal to the revenue they receive.

Note: The coal assessment calculates a revenue capacity using a state's share of the total value of production in each of 2 price bands (above and below $200 per tonne). The value distribution adjustment captures the difference between an assessment using 2 price bands and an aggregate coal assessment.

Data

6 The data used in the assessment are outlined in Table 4.

Table 4 Data used in the mining revenue assessment

Source	Data	Updated
Commonwealth of Australia	Revenue from revenue sharing agreements with the Commonwealth published in Final Budget Outcome	Annually
State departments	Royalty revenue by mineral	Annually
	Value of production by mineral	Annually
	Volume of production for onshore oil and gas	Annually

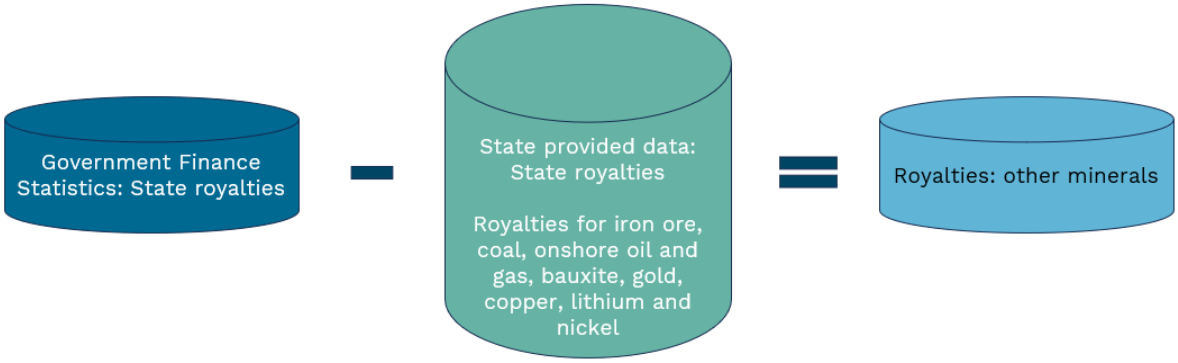
Note: The adjusted budget data sources are outlined in the adjusted budget chapter of the *Commission's Assessment Methodology*.

Revenue data

7 The Commission obtains revenue data from multiple sources. The category comprises royalty revenue sourced from ABS Government Finance Statistics (GFS) and revenue from revenue sharing agreements with the Commonwealth sourced from the Commonwealth's Final Budget Outcome.

8 States provide revenue by mineral. These data are used for most mineral components. Figure 1 shows the revenue for the other minerals component is derived as the difference between a state's GFS royalty revenue and its total state revenue (excluding other minerals royalties).

Figure 1 Derivation of royalty revenue for the other minerals component



Assessment data

9 The Commission sources value and volume of production by mineral from states. For coal, states provide revenue and value of production data for 2 price bands (above and below $200 per tonne).

10 Queensland and the Northern Territory provide aggregated data because confidentiality restrictions prevent them from providing data for each mineral component. The Commission splits their aggregated data using processes agreed with each state.

11 Western Australia is the only state to provide value of production data for both alumina and bauxite. The Commission converts its alumina value of production to a bauxite equivalent using a process agreed with the state.

Assessment method

12 States impose different royalty rates on different minerals. As a consequence, the assessment uses a mineral-by-mineral approach to assess capacity. Under this approach, separate assessments are made for individual minerals where it is material to do so. The remaining minerals are combined and assessed together. Revenue from revenue sharing agreements with the Commonwealth are assessed using the revenue received by the relevant states.

Revenue base

13 The assessment has 10 components. For each component, a state's capacity to raise mining revenue is calculated using its share of one of the following:

- total value of production
- total volume of production or
- revenue raised or received.

14 For most components, the revenue base is the value of minerals produced. For the onshore oil and gas component, it is the volume of production. For the grants in lieu of royalties component, it is the revenue received. For coal, there is a different approach which is discussed in the section below.

15 For each component, an average royalty rate is derived by dividing total revenue by the total revenue base. Figure 2 shows assessed revenue is derived by applying the average royalty rate to a state's revenue base.

Figure 2 Calculating assessed revenue

The coal assessment

16 The calculation of assessed revenue for coal is different. Some states have higher revenue capacity because a higher proportion of their coal production comprises high-value metallurgical coal, which attracts a higher price. Their revenue capacity is further increased when progressive royalty rates are imposed. To capture states' increased capacity, the coal assessment calculates a state's revenue capacity using its share of the total value of production in each of 2 price bands (above and below $200 per tonne).

17 A value distribution adjustment is derived by calculating:

- each state's assessed coal revenue for each price band and combining them
- each state's assessed coal revenue using an aggregate coal assessment
- the ratio of the 2 outcomes.

18 A state's coal revenue base is its value of coal production multiplied by its value distribution adjustment.

19 The exception is Victoria. Its coal does not have a market price as it is largely an internal transfer within mining/electricity generation entities. In the absence of a

price, there is no reliable way to derive a measure of its value of coal production. Consequently, the Commission estimates its coal capacity as the revenue raised.

20 This is not a separate coal assessment. It is a way to estimate coal capacity for a state producing coal that has no price. Victoria's estimated capacity is included with the capacities of other states in the coal assessment.

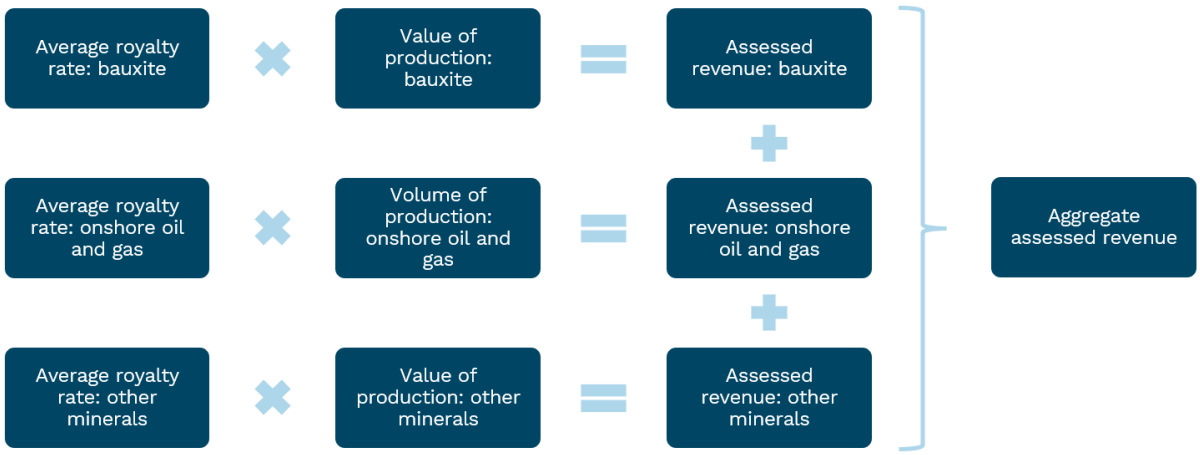
Confidential data

21 A state may provide the Commission with the value of production for a particular mineral on the condition the Commission does not publish its data. In these circumstances, the Commission uses the state's data to derive an assessment for the mineral. To maintain the confidentiality of the relevant state data, the Commission combines that assessment with the assessment for another mineral component.

22 States provided confidential bauxite and onshore oil and gas production data. The Commission maintains the confidentiality of these data by:

- calculating assessed revenue for each mineral
- combining the assessed revenues for both minerals with the assessed revenue for the other minerals component
- setting the revenue base for the other minerals component to each state's share of the aggregate assessed revenues for all three minerals (see Figure 3).

Figure 3 Maintaining confidentiality of state data



Category assessed revenue

23 Category assessed revenue is derived by summing the assessed revenue for each component.

GST distribution in the 2025 Review

24 Table 5 shows the GST impact of the assessment in the 2025 Review.

Table 5 GST impact of the mining revenue assessment, 2025–26

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total effect
	$m	$m	$m	$m	$m	$m	$m	$m	$m
Grants in lieu of royalties	410	339	271	-1,171	90	27	23	11	1,171
Coal	-1,259	4,384	-7,009	1,873	1,190	358	302	161	8,268
Gold	182	185	138	-546	29	16	15	-20	565
Copper	37	107	-15	-19	-126	5	7	4	160
Lithium	230	190	152	-656	50	15	13	5	656
Nickel	45	37	29	-126	10	2	2	1	126
Other minerals	1,044	826	-1,674	-7	-27	-18	62	-206	1,932
Iron ore	3,696	3,057	2,444	-10,424	716	196	206	110	10,424
Total ($m)	**4,385**	**9,125**	**-5,664**	**-11,075**	**1,931**	**601**	**630**	**66**	**16,739**
Total ($pc)	**506**	**1,273**	**-989**	**-3,625**	**1,015**	**1,041**	**1,305**	**258**	**601**

Note: Magnitude and direction of GST impact can change from year to year.

(a) For confidentiality reasons, the Commission does not publish data on its bauxite and onshore oil and gas assessments. This assessment is an aggregation of the bauxite, onshore oil and gas and other minerals assessments.

(b) Onshore oil and gas revenues are assessed using the volume of mineral production, the remaining revenues in this component are assessed using the value of mineral production.

7. Other revenue

Overview

1 The other revenue assessment covers state and territory (state) revenues that the Commission does not differentially assess.

2 Other revenues are assessed equal per capita, meaning each state has the same per capita capacity to raise revenue. This treatment is appropriate where one or more of the following apply:

- states are assessed to have the same per capita capacity to raise revenue (interest income and dividend income are examples)[1]
- either an assessment method or sufficiently reliable data are not available to support an assessment (gambling taxes are an example)
- a differential assessment is not material (assets acquired below fair value are an example).

Actual state revenue

3 The first step in calculating assessed revenue is identifying actual state revenue from other revenue sources.[2] Other revenue accounted for 26.3% of total own-source revenue in 2022–23 (Table 1).[3]

Table 1 Other revenue by state, 2022–23

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Other revenue ($m)	13,883	11,994	11,345	4,138	2,843	851	1,947	684	47,685
Other revenue ($pc)	1,683	1,786	2,106	1,460	1,549	1,486	4,222	2,722	1,813
Proportion of total own-source revenue (%)	**26.5**	**30.0**	**24.7**	**15.0**	**34.8**	**36.8**	**55.3**	**40.0**	**26.3**

4 States with above-average proportions tended to have below-average land-based tax and/or royalty revenue.[4] The ACT's high proportion also reflects the ABS' treatment of its municipal rate revenue as state revenue.

[1] The Commission assesses states to have the same per capita capacity to raise interest income and dividend income as part of its net borrowing assessment, which assumes states to have equal net financial worth per capita at the beginning of each assessment year.

[2] Adjusted budget calculations use ABS Government Finance Statistics data to determine actual state revenue. For further detail see the adjusted budget chapter of the *Commission's Assessment Methodology*.

[3] Tables used in this chapter, unless otherwise stated, use 2022–23 data.

[4] Land-based taxes comprise state land tax and stamp duty on conveyances.

Structure of assessment

5 Table 2 shows the driver that influences each state's revenue raising capacity.

Table 2 Structure of the other revenue assessment

Component	Driver	Influence measured by driver
Other revenue	Equal per capita	These revenues are not differentially assessed.

Data

6 The data used in the assessment are outlined in Table 3.

Table 3 Data used in the other revenue assessment

Source	Data	Updated
ABS	Estimated resident population	Annually

Note: The adjusted budget data sources are outlined in the adjusted budget chapter of the *Commission's Assessment Methodology*.

Assessment method

7 These revenues are assessed equal per capita. Assessed revenue is the product of the national average revenue per capita and a state's population.

GST distribution in the 2025 Review

8 An equal per capita assessment does not impact the GST distribution.

Part B

Expense Assessments

8. Schools

Overview

1 The schools assessment covers state and territory (state) expenses on government pre-schools, primary, secondary and combined schools, and non-government schools. It has the following components:

- state funded government schools
- state funded non-government schools
- Commonwealth funded government schools.

2 The assessment recognises that schools expense needs are influenced by the following.

- School student shares — states with a higher proportion of school students have higher spending needs.
- Government school student shares — states with a higher proportion of students in government schools (which cost states more per student than students in non-government schools) have higher spending needs.
- Secondary student shares — states with a higher proportion of secondary students have higher spending needs.
- Remoteness — states with a higher proportion of students in more remote areas have higher spending needs.
- Service delivery scale — states which provide schools in smaller population centres have higher spending needs.
- Socio-educational status of students — states with more students from a low socio-educational background have higher spending needs.
- Indigenous status of students — states with more First Nations students have higher spending needs.
- Wage costs — states facing greater wage cost pressures have higher spending needs.

Actual state expenses

3 The first step in calculating assessed expenses is identifying actual state expenses on schooling services.[1] States collectively spent 17.5% of their total recurrent expenses on school education in 2022–23. Table 1 shows expenses broken down by component and Table 2 outlines actual expenses by state in 2022-23.[2]

[1] Adjusted budget calculations use ABS Government Financial Statistics data to determine actual state expenses. For further detail see the adjusted budget chapter of the *Commission's Assessment Methodology*.

[2] Tables in this chapter, unless otherwise stated, use 2022–23 data.

Table 1 Schools expenses by component, 2022–23

	2022-23	
	$pc	$m
State funded government schools	1,418	37,304
Commonwealth funded government schools	391	10,294
State funded non-government schools	245	6,433
Total	**2,054**	**54,031**
Proportion of total expenses (%)		**17.5**

Table 2 Schools expenses by state, 2022–23

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Schools ($m)	18,069	11,448	11,592	6,312	3,597	1,248	1,063	704	54,031
Schools ($pc)	2,191	1,704	2,152	2,226	1,959	2,179	2,304	2,800	2,054
Proportion of total expenses (%)	**18.3**	**14.5**	**19.7**	**18.6**	**19.2**	**17.5**	**16.7**	**11.6**	**17.5**

4 Total actual expenses do not include spending of Commonwealth funding on non-government schools.[3] This is considered a Commonwealth own-purpose expense, because states do not have a choice in how these funds are spent.

Structure of assessment

5 Table 3 outlines the drivers that influence expenses in each component.

Table 3 Structure of the schools assessment

Component	Driver	Influence measured by driver
State funded government schools	Socio-demographic composition	Student numbers, Indigenous status, socio-educational status and remoteness influence the use and cost of services.
	Service delivery scale	More remote areas have smaller schools, leading to higher costs per student (due to fixed costs of running a school).
	Wage costs	Differences in wage costs between states affect costs.
State funded non-government schools	Socio-demographic composition	Student numbers, Indigenous status and socio-educational status affect the use and cost of services.
	Service delivery scale	More remote areas have smaller schools, leading to higher costs per student (due to fixed costs of running a school).
	Wage costs	Differences in wage costs between states affect costs.
Commonwealth funded government schools	Schooling Resource Standard	Consistent with the terms of reference for the 2015 Review, this reflects the Department of Education's needs-based funding formula. This includes a base amount adjusted for capacity of the school community to contribute additional funding for students with disability, First Nations students, socio-educationally disadvantaged students, students with low English proficiency, students attending more remote schools and students attending smaller schools.[4]
	Wage costs	Differences in wage costs between states affect costs.

[3] For constitutional reasons this spending is passed through state governments.

[4] Department of Education, *Schooling Resource Standard*, Department of Education website, 2024, accessed 20 June 2024.

Data

6 The data used in the assessment are outlined in Table 4.

Table 4 Data used in the schools assessment

Source	Data	Updated	Component
Australian Curriculum Assessment and Reporting Authority	School profile, enrolment and finance data	Annually	State funded government schools
			State funded non-government schools
ABS	Student counts data	Annually	State funded government schools
			State funded non-government schools
			Commonwealth funded government schools
Department of Education	Schooling Resource Standard	Annually	Commonwealth funded government schools

Note: Data for the wage costs adjustment are also included in this assessment.
The adjusted budget data sources are outlined in the adjusted budget chapter of the *Commission's Assessment Methodology*.

Assessment method

7 The schools assessment has 3 components. The state funded government schools and the state funded non-government schools components use very similar regression-based approaches. The Commonwealth funded government schools component reflects the Commonwealth's needs-based funding formula. In all components, a wage cost adjustment is made to reflect the different wage costs across states.

8 This process estimates the expenses that each state would incur if it provided the national average standard of education at average efficiency, given the profile of its students. This allows the assessed spending needs of each state to be calculated.

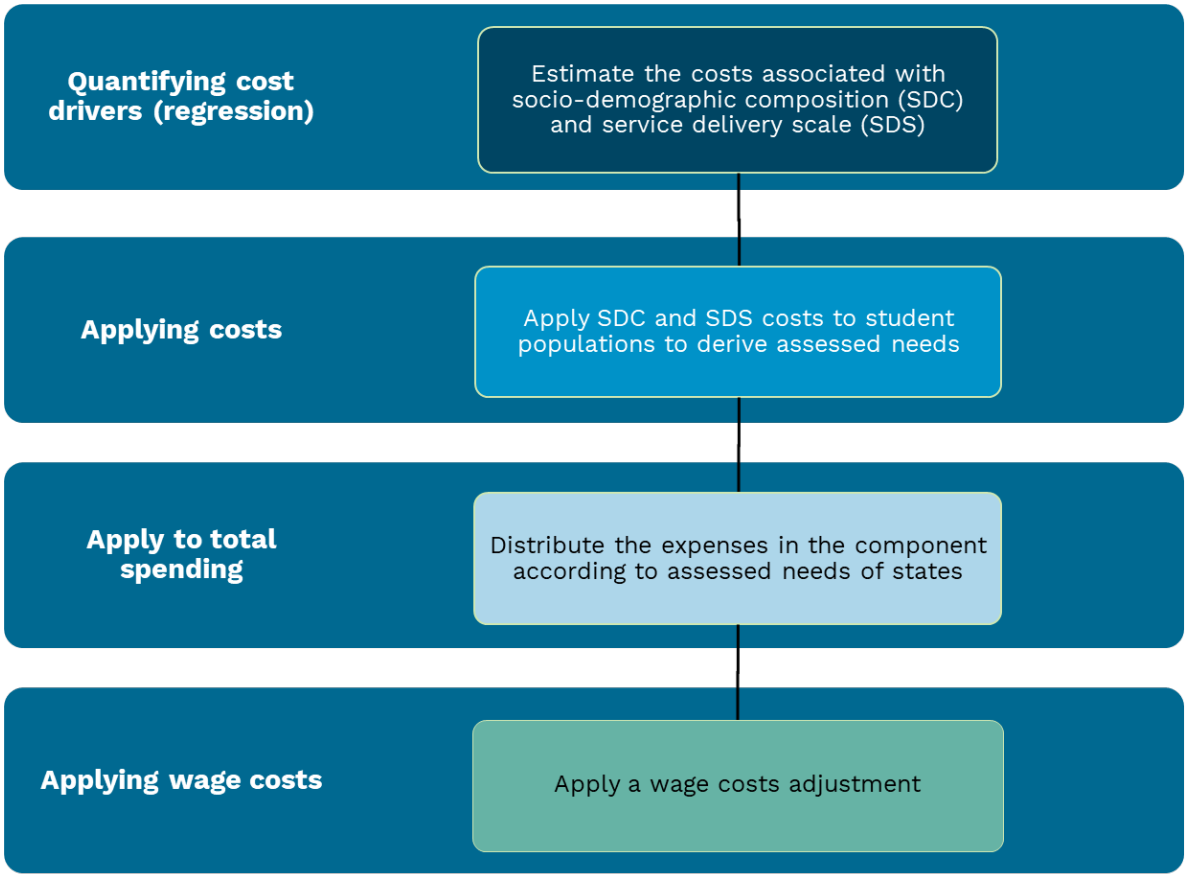
State funded government schools component

9 The assessment method for the state funded government schools component uses a regression model to calculate:

- the base cost of providing education to students
- the additional cost of providing education to student populations that are more expensive to service (due to costs related to socio-demographic composition and service delivery scale).

10 These costs are applied to each state's student population to find the assessed spending needed to educate its students. The national total spending in the state funded government schools component is allocated to states in proportion to these assessed needs. An adjustment is then made for the differences in wage costs between states. See Figure 1 for an outline of the process.

Figure 1 State funded government schools assessment method



Quantifying cost drivers using a regression

11 The regression model allows the Commission to estimate the base cost of educating a student, and the additional costs of educating students from specific groups including secondary students and students who attend more remote schools.

12 The regression model uses data from the Australian Curriculum Assessment and Reporting Authority to model costs per student. This represents the total recurrent costs to states in providing a school, divided by the number of full-time equivalent students enrolled at that school.[5] The explanatory variables used in the model are outlined below and relate to the drivers of socio-demographic composition and service delivery scale. This allows the Commission to estimate the additional costs associated with these drivers.

Socio-demographic composition

13 Socio-demographic composition accounts for student numbers, secondary student numbers, remoteness, socio-educational status and Indigenous status using the variables listed below.

- Base student costs — the standard annual cost in providing education to a student.

[5] Cost per student excludes school funding provided by the Commonwealth as this funding is assessed in the Commonwealth funded government schools component.

- Secondary students — the additional cost of secondary students, defined as the proportion of students who are in year 7 or above, regardless of the institution they attend.
- Outer regional school students— the additional costs of providing education to students in outer regional areas.
- Remote school students — the additional costs of providing education to students in remote or very remote areas.
- Socio-educationally disadvantaged students — the additional costs of providing education to students from a low socio-educational background, represented by the proportion of students in the lowest quartile of educational advantage.[6]
- First Nations students — the additional cost of providing education to First Nations students, represented by the proportion of students who are First Nations students.

Service delivery scale

14 Service delivery scale accounts for the higher cost per student in more remote schools using the variables listed below.

- Fixed cost of a school — the fixed annual cost of running a school, represented by the inverse of the total number of students in a school.[7]
- Fixed cost of a secondary school — the fixed annual cost of running a secondary school, represented by the inverse of the number of students in a secondary school.

15 The regression produces dollar value estimates of the base cost of educating a student, as well as the additional costs associated with higher-cost students, and the fixed cost of schools. For example, Table 5 shows that in 2022–23, a student who attended an outer regional school was estimated to cost an additional $212.

Table 5 State funded government schools regression results, 2022–23

	Value
Socio-demographic composition	**$ per student**
Base student cost	9,234
Additional cost for	
Secondary student	834
Outer regional school student	212
Remote or very remote school student	2,715
Socio-educationally disadvantaged student	4,955
First Nations student	6,041
Service delivery scale	**$ per school**
Fixed cost of a school	357,504
Fixed cost of a secondary school	1,436,619

[6] Educational advantage is calculated using Socio-Educational Advantage which ranks students from least to most educationally advantaged based on a range of attributes of the student's parents.

[7] In a regression model predicting cost per school, the fixed cost of a school would be the intercept, and the socio-demographic attributes measured would reflect the number of students in each group in each school. To convert this to a per student cost model, both the cost per school and all independent variables needs to be divided by the number of students (and the regression needs to be weighted by the number of students in each school). Thus, the fixed cost of a school is reflected by the inverse school size in the per student cost model.

16 The values that are derived in the regression are additive. For example, in 2022–23, a First Nations student who attended a remote primary school was estimated to cost $17,990 ($9,234 + $6,041 + $2,715), plus their share of the fixed costs of that school.

17 The regression is recalculated each year to reflect evolving state funding formulas.

Applying socio-demographic composition costs

18 ABS data are available on the number of school students, First Nations students and secondary students in each state. Data from the Australian Curriculum Assessment and Reporting Authority on other socio-demographic groups are scaled to be consistent with the ABS estimates. The costs per student group calculated in the regression are applied to these student counts. This derives the estimated socio-demographic composition costs of government students for each state.

19 Table 6 illustrates how costs associated with socio-demographic composition are applied to state student populations to calculate assessed expense needs. The spending needs of each state, related to each element of socio-demographic composition, can be found by multiplying the costs associated with the student group by the number of students in that group. For example, in 2022–23, Tasmania had around 24,000 students that were socio-educationally disadvantaged. Therefore, the assessed cost that Tasmania faced in relation to socio-educationally disadvantaged students was around $118,920,000 (24,000 * $4,955). The total assessed socio-demographic composition costs for a state are calculated by summing the cost per student group multiplied by the number of students in each group and summing them.

Table 6 Assessed socio-demographic composition costs by state, 2022–23

	Cost per student	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total students	Total assessed costs
	$	'000	'000	'000	'000	'000	'000	'000	'000	'000	$m
Students	9,234	791	645	570	293	172	55	46	29	2,601	24,019
Secondary students	834	312	257	238	113	75	23	19	11	1,048	874
Outer regional students	212	37	26	83	21	23	20	0	17	227	48
Remote or very remote students	2,715	4	0	15	21	7	1	0	12	60	162
Socio-educationally disadvantaged students	4,955	251	180	189	88	57	24	6	14	810	4,012
First Nations students	6,041	71	17	63	26	12	7	2	13	210	1,270
Total assessed SDC costs ($m)		**9,250**	**7,167**	**6,843**	**3,449**	**2,034**	**694**	**485**	**463**		**30,384**

Applying service delivery scale costs

20 There are fixed costs associated with running a school, regardless of the size of that school. This means that small schools have a higher cost per student than larger schools. In 2022–23, the regression estimated the fixed cost of running a school was $357,504, with an additional $1.4 million for secondary schools (Table 5).

21 States have significant policy control over the size of their schools. Therefore, the Commission uses the average school size in each remoteness area across all states in the calculation of service delivery scale costs.

22 For example, in 2022–23, there were 1,876,334 government students attending the 3,455 schools in major cities nationally, or 543 students per school (Table 7). Given the regression estimated that each school had a fixed cost of $357,504, this represents a cost of $658 per student in major city schools. This fixed cost per student increases in more remote areas as average school size decreases.

Table 7 Fixed cost per student by remoteness area, 2022-23

	Number of students	Number of schools	Average school size	Fixed cost per school ($)	Fixed cost per student ($)
Major city students	1,876,334	3,455	543	357,504	658
Inner regional students	453,492	1,701	267	357,504	1,341
Outer regional students	229,040	1,121	204	357,504	1,750
Remote students	34,697	250	139	357,504	2,576
Very remote students	25,957	248	105	357504	3,416

23 The fixed cost per student for each remoteness area is applied to state student populations to calculate the assessed service delivery scale spending needs for each state (Table 8). The spending needs related to a state's student population in each remoteness area is calculated by multiplying the fixed, per student cost in that remoteness area by the number of students in that remoteness area within the state.

Table 8 Assessed base service delivery scale costs by state, 2022–23

	Cost per student	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total students	Total assessed costs
	$	'000	'000	'000	'000	'000	'000	'000	'000	'000	$m
Major city	658	600	501	365	226	126	0	46	0	1,864	1,227
Inner regional	1,341	151	117	107	25	17	34	0	0	451	604
Outer regional	1,750	37	26	83	21	23	20	0	17	227	397
Remote	2,576	3	0	8	13	5	1	0	5	34	88
Very remote	3,416	1	0	7	8	2	0	0	7	26	87
Total assessed base SDS costs ($m)		**671**	**534**	**574**	**279**	**165**	**83**	**30**	**67**		**2,403**

24 Secondary schools have higher fixed costs than primary or combined schools. The regression showed them to have fixed costs of $1,436,619 in addition to the $357,504 fixed costs faced by all schools.

25 Service delivery scale for secondary schools is calculated in the same way as for all schools with one exception. The number of schools is based on secondary schools, while the number of students includes all students in year 7 or above, regardless of whether they attend secondary schools, combined schools or (until 2022) South Australian primary schools.[8]

Rescaling spending needs to total spending

26 The regression model estimates state-only costs per student using finance data from the Australian Curriculum Assessment and Reporting Authority. The total state spending implicit in these data is different to the ABS Government Finance Statistics (GFS) estimate of total state spending. Therefore, once the assessed needs of each state are calculated, they must be rescaled such that the total state spending is consistent with GFS data.

27 The Australian Curriculum Assessment and Reporting Authority data indicate total spending on state funded government schools in 2022–23 was $34.0 billion. The equivalent GFS estimate was $37.3 billion. Thus, each state's estimated need was increased by 10% to produce assessed expenses consistent with the adjusted budget.

Applying wage costs

28 Wages costs are a significant share of the total cost of providing schooling services. Differences in wage costs between states have a differential effect on the cost of providing schooling services. The schools assessment uses the Commission's general method for measuring the influence of wage costs. Details on how this is calculated are in the wage costs chapter of the *Commission's Assessment Methodology*.

Flexibility within the method

29 There is a conceptual case for assessing schools with different groups of First Nations students differently. This could be done by allowing for higher costs for schools with a high proportion of First Nations students, or higher costs for First Nations students who are disadvantaged or attending more remote schools. This conceptual case is not currently supported by the data. Each year, the Commission will retest variables reflecting the heterogeneity of the First Nations student population. If the latest data support it, the Commission may adjust its model after consulting with states.

[8] Until 2022, South Australia educated year 7 students in primary schools rather than in high schools.

State funded non-government schools component

30 The assessment of state funded non-government schools is the same as the state funded government schools component but it uses a different group of explanatory variables. The model indicates that more remote schools do not attract a higher cost, so outer regional and remote schools are not separately identified in the regression model. While socio-educational disadvantage in the government schools regression uses the measure of the most disadvantaged 25%, the non-government schools model uses the most disadvantaged 50%. This difference reflects that in non-government schools the income dimension of socio-educational disadvantage impacts base funding through the capacity-to-pay concept which states use in their non-government funding.

31 Table 9 outlines the dollar values produced by the state funded non-government schools regression.

Table 9 State funded non-government schools regression results, 2022–23

	Value
Socio-demographic composition	**$ per student**
Base student cost	1,351
Additional cost for	
Secondary student	402
Socio-educationally disadvantaged student	3,024
First Nations student	272
Service delivery scale	**$ per school**
Fixed cost of a school	74,554
Fixed cost of a secondary school	39,422

32 The costs calculated in the regression are applied to student populations in the same way as in the state funded government schools component to derive total assessed needs for each state. These totals are rescaled such that the total state funding is equivalent to the GFS data. Finally, the wage cost factor is applied to the rescaled assessed expenses.

33 The First Nations variables which are currently not significant, will be retested annually in the same way as the state funded government schools component.

Commonwealth funded government schools component

34 Commonwealth funding makes up around 22% of total recurrent funding for government schools.

35 The Commonwealth developed the Schooling Resource Standard to calculate the funding needs of each school. Based on this, an average cost per government student can be found for each state. These costs are applied to states' student populations to derive the total level of funding needed in each state. An adjustment for differences in wage costs is then applied.

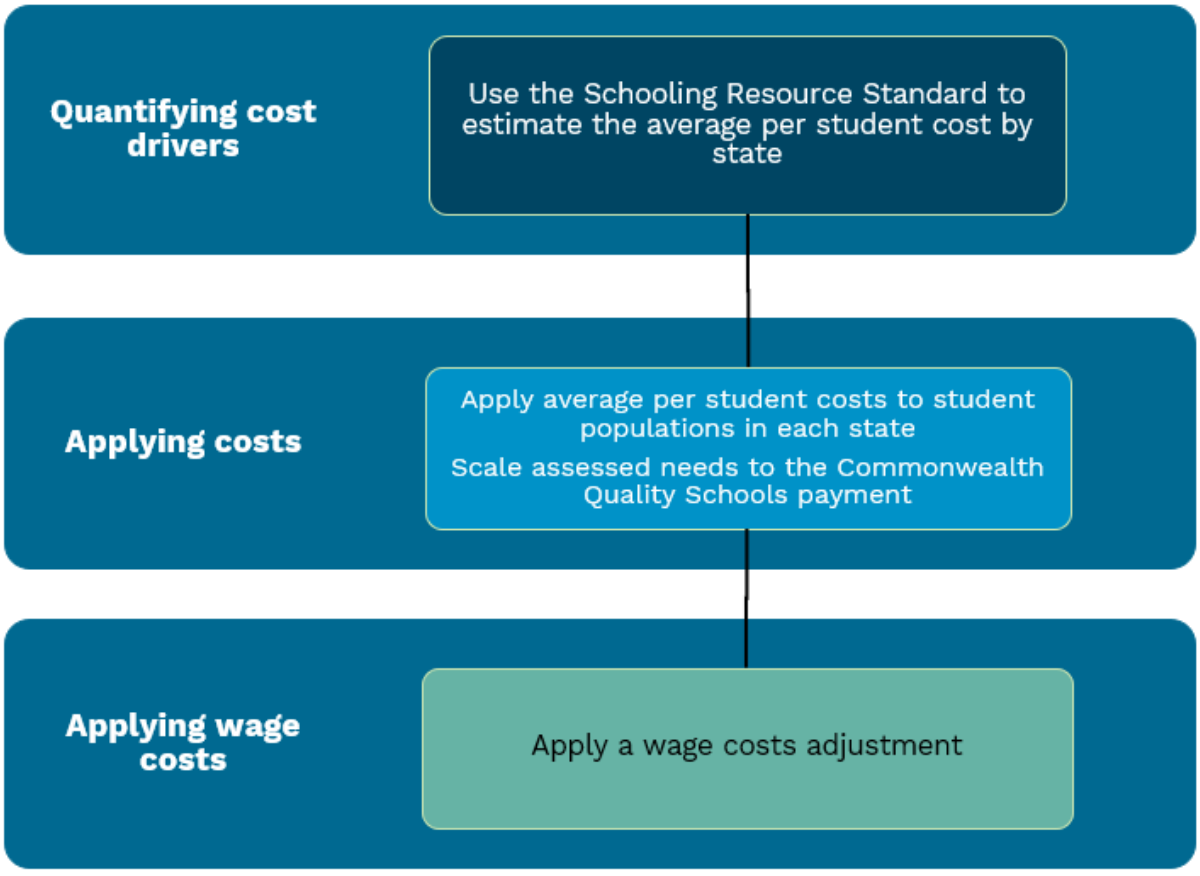
36 The state distribution of funding need is used to assess the spending associated with the Quality Schools Commonwealth payment. The actual distribution of the Quality Schools payment differs from the assessed payment for 2 reasons:

- different states negotiated for the Commonwealth to pay different proportions of their need
- the Schooling Resource Standard does not recognise that wage costs differ between states.

37 As part of the Better and Fairer Schools Agreement (2025-2034), states have bilateral agreements with the Commonwealth, which outline new funding share levels.[9] The Commonwealth has committed to funding a different proportion of the Schooling Resource Standard in each state.

38 The 2015 Review Terms of Reference, which still apply to this aspect of the assessment, ask the Commission to "not have the effect of unwinding the recognition of educational disadvantage embedded in the National Education Reform Agreement funding arrangements". As it has done since the 2015 Review, the Commission's assessment incorporates the measures of educational disadvantage used by the Commonwealth.

Figure 2 Commonwealth funded government schools assessment method



[9] Department of Education, *The Better and Fairer Schools Agreement (2025-2034)*, Department of Education website, 2024, accessed 20 June 2024

Quantifying cost drivers

39 The Schooling Resource Standard derives an estimate of the total public funding a school requires to support its students and is updated annually.[10] This estimate reflects a base cost with additional loadings for:

- students with disability
- First Nations students
- socio-educationally disadvantaged students
- students with low English proficiency
- school size
- school location.

40 The base cost and additional cost loadings outlined in the Schooling Resource Standard are used to calculate an average funding per student amount for each state which describes the average cost of a student in the state.

Applying costs

41 The average per student Schooling Resource Standard for each state is multiplied by state student population numbers to obtain a total spending need.

42 The total funding by state is then scaled to reflect the total Commonwealth Quality Schools payment. In 2022–23, the Commonwealth Quality Schools payment represented 19% of the total funding required. This differs from the 22% noted in paragraph 34 because some government schools have sources of income other than the Commonwealth and state governments and because schools are not yet funded at 100% of the Schooling Resource Standard.

Applying wage costs

43 The wage cost factor is applied in the same way as it is in the state funded government schools component.

[10] Department of Education, *Schooling Resource Standard*.

GST distribution in the 2025 Review

44 Table 10 shows the GST impact of the assessment in the 2025 Review.

Table 10 GST impact of the schools assessment, 2025–26

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total effect
	$m	**$m**	**$m**	**$m**	**$m**	**$m**	**$m**	**$m**	**$m**
State funded government schools	-423	-854	842	317	-179	60	-50	286	1,505
State funded non-government schools	-27	-15	42	-8	20	-12	2	-3	65
Commonwealth funded government schools	-126	-169	207	27	-32	3	-22	113	349
Total ($m)	**-576**	**-1,038**	**1,091**	**336**	**-191**	**51**	**-69**	**396**	**1,874**
Total ($pc)	**-66**	**-145**	**190**	**110**	**-101**	**88**	**-143**	**1,540**	**67**

Note: Magnitude and direction of GST impact can change from year to year.

9. Post-secondary education

Overview

1 The post-secondary education assessment covers state and territory (state) expenses on vocational education, training and other higher education. The majority of expenses relate to vocational education and training, including apprenticeships and traineeships (93%), with a small proportion of spending on universities (7%). State spending is mainly comprised of subsidies for courses provided by public technical and further education institutes, but it also includes subsidies for courses provided by other public and private registered training organisations.

2 The assessment recognises that post-secondary expense needs are influenced by the following.

- Socio-economic status — states with more socio-economically disadvantaged populations, who have higher service use rates, have higher spending needs.
- Indigenous status — states with larger First Nations populations have higher spending needs, as First Nations populations have higher service use rates and higher service delivery costs.
- Remoteness — states face increased costs if they have greater concentrations of people in remote areas due to higher service use rates and service delivery costs in these areas.
- Cross-border service use — some New South Wales residents use the ACT's post-secondary education services which increases the ACT's expenses and reduces the expenses of New South Wales.
- Wage costs — states facing greater wage cost pressures have higher spending needs.

Actual state expenses

3 The first step in calculating assessed expenses is identifying actual state expenses.[1] States collectively spent 2.5% of their total recurrent expenses on post-secondary education in 2022–23. Table 1 outlines actual expenses by state in 2022–23.[2]

Table 1 Post-secondary education expenses by state, 2022–23

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Post-secondary education ($m)	2,123	2,726	1,132	723	374	142	204	230	7,654
Post-secondary education ($pc)	257	406	210	255	204	248	442	916	291
Proportion of total expenses (%)	**2.1**	**3.5**	**1.9**	**2.1**	**2.0**	**2.0**	**3.2**	**3.8**	**2.5**

[1] Adjusted budget calculations use ABS Government Financial Statistics data to determine actual state expenses. For further detail see the adjusted budget chapter of the *Commission's Assessment Methodology*.

[2] Tables in this chapter, unless otherwise stated, use 2022–23 data.

Structure of assessment

4 Table 2 outlines the drivers that influence spending in the assessment.

Table 2 Structure of the post-secondary education assessment

Component	Driver	Influence measured by driver
Post-secondary education	Socio-demographic composition	Indigenous status, remoteness and socio-economic status of the working age population (15–64) influence the use and cost of services.
	Cross-border	The ACT incurs additional costs in providing services to residents of NSW.
	Wage costs	Differences in wage costs between states affect costs.

Data

5 The data used in the assessment are outlined in Table 3.

Table 3 Data used in the post-secondary education assessment

Source	Data	Updated
National Centre for Vocational Education Research	Contact hours of persons aged 15–64 by Indigenous status and postcode of client	Annually
	Contact hours of persons aged 15–64 by state of residence and of provider	Annually
States	Regional cost weights	5-yearly
	First Nations cost weights	5-yearly

Note: Data for the wage costs adjustment are also included in this assessment.
The adjusted budget data sources are outlined in the adjusted budget chapter of the *Commission's Assessment Methodology*.

Assessment method

Use of services

6 The assessment recognises that the socio-demographic composition of the population with respect to Indigenous status, socio-economic status, and remoteness affects the use of post-secondary education services in each state.

7 The number of contact hours per capita is calculated from National Centre for Vocational Educational Research and ABS population estimates for the population aged 15–64, disaggregated by:

- Indigenous status
- remote and non-remote areas.
- socio-economic status in non-remote areas[3]

[3] This is calculated separately for the First Nations population (using the Indigenous Relative Socioeconomic Outcomes index) and the non-Indigenous population (using the Non-Indigenous Socio-Economic Index for Areas) in non-remote areas, dividing each population into the most disadvantaged 20%, the middle 60%, and the least disadvantaged 20%.

Cost weights

8 The regional cost gradient accounts for different costs per contact hour in different regions. The Commission calculates the national average regional cost weights in each ABS remoteness area using state data on cost loadings provided to vocational education institutions. This is combined in proportion to the total contact hours in each region from 2020 to 2022.

9 To calculate the First Nations cost weight, the Commission uses state-provided data on:

- amounts spent on First Nations student loadings included in state funding models
- funding on supplementary programs for First Nations students
- other funding on First Nations student concessions and exemptions.

10 The expenses listed above are netted off from post-secondary education category expenses to estimate the expenses which are spent on all students in proportion to their contact hours. This amount is divided by total contact hours to obtain the base cost per hour. Similarly, the targeted funding amounts are divided by First Nations student contact hours to obtain the additional hourly cost of servicing First Nations students.

11 The Commission calculates the higher cost per hour of educating First Nations students. The additional hourly cost of servicing First Nations students as a percentage of the base hourly cost represents the First Nations cost weight. Data from 2020 to 2022 are averaged to estimate the final cost weight at 23%, which will remain fixed for the 2025 Review period.

Assessed expenses

12 Cost-adjusted use rates are applied to their corresponding population groups to produce assessed cost-weighted hours for each group. These are scaled proportionally so total assessed spending is equal to total actual spending.

Cross-border adjustment

13 The Commission uses data from the National Centre for Vocational Education Research on the hours of training provided by ACT institutes for New South Wales residents and vice versa. There is a bilateral agreement covering the cost of some of these hours (those funded within the Smart and Skilled program). The Commission nets off the hours funded by New South Wales to ensure its cross-border adjustment reflects the provision of training that is not covered by the agreement. It uses ACT and New South Wales data to do this.

Applying wage costs

14 Wage costs are a significant share of the total cost of providing post-secondary education services. Differences in wage costs between states have a differential effect on the cost of providing post-secondary education. The post-secondary education assessment uses the Commission's general method for measuring the influence of wage costs. Details on how this is calculated are in the wage costs chapter of the *Commission's Assessment Methodology*.

GST distribution in the 2025 Review

15 Table 4 shows the GST impact of the assessment in the 2025 Review.

Table 4 GST impact of the post-secondary education assessment, 2025–26

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total effect
	$m	$m	$m	$m	$m	$m	$m	$m	$m
Post-secondary education	-63	-77	49	25	-8	22	-1	55	150
Total ($m)	**-63**	**-77**	**49**	**25**	**-8**	**22**	**-1**	**55**	**150**
Total ($pc)	**-7**	**-11**	**8**	**8**	**-4**	**39**	**-3**	**213**	**5**

Note: Magnitude and direction of GST impact can change from year to year.

10. Health

Overview

1 The health assessment covers state and territory (state) recurrent spending on public hospitals, community and public health services, and patient transport. It has the following components:

- admitted patients
- emergency departments
- non-admitted patients
- community and public health
- non-hospital patient transport
- state spending on COVID-19 health services associated with the national partnership agreement.

2 The assessment recognises that health expense needs are influenced by the following.

- Age structure — states with a higher proportion of older people have higher spending needs.
- First Nations people — states with more First Nations people have higher spending needs.
- Socio-economic status — states with more people of low socio-economic status have higher spending needs.
- Remoteness — states face higher costs if they have greater concentrations of people in remote areas where the costs of delivering health services are higher, people are more reliant on state provided services and patient transport costs are higher.
- Non-state health services — availability of general practitioners, specialists and other private health professionals, and Commonwealth-funded Aboriginal Community Controlled Health Services, can affect state spending needs.
- Wage costs — states facing greater wage cost pressures have higher spending needs.
- COVID-19 expenses — states with higher COVID-19 health expenses covered by the national partnership agreement have higher expense needs.

Actual state expenses

3 The first step in calculating assessed expenses is identifying actual state expenses on health services.[1] States collectively spent 30.7% of their total recurrent expenses on health services in 2022–23. Table 1 shows expenses broken down by component and Table 2 outlines actual expenses by state in 2022–23.[2]

Table 1 Health expenses by component, 2022–23

	2022-23	
	$pc	$m
Admitted patients	2,356	61,975
Emergency departments	223	5,879
Non-admitted patients	328	8,622
Community and other health	596	15,692
Non-hospital patients transport	25	653
COVID health	70	1,831
Total	**3,598**	**94,650**
Proportion of total expenses (%)		**30.7**

Table 2 Health expenses by state, 2022–23

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Health ($m)	25,000	25,096	20,512	11,258	6,581	2,594	1,859	1,751	94,650
Health ($pc)	3,031	3,736	3,808	3,971	3,584	4,529	4,030	6,969	3,598
Proportion of total expenses (%)	**25.3**	**31.9**	**34.9**	**33.1**	**35.2**	**36.5**	**29.2**	**28.8**	**30.7**

Structure of assessment

4 The health assessment has 5 ongoing components. Each of these has socio-demographic and wage cost drivers. A non-state sector services adjustment is applied in the admitted patient, emergency department, non-admitted patient and community and public health components, and a cross-border services adjustment is applied in the community and public health component. There is also an additional temporary component to assess expenses associated with state spending on the National Partnership on COVID-19 Response.[3]

[1] Adjusted budget calculations use ABS Government Finance Statistics data to determine actual state expenses. For further details see the adjusted budget chapter of the *Commission's Assessment Methodology*.

[2] Tables in this chapter, unless otherwise stated, use 2022–23 data.

[3] A separate assessment of the expenses associated with the National Partnership on COVID-19 Response will be undertaken for the recommendation of GST relativities for 2025–26 and 2026–27.

5 Table 3 outlines the drivers that influence expenses in each component.

Table 3 Structure of the health assessment

Component	Driver	Influence measured by driver
Admitted patients	Socio-demographic composition	Age, Indigenous status, remoteness and socio-economic status influence the use and cost of services.
	Non-state sector	Non-state services such as private health insurance-funded hospital services affect state expenses.
	Wage costs	Differences in wage costs between states affect costs.
Emergency departments	Socio-demographic composition	Age, Indigenous status, remoteness and socio-economic status influence the use and cost of services.
	Non-state sector	Non-state services such as Commonwealth-funded general practitioner services affect state spending.
	Wage costs	Differences in wage costs between states affect costs.
Non-admitted patients	Socio-demographic composition	Age, Indigenous status, remoteness and socio-economic status influence the use and cost of services.
	Non-state sector	Non-state services such as Commonwealth-funded specialists and private health professionals affect state expenses.
	Wage costs	Differences in wage costs between states affect costs.
Community and public health	Ambulatory community mental health services	Age, Indigenous status, remoteness and socio-economic status influence the use and cost of services.
	Balance of the component – socio-demographic composition	Age, Indigenous status, remoteness and socio-economic status influence the use and cost of services.
	Non-state sector	Non-state services such as Commonwealth-funded general practitioners (GPs) affect state expenses.
	Cross-border	The ACT incurs additional costs in providing services to NSW residents.
	Wage costs	Differences in wage costs between states affect costs.
Non-hospital patient transport	Socio-demographic composition	Remoteness influences the use and cost of services.
	Wage costs	Differences in wage costs between states affect costs.
National Partnership on COVID-19	Actual per capita	State expenses reflect circumstances beyond state control.

Data

6 The main data source for calculating category and component expenses is state budget data sourced from ABS Government Finance Statistics (GFS). Several other data sources are used when more disaggregated expense data are required.

- National Hospital Cost Data Collection (NHCDC) data from the Independent Health and Aged Care Pricing Authority (IHACPA) are used to split GFS outpatient expenses between the non-admitted patient and emergency department components.
- Productivity Commission data on state spending on specialised mental health services, published annually in the *Report on Government Services*, are used to estimate the share of ambulatory mental health expenses in gross community and public health expenses.
- State-provided data are used to determine the proportion of patient transport expenses that relate to land ambulance or inter-hospital transfers, and non-hospital patient transport (aero-medical ambulance and patient assisted travel schemes).
- National Health Funding Body data are used for expenses associated with the National Partnership on COVID-19 Response.

7 Activity data for state-funded health services are sourced from the Independent Health and Aged Care Pricing Authority and the Australian Institute of Health and Welfare (AIHW). Activity data for the non-state sector adjustments are sourced from the AIHW, Services Australia and the Australian Prudential Regulation Authority (APRA).

8 The data used in the assessment are outlined in Table 4.

Table 4 Data used in the health assessment

Source	Data	Updated	Component
IHACPA	National Weighted Activity Units	Annually	Admitted patients
			Non-admitted patients
			Emergency departments
			Community and public health
	National Efficient Cost (NEC) funding formula and data on block funded small rural hospitals	Annually	All hospital components
	NHCDC ED and NAP expenses	Annually	Emergency departments and non-admitted patients
AIHW	Admitted patient private health insurance-funded separations	Annually	Admitted patients
	Medicare bulk billed benefits paid by Indigenous status	Annually	Non-admitted patients
			Emergency departments
			Community and public health
	Community mental health service contacts	Annually	Community and public health
	State expenses on community and public health services	5-yearly	Community and public health
Services Australia	Medicare bulk billed benefits paid	Annually	Non-admitted patients
			Emergency departments
			Community and public health
APRA	Private health insurance benefits paid by state	Annually	Admitted patients
Productivity Commission	ROGS state expenditure on specialised mental health services	Annually	Community and public health
States	Non-admitted patient referrals after hospital admission	5-yearly	Non-admitted patients
	ACT-NSW cross-border community health	5-yearly	Community and public health
	Aero-medical and Patient Assisted Transport Scheme expenses	5-yearly	Non-hospital patient transport
NHFB	National Partnership on COVID-19 Response reconciled expenses	Annually	National partnership on COVID-19 Response
	Net cross-border national weighted activity units by state	Annually	Health investment assessment

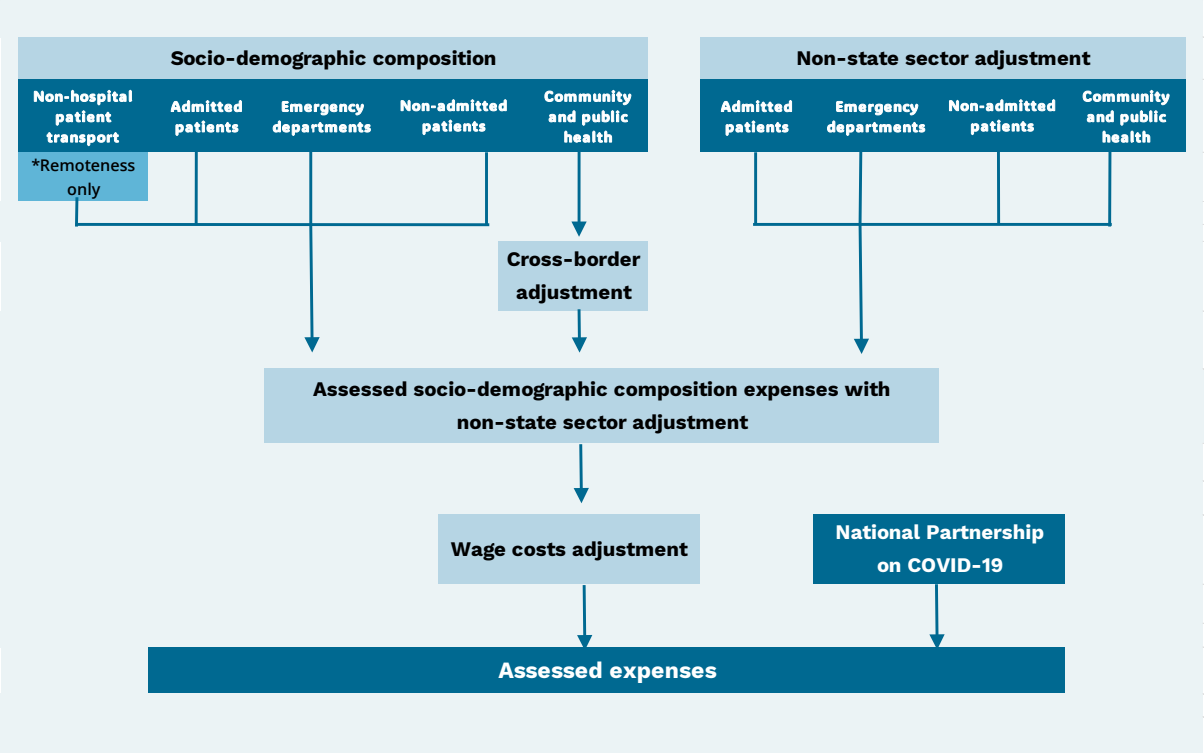
Note: Data for the wage costs adjustment are also included in this assessment.
The adjusted budget data sources are outlined in the adjusted budget chapter of the *Commission's Assessment Methodology*.

Acronyms: APRA – Australian Prudential Regulation Authority, IHACPA – Independent Health and Aged Care Pricing Authority, NEC – National Efficient Cost, NHCDC – National Hospital Cost Data Collection, NHFB – National Health Funding Body, ROGS – Report on Government Services.

Assessment method

9 Figure 1 shows a generalised flow diagram of the health assessment.

Figure 1 Flow diagram of the health assessment



10 There are common elements in the assessment method for admitted patients, emergency departments and non-admitted patients (the public hospital components). The description of these components has been grouped together.

11 The components covering community and public health, non-hospital patient transport and the National Partnership on COVID-19 Response are described separately.

Public hospitals components

12 Spending on hospital services represent the largest proportion of the health category and includes 3 components.

- Admitted patient services — medical care for public patients admitted into public or private hospitals, and land ambulance services.
- Emergency department — emergency care delivered to patients at public hospitals.
- Non-admitted patient services — outpatient type services provided at public hospitals such as obstetrics, gynaecology, cardiology, pathology, radiology and imaging services.

Socio-demographic composition assessment

Drivers

13 The assessment recognises that the socio-demographic composition of the population with respect to Indigenous status, socio-economic status, remoteness and age affect the use and cost of health services in each state.

14 The population groups for these variables are outlined in Table 5.

Table 5 Socio-demographic population groups used in the health assessment

Indigenous status	Socio-economic status	Remoteness area	Age
First Nations	Bottom quintile	Major cities	0 to 14
Non-Indigenous	Middle 3 quintiles	Inner regional	15 to 44
	Top quintile	Outer regional	45 to 64
		Remote	65 to 74
		Very remote	75+

15 The 5 socio-economic status quintiles are grouped into 3 bands — the bottom quintile, the 3 middle quintiles and the top quintile. For First Nations and non-Indigenous people living in remote and very remote regions, there is not a strong relationship between socio-economic quintiles and hospital spending. Hence the population in remote and very remote regions are not disaggregated by socio-economic status. Age is classified into 5 groups with the highest age band set at 75+.

16 To measure hospital use by socio-demographic group, the assessment uses national weighted activity unit (NWAU) data from the Independent Health and Aged Care Pricing Authority. The Independent Health and Aged Care Pricing Authority costs all hospital activity in Australia and expresses these costs as NWAUs.

- A NWAU is a cost-weighted measure of hospital activity. The average hospital service across Australia is worth one NWAU; the most intensive, expensive and lengthy activities are worth multiple NWAUs; and the simplest and least expensive are worth fractions of an NWAU.
- NWAU data reflect the medical cost of different procedures and other factors (such as patient remoteness and Indigenous status) that affect the overall cost of each hospital service.
- NWAU data cover the activity of both activity based funded (ABF) hospitals and block-funded hospitals, with the latter tending to be small and more remote.

17 The public hospital assessments are based on NWAUs specific to admitted patients, emergency departments and non-admitted patients. The NWAU data are cross-classified by the socio-demographic groups in Table 5.

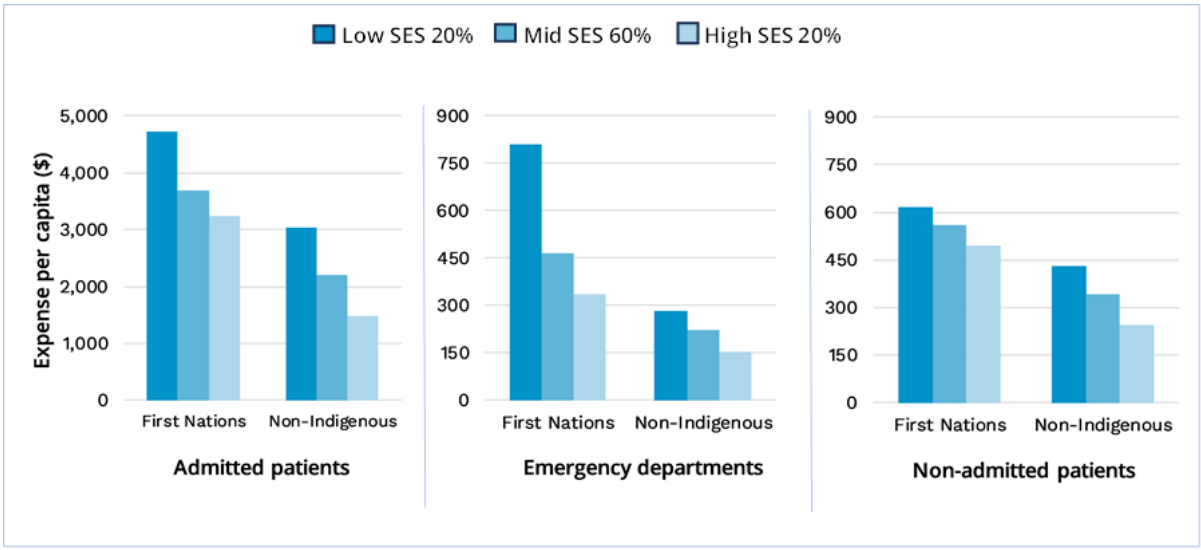
Indigenous status and socio-economic status

18 The health assessment recognises the differences in spending on First Nations and non-Indigenous people as well as differences in spending on people in areas with different socio-economic status. Two indicators of socio-economic status are

used — the Indigenous Relative Socioeconomic Outcomes Index (IRSEO) and the Non-Indigenous Socio-Economic Indexes for Areas (NISEIFA).[4]

19 Figure 2 shows that spending on health services varies for First Nations and non-Indigenous people by socio-economic status across the 3 components.

Figure 2 Public hospital expenses per capita by socio-economic and Indigenous status, 2022–23



Note: Excludes remote areas as the population in remote and very remote regions are not disaggregated by socio-economic status.

Source: Commission calculation using IHACPA unpublished national weighted activity unit data and ABS unpublished GFS expenses and population data.

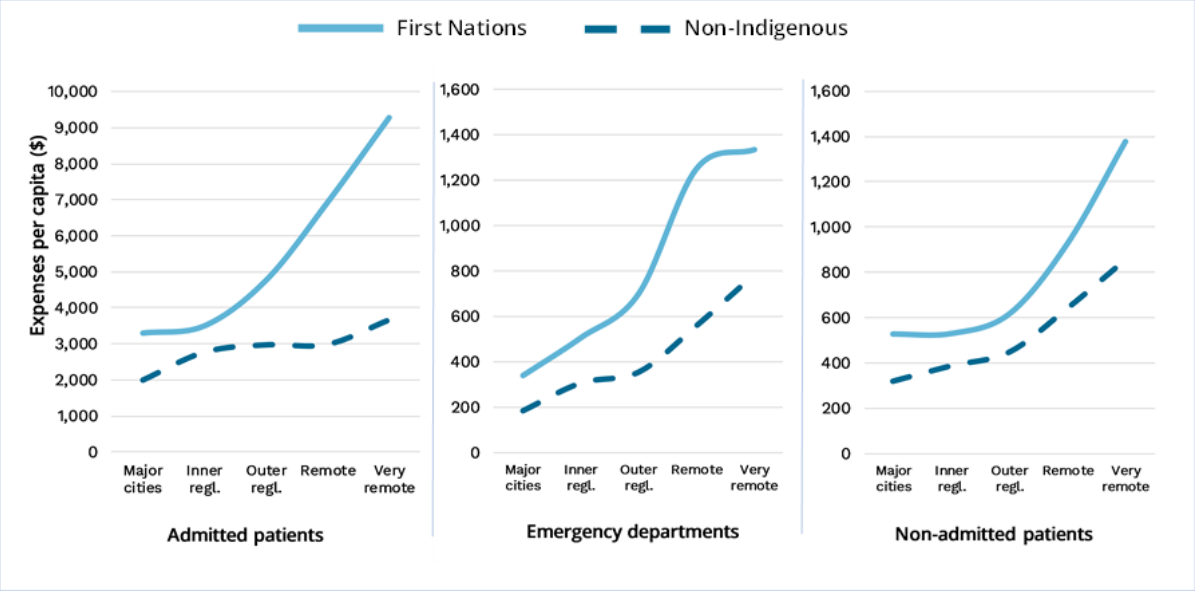
Remoteness

20 Differences in the use and cost of providing services by remoteness regions affect state expenses. The NWAU data include remoteness adjustments for patients living in outer regional and remote areas, and hospital treatment adjustments to reflect the additional cost to provide services in remote and very remote locations.

21 Figure 3 shows that spending per capita on people living in remote and very remote areas is significantly higher than spending per capita on people in major cities. This is due to a mix of factors, such as more remote patients having poorer health and thus greater use of health services, the higher costs of providing services in more remote areas, and lack of non-state funded health services in more remote areas.

[4] These indexes are based on the same variables and methodology as the ABS Socio-Economic Indexes for Areas (SEIFA) – Index of Relative Socio-economic Disadvantage.

Figure 3 Public hospital expenses per capita by remoteness, 2022–23



Source: Commission calculation using IHACPA unpublished national weighted activity unit data and ABS unpublished GFS expenses and population data.

Service delivery scale

22 States face higher service delivery costs in regions where the small size and dispersed nature of communities lead to above-average staffing ratios. While NWAU data for activity based funded hospitals capture all regional costs for larger hospitals, NWAU data for block-funded hospitals are adjusted by the Commission to capture service delivery scale costs not reflected in block-funded NWAU data.[5]

23 Table 6 shows the estimated cost of block-funded hospitals based on activity based funding and block-funding arrangements for 2022–23. The ratio of block funded to activity based funding provides the basis for the service delivery scale adjustments.

Table 6 Block funded adjustment factors for estimating service delivery scale, 2022–23

Hospital remoteness	Activity based costing (a)	Block-funded costing (b)	Block-funded adjustment
	$m	$m	ratio
Inner regional	477	644	1.35
Outer regional	666	963	1.45
Remote	166	258	1.55
Very remote	202	318	1.58

(a) Calculated based on the 2022-23 National Efficient Price (NEP) multiplied by NWAU for small rural block-funded hospitals.
(b) Calculated based on the 2022-23 National Efficient Cost (NEC) funding formula for small rural block-funded hospitals.
Source: Commission calculation based on the NEP, NEC funding formula and IHACPA unpublished data on small rural block-funded hospitals for 2022–23.

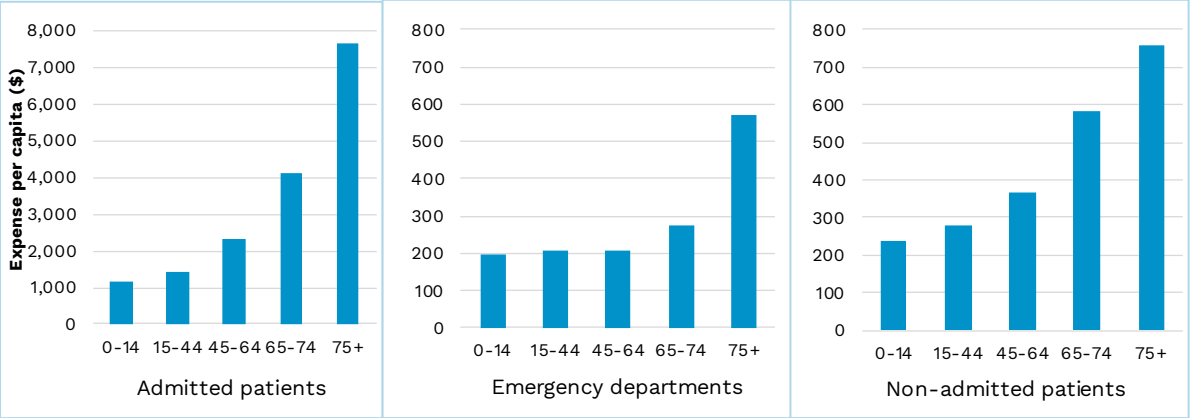
[5] There are similar adjustments in the community and public health assessment that are applied to all activity.

24 The service delivery scale adjustments are updated each year, as the Independent Health and Aged Care Pricing Authority updates its National Efficient Price and National Efficient Cost funding formula annually.

Age

25 Admitted patient, emergency department and non-admitted patient services all have higher expense per capita as age increases. Figure 4 shows that the 75+ and the 65–74 age groups have the highest expense per capita for all components.

Figure 4 Public hospital expenses per capita by age, 2022–23



Source: Commission calculation using IHACPA national weighted activity unit data and ABS unpublished GFS expenses and population data.

Box 1 Calculating socio-demographic composition assessed expenses

The following calculation is undertaken for the 3 hospital components as well as the community and public health component.

The socio-demographic composition (SDC) assessed expenses for each state are derived by:

- allocating total national expenses for each component to each of the socio-demographic groups in Table 5 based on the distribution of NWAU
  - i.e. SDC expenses = total expenses * (SDC NWAU / total NWAU)
- dividing the expenses attributable to each socio-demographic group by the national population in that group to obtain expenses per person for each socio-demographic group
  - i.e. SDC expenses per person = SDC expenses / SDC population
- multiplying the national average expense per person for each socio-demographic group by the number of people in that group in each state
  - i.e. assessed spending per SDC group = SDC expenses per person * state population in SDC group
- summing assessed spending for all socio-demographic groups to give total assessed expenses for each state.

See Table 7 for a sample of this calculation.

Table 7 Sample matrix illustrating the socio-demographic composition assessed expenses calculation

Indigenous status	Remoteness x SES	Age	SDC NWAU	SDC expenses	SDC population	SDC expenses per person		No. of persons (NSW)		Assessed spending (NSW)
			'000	$m	no.	$pc		no.		$'000
Non-Indigenous	Major cities 1. Low SES 20%	0-14	100	847	581,919	1,455		226,933		330,170
Non-Indigenous	Major cities 1. Low SES 20%	15-44	245	2,083	1,358,206	1,534		532,294		816,454
Non-Indigenous	Major cities 1. Low SES 20%	45-64	247	2,101	734,800	2,859		294,106		840,894
Non-Indigenous	Major cities 1. Low SES 20%	65-74	165	1,401	293,274	4,777		114,951		549,158
Non-Indigenous	Major cities 1. Low SES 20%	75+	228	1,935	265,883	7,278	*	102,993	=	749,547
Non-Indigenous	Major cities 2. Middle SES 60%	0-14	235	1,991	1,928,787	1,032		531,601		548,848
Non-Indigenous	Major cities 2. Middle SES 60%	15-44	635	5,391	4,618,719	1,167		1,310,742		1,529,927
Non-Indigenous	Major cities 2. Middle SES 60%	45-64	580	4,922	2,472,166	1,991		694,169		1,382,199
Non-Indigenous	Major cities 2. Middle SES 60%	65-74	386	3,279	894,988	3,663		253,438		928,393
Non-Indigenous	Major cities 2. Middle SES 60%	75+	604	5,128	733,228	6,994		210,937		1,475,302
Non-Indigenous	Major cities 3. High SES 20%	0-14	71	601	801,906	749		319,311		239,201
Non-Indigenous	Major cities 3. High SES 20%	15-44	190	1,614	1,729,472	933		673,123		628,137
Non-Indigenous	Major cities 3. High SES 20%	45-64	168	1,424	1,134,181	1,256		433,776		544,785
Non-Indigenous	Major cities 3. High SES 20%	65-74	116	989	381,045	2,594		144,585		375,089
Non-Indigenous	Major cities 3. High SES 20%	75+	211	1,791	270,843	6,613		108,237		715,803

Non-state sector health services assessment

26 State governments are not the sole providers and funders of health services. Health services are also provided by private and community organisations and funded from private sources and/or the Commonwealth. The health assessment recognises the influence of non-state health services on state health expense needs in 2 ways.

- The socio-demographic composition assessment recognises that the level of state services at the national level for socio-demographic groups may vary due to the provision of non-state sector services. For example, the level of state services is higher in remote areas in part due to lower levels of non-state sector services in these areas.
- The non-state sector adjustment recognises that the different levels of private health services in each state affects the need for state health spending.

27 The non-state sector adjustment is the difference between the value of non-state services states are assessed to need to achieve the national average level of provision, given their socio-demographic profile, and the actual provision of substitutable non-state sector services.

28 The calculation of the non-state sector adjustment requires estimates of:

- the proportion of state spending on health services for which 'substitutable services' exist in the non-state sector
  - For a health service to be considered 'substitutable' it needs to be 'comparable' with a service provided by the non-state sector and potentially used by patients instead of the equivalent service in the state sector.
- an indicator of non-state sector activity.

Levels of non-state sector substitutability

Admitted patients

29 The admitted patient substitutability level is determined using the average result from 2 methods.

Method 1

30 The level of substitutability between state and non-state admitted patient services is influenced by similar activity in the state and non-state sectors (comparable services), and the proportion of the population with private hospital health insurance or prepared to pay for their own hospital expenses (self-funded patients).

- The average estimated share of comparable services (the proportion of admitted patient services that are also provided in the non-state sector) is 54%.
- The proportion of the population with private health insurance hospital coverage is around 45%, while patients who self-insure constitute about 4%. In total around 49% of people can potentially afford to use private admitted patient services.

31 This suggests an average potential substitutability level of 26% (54% * 49%). This range would be an upper bound, as patients do not always choose to utilise their private health insurance due to policy excesses and gap payments (Table 8).

Method 2

32 An alternative approach is to limit the concept of substitutability to private patients treated in public hospitals. Between 2018–19 to 2021–22, around 12% of public hospital separations were privately funded, representing around 8% of public hospital funding. This would be a lower bound for the admitted patient non-state sector substitutability level. Activity in private hospitals would relieve some pressure on public hospitals even though the extent of such relief is uncertain.

33 Considering the upper bound of 26% and the lower bound of 8%, the substitutability level is set at the midpoint, 17% (Table 8). This level will be maintained for the 2025 Review.

Table 8 Admitted patients substitutability level

	2020-21	2021-22	2022-23	Average
	%	%	%	%
Method 1				
Public hospital services with similar non-state sector services	53	53	55	54
Share of population				
With private health insurance (PHI)	44	45	45	
Self-funded	4	4	4	
Total	48	49	49	
Method 1 substitutability range	**26**	**26**	**27**	**26**
	2019-20	2020-21	2021-22	
Method 2				
Share of privately funded public hospital separations (cost)	8	8	7	
Method 2 substitutability level				**8**
AP substitutability level				**17**

Source: Commission calculation using AIHW and APRA data.

Emergency departments

34 Similar to admitted patients, the non-state sector can provide some emergency type services. For example, General Practitioner (GP) clinics can treat many of the less severe emergency department presentations.

35 The AIHW has developed a measure of the use of emergency departments for lower urgency care. The most recent data (Table 9) show that, on average, 35% of emergency department presentations may be characterised as lower urgency presentations.[6]

36 The AIHW data on lower urgency presentations are translated into the equivalent proportion of GP type presentations.[7] Based on the Australasian College for Emergency Medicine (ACEM) concept, GP-type presentations were estimated at Australian Institute of Health and Welfare (AIHW), 50% of lower urgency presentations in major cities and 60% in other remoteness regions. On average about a fifth (19%) of all emergency department presentations are GP-type services (i.e comparable services) (Table 9).

Table 9 Proportion of GP treatable emergency department presentations, 2021–22

	No. of ED presentations		% total presentations	
	Total	Lower urgency presentations	Lower urgency presentations	GP-treatable presentations
	000	000	%	%
Major cities	5,525	1,861	34	17
Inner regional	1,940	733	38	23
Outer regional	913	276	30	18
Remote/very remote	298	177	59	36
Total	**8,676**	**3,048**	**35**	**19**

Note: GP-treatable presentations were estimated at 50% of lower urgency presentations in major cities and 60% in other remoteness regions.

Source: Commission calculation using AIHW data.

37 Independent Health and Aged Care Pricing Authority data for 2021–22 show that emergency department triage 4 and 5 (semi-urgent or non-urgent presentations) make up 46% of total emergency department presentations, but only account for 33% of the costs, resulting in a cost to activity ratio of 0.33/0.46=0.72. Applying this to the activity level of 19%, the proportion of emergency department spending on GP-type presentations is 14% for 2021–22 (Table 10).

[6] The method developed by the AIHW defines low urgency presentations to an emergency department as any self-referred, non-ambulance, police or community service presentation classified as triage 4 and 5 (less urgent). The AIHW data notes indicate that care should be taken when using the data to identify 'avoidable GP-type' or 'GP-style' presentations because it is based on urgency (triage) categories which may not reflect the various factors that influence the use of EDs such as the complexity of a presentation, the patient's choice or condition, the most appropriate model of care for such presentations, or the accessibility and availability of primary and community health services.

[7] The method developed by the Australasian College for Emergency Medicine defined a GP-type presentation at an emergency department to be any self-referred, non-ambulance patient with a medical consultation time less than one hour.

38 From 2018–19 to 2021–22 the method produces an average value of 13%. The substitutability level is set at 13% and this level will be maintained for the 2025 Review.

Table 10 Emergency departments substitutability level

	2018-19	2020-21	2021-22	Average
	%	%	%	%
Proportion of GP-type presentations (activity)	19	20	19	
Ratio of cost to activity	66	67	72	
Proportion of GP-type presentations (cost)	13	13	14	
ED substitutability level				**13**

Note: Data on low urgency ED presentations from AIHW were not available for 2019–20.

Source: Commission calculation using AIHW data and IHACPA unpublished data on the proportion of ED triage 4 and 5 NWAU (presentations) to total NWAU (presentations).

Non-admitted patients

39 State provided non-admitted patient services include a wide range of pre-hospital, post-hospital and clinical treatments. The majority of these services are also provided by the non-state sector, so potential substitutability is high. However, actual substitutability is lower because the demand for many state-provided non-admitted patient services that are directly linked to a previous public hospital admission would be less likely to be affected by the availability of similar services provided by the non-state sector – that is, patients are likely to use the public non-admitted patient service if they have already received a related admitted patient service in a public hospital.

40 The non-admitted patient substitutability level is determined using the average result from 2 methods.

Method 1: comparable state services

41 The first method estimates 'comparable' services based on similar services undertaken in public hospitals and the non-state sector. It involves the following steps.

Step 1. Identify and assess the level of substitutability for each group of services considering the range of services provided by the state and non-state sectors. The level of substitutability varies for each group of services.

- Procedure clinics, where surgeons or other medical specialists are the main service providers. Some private surgeons and medical specialists offer bulk billed services, so there is a non-state sector alternative. The relevant Medical Benefits Scheme services are operations and assistance at operations. The bulk billing rate for these services out of hospital is 64% and the average out-of-pocket cost is about $101 per service.
- Medical consultation clinics, where general physicians or medical specialists are the main service providers. Some private specialists offer bulk billed services, so there is a potential non-state sector alternative. The relevant Medical Benefits Scheme (MBS) services are specialist attendances. The bulk billing rate for these services out of hospital is 43% and the average out-of-pocket cost is about $97 per service.

- Diagnostic clinics, which states advise are generally bundled with the requesting specialist. In the calculation that follows, diagnostic services are bundled with medical consultation clinics.
- Allied health clinics, where allied health professionals or clinical nurse specialists are the main service providers. Although all state-provided allied health services are also available in the private sector, most are linked to an earlier admitted patient episode. In addition, only a very limited number of patients who meet specific eligibility requirements (for example, those with a chronic medical condition or with an assessed mental disorder) are eligible for Medicare allied health items. State provided allied health services are generally not substitutable.

Step 2. Estimate the expense weight or share of expenses for each group of services. This is calculated based on each group's share of activity weighted by average expenses.

Step 3. Combine substitutability (from step 1) and expense weights (from step 2) for each group of services and sum the expenditure-weighted substitutability to obtain an estimate of the proportion of state services affected by the availability of comparable non-state services.

Step 4. Take account of the connection between the use of state non-admitted patient services and prior treatment as an admitted patient.

- Step 4 uses state data on the share of non-admitted patient referrals from prior admitted patient episodes. Data provided by 6 states indicate that, on average, 43% of state provided non-admitted patient services were related to a prior hospital admission. This implies that 57% (100% - 43%) of state services could be substitutable. When applied to the proportion of comparable services (64%), this yields a substitutability level of 37% (see Table 11).

Table 11 Non-admitted patients substitutability based on comparable services

Group of services	Share of activity	Average expenditure per service	Share of expenditure	Substitutable service available (a)	NAP substitutability method 1
	%	$	%		%
Procedure clinics	12	507	18	Yes	18
Consultation clinics (b)	38	435	47	Yes	47
Allied health clinics	50	254	36	No	0
Comparable services (%)					**64**
Proportion of NAP episodes related to prior AP episodes					**43**
Substitutability (c)					**37**

(a) Although all state-provided allied health services are also available in the private sector, most are linked to an earlier admitted patient episode. In addition, only a very limited number of patients who meet specific eligibility requirements (for example, those with a chronic medical condition or with an assessed mental disorder) are eligible for Medicare allied health items. State-provided allied health services are generally not substitutable.

(b) Diagnostic services were grouped together with consultation clinics.

(c) Substitutability level using method 1 = % comparable services * (1-% of non-admitted patient episodes related to prior admitted patient episodes).

Source: Commission calculation using AIHW and IHACPA data.

Method 2: affordable services

42 The second method takes account of the out-of-pocket costs for services provided in the non-state sector. Data on bulk billed non-state services (private operations and specialist services) that are similar to state-provided services are used to estimate the amount of non-state services that are likely to be affordable and therefore potentially substitutable. The average substitutability level using this method is 20% (Table 12).

Table 12 Non-admitted patients substitutability based on affordable services

Group of services	Share of activity	Average expenditure per service	Share of expenditure	Substitutable service available (a)	NAP substitutability method 2
	%	$	%	%	%
Procedure clinics	12	507	18	22	4
Consultation clinics	38	435	47	34	16
Allied health clinics	50	254	36	0	0
Total					**20**

Note: The proportions of private operations, specialist services and allied health services that are bulk billed are used as proxy for the availability of substitutable services.

Source: Commission calculation using AIHW and IHACPA data.

43 The midpoint of the results from the first and second methods is 28%. The substitutability level is set at 28% and this will be maintained for the 2025 Review.

Indicators of non-state sector activity

44 Each component uses different indicators to measure non-state service use. The data are disaggregated by age, Indigenous status, remoteness and socio-economic status using the socio-demographic groups shown in Table 5.

45 The indicator of non-state sector admitted patient activity is *private patient separations for private health insurance-funded admitted patients in private and public hospitals*. The data are sourced from the AIHW (for the calculation of assessed service need) and the Australian Prudential Regulation Authority (for the estimation of actual service provision).

46 The indicator of non-state sector emergency department activity is *Medicare bulk billed benefits paid from non-referred attendances* (i.e. GP services).

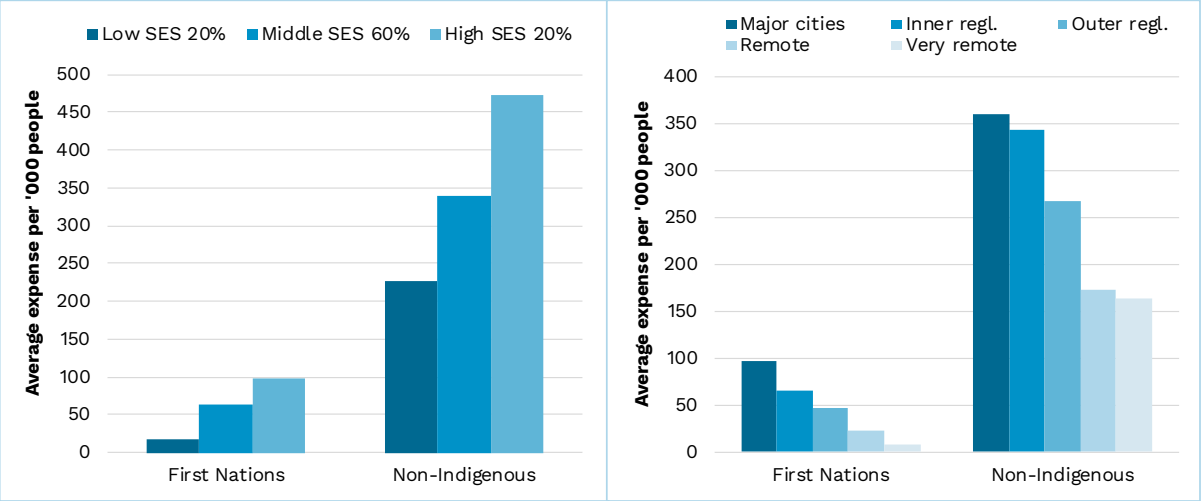
47 The indicator of non-state sector non-admitted patient activity is *Medicare bulk billed benefits paid from specialist attendances and operations.*

48 The Medicare data are mainly provided by Services Australia, with a subset of the data disaggregated by Indigenous status sourced from the AIHW. The Commission applies an iterative process to generate benefits paid cross-classified by age, Indigenous status, remoteness and socio-economic status.

49 The socio-demographic use profile for admitted patient non-state health services differs to the profile for state services. Figure 5 shows that spending per capita is higher for non-Indigenous people, increases with higher socio-economic status, is

highest for major cities and declines with increasing remoteness. The socio-demographic use profile for other non-state sector services (Medicare bulk billed non-referred services and specialists and operations) is similar to the use profile in public hospitals.

Figure 5 **Admitted patient non-state sector activity: average expense per '000 people, by Indigenous status, socio-economic status and remoteness, 2021-22**



Source: AIHW unpublished data on private health insurance funded admitted patient separations in public and private hospitals, and ABS unpublished GFS expenses and population data.

50 Table 13 summarises the substitutability levels and indicators to measure non-state services for each component of the health assessment. An explanation for the community and public health substitutability level is provided below (from paragraph 67).

Table 13 **Substitutability levels and indicators**

	Substitutability level	Indicator
Admitted patients	17%	Private patient separations
Emergency departments	13%	Bulk billed GP benefits paid
Non-admitted patients	28%	Bulk billed operations and specialist benefits paid
Community and public health	62%	Bulk billed GP benefits paid

51 A low-level discount (12.5%) is applied to the non-state sector adjustment for all components (including community and public health) due to uncertainty with the reliability of the data and the robustness of the method.

52 The non-state sector adjustment for each component is calculated following the approach outlined in Box 2.

Box 2 Calculating the non-state sector adjustments

The following calculation is undertaken for admitted patients, emergency departments and non-admitted patients, as well as community and public health.

Step 1: Calculate *national substitutable expenses* by multiplying the substitutability level by national component expenses.

Step 2: Calculate *assessed substitutable expenses* using the same process used to calculate state sector socio-demographic assessed expenses (Box 1) as explained below:

- Allocate *national substitutable activity* for each component to each of the socio-demographic groups based on the socio-demographic distribution of non-state sector activity.
- Divide national substitutable activity attributable to each socio-demographic group by the national population in that group.
- Multiply national average substitutable activity per capita for each socio-demographic group by the number of people in that socio-demographic group in each state.
- Summing *assessed substitutable activity* for all population groups gives total assessed substitutable activity for each state.
- *Assessed substitutable activity* for each state are scaled so the national total equals *national substitutable expenses* (this is *assessed substitutable expenses*).

Step 3: *Actual substitutable expenses* are calculated by taking *actual substitutable activity* for each state and scaling so the national total equals *national substitutable expenses*.

Step 4: The non-state sector adjustment is calculated by taking the difference between assessed and actual substitutable expenses.

Applying wage costs

53 Wages costs are a significant share of the total cost of providing health services. Differences in wage costs between states have a differential effect on the cost of providing hospital services. The health assessment uses the Commission's general method for measuring the influence of wage costs. Details on how this is calculated are in the wage costs chapter of the *Commission's Assessment Methodology*.

Community and public health services component

54 This component includes a broad range of community and public health services.

55 The assessment is made up of 2 sub-components.

- Ambulatory community mental health services, which represent around a fifth of component expenses.
- Other community health services (such as public dental and alcohol and other drug service) and public health services (such as cancer screening, organised immunisation, health promotion, communicable disease control and environmental health). These services represent the balance of component expenses.

Socio-demographic composition assessment

Drivers

56 As with hospital services, the community and public health assessment recognises that the use and cost of health services in each state is affected by the socio-demographic composition of the population with respect to Indigenous status, socio-economic status, remoteness and age.

Measuring activity for ambulatory community mental health services

57 Activity is measured using AIHW data on the number of service contacts in state funded and operated ambulatory (or non-residential) community mental health programs.

58 The activity data are not cost weighted so regional cost adjustments, based on the general regional cost gradient, and health-related service delivery scale adjustments are applied (Table 14).

59 The socio-demographic assessed expenses for ambulatory community mental health services are calculated using the same approach used for the public hospital components.

Table 14 Regional cost and service delivery scale adjustments applied to ambulatory mental health service contacts

	2019-20	2020-21	2021-22	2022-23
General regional cost gradient				
Major cities	1.00	1.00	1.00	1.00
Inner regional	1.01	1.01	1.01	1.01
Outer regional	1.03	1.03	1.03	1.03
Remote	1.18	1.17	1.18	1.18
Very remote	1.23	1.24	1.26	1.27
Service delivery scale [(a)]				
Major cities	1.00	1.00	1.00	1.00
Inner regional	1.04	1.04	1.04	1.04
Outer regional	1.12	1.14	1.11	1.11
Remote	1.15	1.15	1.14	1.14
Very remote	1.27	1.33	1.29	1.29

(a) Calculated using the adjustments in Table 6 applied to emergency department triage 4 and 5 and selected non-admitted patient NWAU.

Source: Commission calculation using general regional cost gradient and IHACPA unpublished data on emergency department triage 4 and 5 and selected non-admitted patient NWAU.

Measuring activity for the balance of the component

60 Direct measures of activity are not available for other community health services or for public health services. Therefore, a proxy measure is used, based on a combination of emergency department activity and non-admitted patient activity.

61 The emergency department triage categories 4 and 5 represent lower urgency emergency department services that provide treatment for less severe injuries or minor illnesses. These are closer than other emergency department services to the types of primary health services provided in community health centres.

62 The types of non-admitted patient services similar to community health services and included in the proxy indicator are listed in Table 15.[8]

Table 15 Non-admitted services similar to community health services

Tier 2	Non-admitted patient service	Community and public health service
40.09	Physiotherapy	Allied health services
40.10	Sexual health	Sexual health services
40.13	Wound management	Community/home nursing services
40.23	Nutrition/dietetics	Allied health services
40.24	Orthotics	Allied health services
40.25	Podiatry	Allied health services
40.28	Midwifery and maternity	Family and child health services
40.29	Psychology	Community mental health services
40.30	Alcohol and other drugs	Alcohol and other drug services
40.31	Burns	Community/home nursing services
40.32	Continence	Continence services
40.35	Palliative care	Community/home nursing services
40.36	Geriatric evaluation and management	Community/home nursing services
40.37	Psychogeriatric	Community/home nursing services
40.38	Infectious diseases	Communicable disease control
40.51	Breast	Cancer screening (bundled with main service)
40.55	Paediatrics	Family and child health services
40.56	Falls prevention	Community/home nursing services
40.57	Cognition and memory	Community/home nursing services
40.58	Hospital avoidance programs	Chronic disease management
40.60	Pulmonary rehabilitation	Chronic disease management
40.63	COVID-19 response	Communicable disease control
40.64	Chronic pain management	Chronic disease management

Source: Commission decision based on the IHACPA Tier 2 Non-Admitted Services 2021-22, accessed 30 January 2025.

63 The NWAU for emergency department triage 4 and 5 and selected non-admitted patient services are summed to form the proxy indicator. Based on the share of activity in these services in 2022–23, the proxy is around 62% emergency department triage category 4 and 5 and 38% non-admitted patient services. This ratio will change each year as the proxy data are updated.

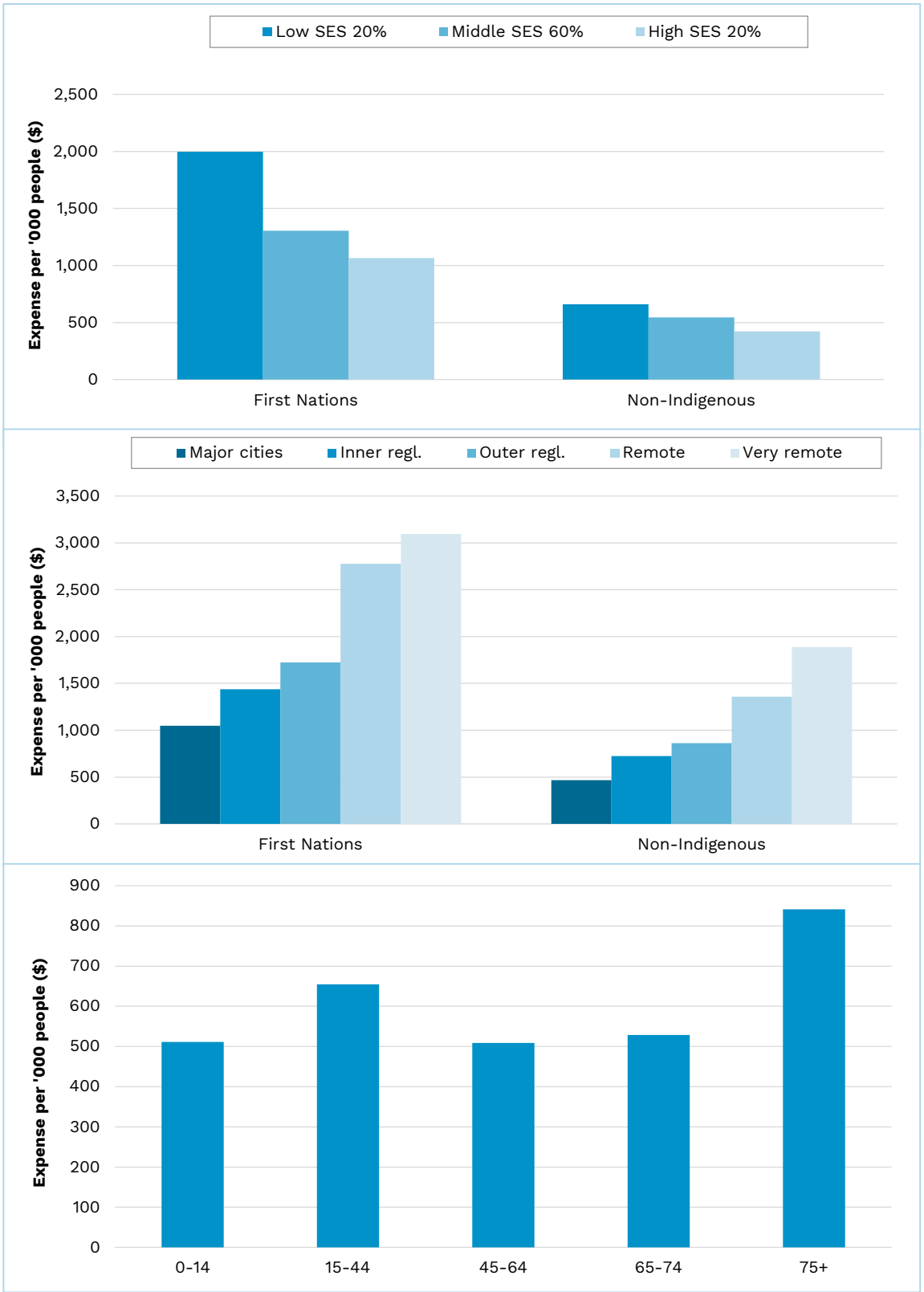
64 NWAU already incorporate adjustments for regional costs. Adjustments for service delivery scale (the same as those used in ambulatory community mental health) are applied to the national weighted activity units (Table 14).

65 The socio-demographic assessed expenses for the balance of community and public health services are calculated using the same approach as for the public hospital components. Since this calculation is based on proxy data, a low-level discount (12.5%) is applied.

[8] Activity in COVID-19 clinics will not be included in the proxy for the assessment of GST relativities for 2025–26 and 2026–27 on the assumption that these clinics are funded by the National Partnership on COVID-19 Response. Expenses under the national partnership are being assessed separately.

66 Figure 6 shows how spending on community and public health vary across the socio-demographic groups.

Figure 6 Community and public health expenses per capita by socio-demographic variables, 2022–23



Source: Commission calculation using AIHW unpublished ambulatory community health service contacts with regional cost and SDS adjustments; IHACPA unpublished national weighted activity unit data and ABS unpublished GFS expenses and population data.

Non-state sector health services assessment

67 A non-state sector adjustment is applied to assessed expenses to recognise that the availability of a GP and other non-referred services are likely to affect the level of state spending on community and public health services.

68 The calculation of the non-state sector adjustment for community and public health services is the same as for hospital services (Box 2).

Levels of non-state sector substitutability

69 The level of substitutability varies for individual community and public health services. If the state and non-state sectors provide similar services, and accessibility and out-of-pocket costs are comparable, the potential substitutability would be high. On the other hand, if state and non-state sectors provide different services, with different accessibility and/or costs, the potential substitutability would be lower.

70 The following substitutability ranges were established in the 2015 Review:

- Very high level of substitutability (81–100%)
  - Community health services provided in a community setting — baby clinics, home nursing services, community health centre programs, family planning, etc.
- High level of substitutability (61–80%)
  - Organised immunisation — states are responsible for coordinating and implementing the National Immunisation Program Schedule with vaccines mainly administered by the non-state sector.
- Medium level of substitutability (41–60%)
  - Cancer screening — these include population-based screening programs for breast, cervical and bowel cancer.
  - Alcohol and other drug services — these include assessment, counselling, withdrawal management and support and information and education.
- Low level of substitutability (21–40%)
  - Mental health — mental health services provided in a community setting
  - Public dental services.
- Very low level of substitutability (0–20%)
  - Other public health services — these include health promotion, communicable disease control, prevention of hazardous and harmful drug use, and health research and administration.

71 The overall substitutability level is estimated by taking the midpoint of the substitutability ranges and multiplying it by the share of expenses for each sub-component.

72 This produces an estimate of 62% for the overall proportion of state expenses considered substitutable (Table 16). The substitutability level is set at 62% and this level will be maintained for the 2025 Review.

Table 16 Community and public health substitutability level

Group of services	Substitutability range	Share of expenses 2019-20	Expense weighted substitutability
	%	%	%
Community health services			
Public dental services	Low (21–40)	3	1
Alcohol and other drugs services	Medium (41–60)	3	2
Community mental health services	Low (21–40)	18	5
Other community health services	Very high (81–100)	55	50
Public health services			
Cancer screening	Medium (41–60)	3	1
Organised immunisation	High (61–80)	3	2
Selected health promotion	Very low (0–20)	4	0
Communicable disease control	Nil	6	0
Environmental health	Nil	1	0
Other public health services	Very low (0–20)	4	0
CH substitutability level			**62**

Note: The substitutability level was estimated using 2019–20 expenses as expenses for later years were heavily COVID affected.
Source: Commission calculation using AIHW unpublished expense data.

Indicator of non-state sector activity

73 The non-state sector indicator for community and public health is *Medicare bulk billed benefits paid from non-referred attendances* (i.e. GP services).

Cross-border adjustment

74 A cross-border adjustment is applied to community and public health services between the ACT and New South Wales. The net value of cross-border services provided by the ACT to New South Wales residents is estimated at 4% of the ACT's gross expenses on community and public health services, excluding expenses on community mental health.[9] This amount is added to the ACT's assessed expenses and removed from New South Wales'.

Applying wage costs

75 Wages costs are a significant share of the total cost of providing health services. Differences in wage costs between states have a differential effect on the cost of providing community and public health services. The health assessment uses the Commission's general method for measuring the influence of wage costs. Details on

[9] The Commission does not need to make a similar adjustment for cross-border hospital services. The National Health Funding Body monitors cross-border flows of hospital activity funded under the National Health Reform Agreement to ensure that states are compensated for the Commonwealth contribution when providing hospital services to residents of other states. Bilateral agreements between states facilitate reimbursement of the state contribution to cross border service use.

how this is calculated are in the wage costs chapter of the *Commission's Assessment Methodology*.

Non-hospital patient transport component

76 Patient transport expenses comprise:

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

77 Land ambulance expenses are included in the admitted patient component because the drivers that influence land ambulance expenses are similar to the drivers that influence hospital-based services.

78 Aero-medical services and subsidies for patient travel are provided disproportionately to people in remote and very remote regions, so these are assessed separately.

79 Government Finance Statistics data on patient transport do not distinguish between land ambulance, aero-medical ambulance and other patient transport expenses. Data provided by states for the 2025 Review showed that aero-medical and Patient Assisted Travel Scheme expenses represent 19% of state spending on patient transport. This proportion is used to apportion total patient transport expenses between the admitted patient component and the non-hospital patient transport component for the duration of the 2025 Review period.

Socio-demographic composition assessment

Drivers

Remoteness

80 Data provided by states for the 2025 Review shows that expenses on aero-medical and Patient Assisted Travel Scheme services are disproportionately incurred in assisting people in remote and very remote regions. The state data on expenses by remoteness area and ABS Census data on state population by remoteness area are used to produce a regional cost gradient. The gradient for the 2025 Review is shown in Table 17.

Table 17 Remoteness cost weights for the non-hospital patient transport component

	Cost weight
Non-remote	1
Remote	13
Very remote	37

Source: Commission calculation using state provided aero-medical and PATS expenses and ABS unpublished population data.

81 The regional cost gradient is applied to state populations in each remoteness area. The cost-weighted populations are used to apportion national expenses on non-hospital patient transport to produce state assessed expenses.

Applying wage costs

82 Wages costs are a significant share of the total cost of providing non-hospital patient transport services. Differences in wage costs between states have a differential effect on the cost of providing hospital services. The health assessment uses the Commission's general method for measuring the influence of wage costs. Details on how this is calculated are in the wage costs chapter of the *Commission's Assessment Methodology*.

COVID-19 component

83 State spending on COVID-19–related public hospital and public health services are assessed separately.

Expenses

84 The value of expenses in the COVID-19 component is determined by the amount of funding contributed by the Commonwealth and the states under the National Partnership on COVID-19 Response for public hospital and public health services.[10]

85 The reconciled value of the payments (rather than the estimates published in the Commonwealth of Australia's *Final Budget Outcome*) are used as these provide a more accurate reflection of state spending that align with activity data. This represents half of total expenses as states matched the Commonwealth contribution.

86 The National Partnership on COVID-19 Response ceased in 2022–23. The separate assessment of state spending under the national partnership will continue until the 2027 Update when the 2022–23 financial year drops out of the Commission's 3-year assessment period.

- The 2025 Review includes the 3 assessment years 2021–22 to 2023–24, and there will be a separate assessment of state spending on COVID-19 spending for 2021–22 and 2022–23.
- In the 2026 Update, there will be a separate assessment on COVID-19 spending only for 2022–23 because 2021–22 will drop out of the assessment period.
- For the 2027 Update, 2022–23, the last year for the National Partnership on COVID-19 Response, will drop out of the assessment period.

[10] The Commonwealth payment to maintain private hospital viability is treated as no impact and is not included in component expenses because these expenses are not related to a usual state responsibility for which needs are assessed.

Drivers

87 The usual drivers in the health assessment do not adequately reflect state expense needs for COVID-19–related hospital and public health services during the period in which the National Partnership on COVID-19 Response was in place.

88 COVID-19 component expenses (both Commonwealth and state funded) are assessed on an actual per capita basis. State responses to the COVID-19 pandemic are considered to largely reflect state circumstances rather than state-specific policy choices. The National Partnership on COVID-19 Response ensured state spending was broadly policy neutral.

GST distribution in the 2025 Review

89 Table 18 shows the GST impact of the assessment in the 2025 Review.

Table 18 GST impact of the health assessment, 2025–26

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total effect
	$m	$m	$m	$m	$m	$m	$m	$m	$m
Admitted patients	-170	-920	208	30	294	337	-204	425	1,294
Emergency departments	-112	-200	99	48	22	67	-28	103	340
Non-admitted patients	-219	-183	73	158	62	53	-15	71	417
Community and public health	-406	-520	218	234	89	158	18	210	927
Non-hospital patient transport	-56	-56	12	52	5	-1	-3	46	116
COVID health	308	412	-574	-31	-134	14	-14	20	753
Total ($m)	**-655**	**-1,467**	**35**	**491**	**338**	**628**	**-246**	**876**	**2,369**
Total ($pc)	**-76**	**-205**	**6**	**161**	**178**	**1,087**	**-510**	**3,406**	**85**

Note: Magnitude and direction of GST impact can change from year to year.

11. Housing

Overview

1 The housing assessment covers state and territory (state) recurrent spending on social housing services, housing assistance for people in private dwellings and grants to first home owners. The assessment also takes into account revenue states receive from public housing tenants.

2 The assessment has the following components:

- social housing expenses
- social housing revenue
- first home owner expenses.

3 The assessment excludes:

- homeless persons assistance, including emergency accommodation and women's shelters, which is assessed in the welfare category
- accommodation for state employees, such as teachers and police officers in remote areas, which is assessed in the schools and justice categories, respectively
- residential institutions mainly providing living quarters for people with special needs, such as the young or the disabled, which is assessed in the welfare category
- tax expenditures on concessional rates of conveyance duty for first home owners, which are assessed in the stamp duty on conveyances category.

4 The assessment recognises that housing expense needs are influenced by the following.

- First Nations households — states with above-average shares of First Nations households have higher spending needs.
- Socio-economic status — states with more low socio-economic status households have higher spending needs.
- Remoteness — states with more households living in more remote areas have higher spending needs.
- Crowding of dwellings and mobility of tenants — states with more people in overcrowded dwellings and dwellings where tenants are highly mobile have higher costs.
- Wage costs — states facing greater wage cost pressures have higher spending needs.

Actual state expenses

5 The first step in calculating assessed expenses is identifying actual state expenses on housing services.[1] States collectively spent 0.9% of their total recurrent expenses on housing in 2022–23. Table 1 shows expenses broken down by component and Table 2 outlines actual expenses by state in 2022–23.[2]

Table 1 Housing expenses by component, 2022–23

	2022-23	
	$pc	**$m**
Social housing	199	5,236
Social housing user charges	-103	-2,715
First home owner expenses	12	311
Total	**108**	**2,832**
Proportion of total expenses (%)		**0.9**

Table 2 Housing expenses by state, 2022–23

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Housing ($m)	570	616	651	496	64	134	65	237	2,832
Housing ($pc)	69	92	121	175	35	233	141	942	108
Proportion of total expenses (%)	**0.6**	**0.8**	**1.1**	**1.5**	**0.3**	**1.9**	**1.0**	**3.9**	**0.9**

Structure of assessment

6 Table 3 outlines the drivers that influence expenses and revenue raising capacity in each component.

Table 3 Structure of the housing assessment

Component	Driver	Influence measured by driver
Social housing expenses	Socio-demographic composition	Indigenous status, socio-economic status and remoteness influence the use and cost of services.
	Regional costs	The cost of providing services increases as the level of the remoteness increases.
	Wage costs	Differences in wage costs between states affect costs.
Social housing revenue	Socio-demographic composition and capacity to raise revenue from rents	Indigenous status, socio-economic status and remoteness influence the rent paid by households.
First home owner expenses	Non-deliberative EPC	These expenses are not differentially assessed.

[1] Adjusted budget calculations use ABS Government Finance Statistics data to determine actual state expenses. For further details see the adjusted budget chapter of the *Commission's Assessment Methodology*.

[2] Tables in this chapters, unless otherwise stated, use 2022–23 data.

Data

7 The data used in the assessment are outlined in Table 4.

Table 4 Data used in the housing assessment

Source	Data	Updated	Component
ABS census	Count of households and individuals by landlord type and socio-demographic group	5-yearly	Social housing expenses
	Rents paid by landlord type and socio-demographic group	5-yearly	Social housing revenue
States	Social housing expenses	Annually	Social housing expenses
	Social housing expenses – mainstream and First Nations specific	5-yearly	Social housing expenses
	Social housing revenue	Annually	Social housing revenue
	First home owner grants	Annually	First home owner expenses
Productivity Commission Report on Government Services - Housing	Proportion of First Nations social households in First Nations-specific social housing	Annually	Investment (housing)

Note: Data for the wage costs adjustment are also included in this assessment.
The adjusted budget data sources are outlined in the adjusted budget chapter of the *Commission's Assessment Methodology*.

Assessment method

8 The assessment method recognises the higher costs for states with above-average shares of First Nations households, low socio-economic status households and/or households in more remote areas due to higher use of public housing services by these groups.

9 The assessment also accounts for the higher costs of providing social housing services as remoteness increases, the higher costs associated with overcrowded dwellings and dwellings where tenants are highly mobile, and differences in wage costs between states.

Social housing expenses component

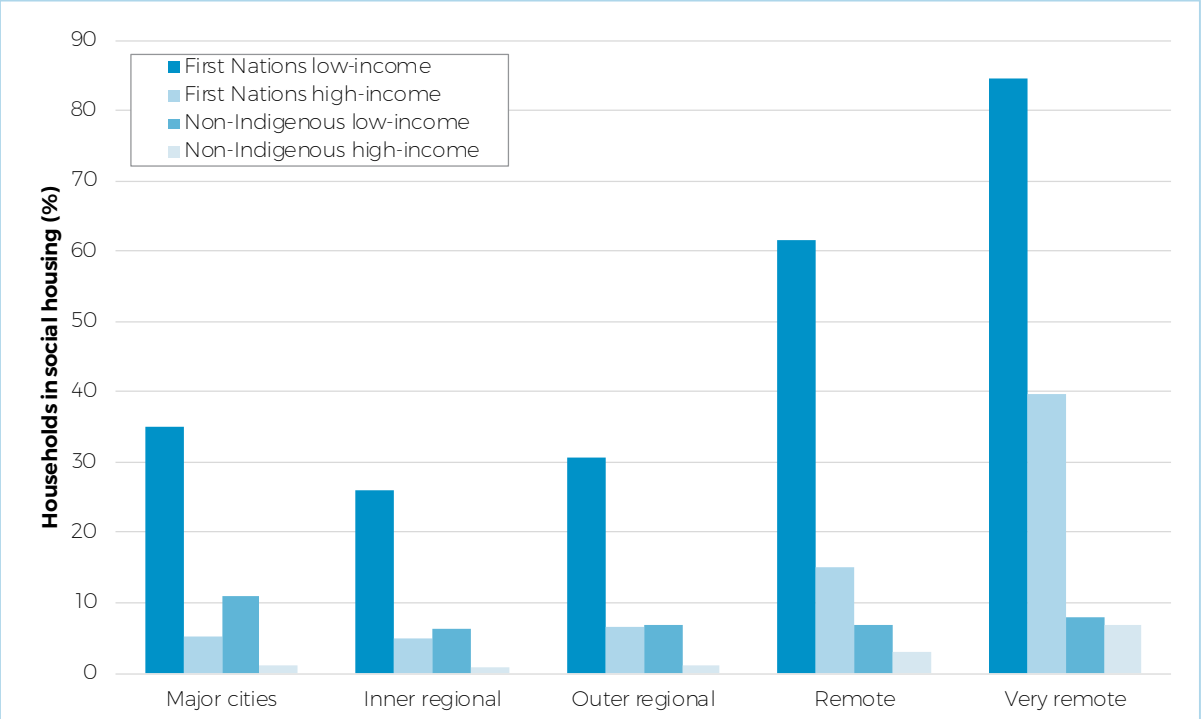
Drivers

Socio-demographic use rates

10 Differences in state shares of First Nations households, low socio-economic status households and households in more remote areas are the main determinant of expense needs for social housing. This is because these population groups rely on social housing more than the average for the overall population.

11 Figure 1 shows the proportion of households in social housing by Indigenous status, socio-economic status and remoteness, as reported in the 2021 Census.

Figure 1 **Proportion of households in social housing households by Indigenous status, socio-economic status and remoteness, 2021**



Source: ABS 2021 Census.

12 ABS census data are used to obtain the number of households in social housing and not in social housing, disaggregated by Indigenous status, income and remoteness area.[3]

13 The census count of households in social housing is adjusted by the ratio of the Australian Institute of Health and Welfare total social housing household count to the ABS census total social housing household count. This addresses concerns with the accuracy with which tenants categorise their landlord type in the census. A corresponding adjustment is made to non-social housing households to leave the total household count unchanged. This adjustment only affects the balance between social and non-social housing households.[4]

14 Census post enumeration survey adjustment factors are applied to census household numbers to account for differences in enumeration by Indigenous status and remoteness to obtain estimates of the total number of households in the census year (2021–22).

Applying the First Nations cost weight

15 The provision of social housing services to First Nations households has higher costs per household than for non-Indigenous households. The source of the higher costs in

[3] For the assessment of social housing expenses, low-income households are defined as those with an equivalised income of less than $649 per week. An equivalised income of less than $649 per week is similar to the average state income eligibility thresholds for access to public housing for a single person.

[4] This adjustment only affects housing investment needs.

First Nations social housing includes higher rates of overcrowding and higher rates of tenant mobility.

16 As at June 2023, 9.3% of all First Nations households in public housing were living in overcrowded dwellings while only 4.1% of all public housing households were living in overcrowded dwellings.[5] Similarly in community housing, 7.8% of all First Nations households lived in overcrowded dwellings compared with 4.0% of all households. Overcrowding increases wear and tear, which requires additional maintenance attendances. In addition, the high mobility of the remote First Nations population necessitates additional tenancy management services to ensure that users of social housing are known and are paying rents.

17 State data on the cost of providing public housing and State Owned and Managed Indigenous Housing is used to estimate a First Nations cost weight. A First Nations cost weight of 1.2 will be used for the 2025 Review.

18 The assessment takes account of these higher costs at the national level through the First Nations cost weight that is applied to First Nations people in all types of social housing. It is apportioned across states based on the number of First Nations households in each state. The number of households is calculated using the national average size of First Nations households, by socio-economic status and remoteness area.

Applying regional costs

19 Differences in tenancy management and maintenance costs as remoteness increases are recognised in the assessment of recurrent social housing expenses.

20 The Rawlinsons capital cost gradient and the general regional cost gradient are used to recognise the effects of regional costs on the cost of providing social housing services. Using these data, 2 separate regional cost gradients are derived: one for maintenance expenses and one for other social housing expenses.

- The regional cost gradient for maintenance expenses is based on the Rawlinsons capital cost gradient and the general regional cost gradient. Each has a 50% weight. The Rawlinsons state factors are derived by calculating the difference between the Rawlinsons weighted socio-demographic composition assessed expenses and the unweighted socio-demographic composition expenses.
- The regional cost gradient for other social housing expenses is based solely on the general regional cost gradient.[6]

21 Table 5 summarises the method for deriving the regional cost gradients for maintenance and other social housing expenses. For the recurrent assessment, 87.5% of the regional cost gradient reflects the general regional cost gradient and 12.5% reflects the Rawlinsons capital cost gradient.

[5] Australian Institute of Health and Welfare (AIHW), *Housing assistance in Australia*, 2024, accessed 5 September 2024.

[6] See the geography chapter of the *Commission's Assessment Methodology* for more information on the general regional cost gradient.

Table 5 Regional costs assessment for social housing assessments

Expense item	Expense weight	Regional costs indicator
Maintenance expenses	25%	Rawlinsons capital cost gradient (50%)
		General regional cost gradient (50%)
Other social housing expenses (a)	75%	General regional cost gradient

(a) Other social housing expenses include tenancy management.

Applying wage costs

22 Wages costs are a significant share of the total cost of providing social housing services. Differences in wage costs between states have a differential effect on the cost of providing social housing services. The housing assessment uses the Commission's general method for measuring the influence of wage costs. Details on how this is calculated are in the wage costs chapter of the *Commission's Assessment Methodology*.

Method

23 The key steps in the calculation of assessed expenses for social housing are as follows.

- Estimate for each assessment year, the number of households in social housing and not in social housing by scaling the adjusted household numbers in the census year to take account of population growth.
- Apply regional and First Nations cost weights to the adjusted household numbers to derive the number of cost-weighted social housing households by socio-demographic group.
  - This captures the additional service costs associated with providing social housing in more remote areas and to First Nations households that are highly mobile and living in overcrowded dwellings.
- Calculate national average spending per household.
  - Total social housing expenses for each assessment year, are apportioned among socio-demographic groups using the share of cost-weighted social housing households to give social housing expenses by socio-demographic group.
  - The expenses by socio-demographic group are divided by total actual households in each group to derive national average per household social housing expenses for each socio-demographic group for each assessment year.
- Determine state socio-demographic assessed expenses.
  - Total individuals by socio-demographic group are divided by total households by socio-demographic group to derive the national average household size of each group.
  - The number of individuals in each state by socio-demographic group is divided by the national average household size of each group to derive the number of households in each group in each state.
  - These steps are undertaken to recognise the different rates of overcrowding between states.

- The national per household, social housing expenses by socio-demographic group is multiplied by each state's number of household-size adjusted households in each group.
- These values are summed to derive each state's socio demographic assessed expenses.

- Apply wage costs and Rawlinson's capital cost gradient.

Social housing revenue component

Drivers

24 The social housing revenue component includes rents collected from households living in public housing. The assessment recognises the effects of remoteness, household income and Indigenous status on state capacities to raise revenue from rents. Specifically:

- rents paid decrease with remoteness
- households on higher incomes pay more rent than those on lower incomes
- First Nations households in some socio-demographic groups pay higher rents than non-Indigenous households.

25 Table 6 shows the average rent paid by social housing households by remoteness, socio-economic status and Indigenous status, as reported in the 2021 Census.

Table 6 Average rent paid by social housing households by remoteness, socio-economic status and Indigenous status, 2021

Remoteness	Socio-economic status	Indigenous status	Actual social housing households (No.)	Average weekly rent social housing households ($)
Major cities of Australia	Low-income	Indigenous	18,090	191
Major cities of Australia	Low-income	Non-Indigenous	170,002	168
Major cities of Australia	High-income	Indigenous	5,668	269
Major cities of Australia	High-income	Non-Indigenous	48,415	261
Inner regional Australia	Low-income	Indigenous	9,344	195
Inner regional Australia	Low-income	Non-Indigenous	34,109	169
Inner regional Australia	High-income	Indigenous	2,691	229
Inner regional Australia	High-income	Non-Indigenous	8,829	220
Outer regional Australia	Low-income	Indigenous	7,997	173
Outer regional Australia	Low-income	Non-Indigenous	15,900	152
Outer regional Australia	High-income	Indigenous	2,349	204
Outer regional Australia	High-income	Non-Indigenous	5,339	191
Remote Australia	Low-income	Indigenous	4,166	138
Remote Australia	Low-income	Non-Indigenous	1,394	135
Remote Australia	High-income	Indigenous	1,154	180
Remote Australia	High-income	Non-Indigenous	1,649	209
Very remote Australia	Low-income	Indigenous	9,340	106
Very remote Australia	Low-income	Non-Indigenous	507	126
Very remote Australia	High-income	Indigenous	2,264	148
Very remote Australia	High-income	Non-Indigenous	1,030	147

Source: ABS 2021 Census.

Method

26 The key steps in the calculation of assessed revenue for social housing are as follows.

- The number of social housing households by socio-demographic group is divided by the total number of social housing households to give the share of social housing households by socio-demographic group.
- Total revenue, for each assessment year, is apportioned among socio-demographic groups using the share of social housing households weighted by relative rent paid per group to give revenue by socio-demographic group.
- The revenue by socio-demographic group is divided by the total number of households in each group to calculate the national average per household rent paid by different types of households for each assessment year.
- The per household revenue by socio-demographic group is multiplied by each state's number of household size adjusted households in each group. These values are summed to give each state's assessed revenue.

First home owner expenses component

27 First home owner expenses are assessed on an equal per capita basis because no reliable policy neutral measure of first home owner expenses could be identified. This is a non-deliberative equal per capita assessment.

GST distribution in the 2025 Review

28 Table 7 shows the GST impact of the assessment in the 2025 Review.

Table 7 GST impact of the housing assessment, 2025–26

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total effect
	$m	$m	$m	$m	$m	$m	$m	$m	$m
Social housing	-118	-315	103	108	37	1	-45	229	478
Social housing user charges	3	72	-29	-14	-22	4	16	-31	95
First home owner expenses	0	0	0	0	0	0	0	0	0
Total ($m)	**-116**	**-242**	**74**	**94**	**15**	**5**	**-29**	**198**	**387**
Total ($pc)	**-13**	**-34**	**13**	**31**	**8**	**9**	**-60**	**772**	**14**

Note: Magnitude and direction of GST impact can change from year to year.

12. Welfare

Overview

1 The welfare assessment covers state and territory (state) recurrent spending on social protection, including services for families and children, low-income households, disability services and other programs to mitigate social exclusion. It has the following components:

- child protection and family services
- National Disability Insurance Scheme
- concessions
- homelessness services
- other welfare.

2 The assessment recognises that welfare expense needs are influenced by the following.

- First Nations people — states with above-average shares of First Nations people have higher spending needs.
- Age — states with above-average shares of children have higher spending needs.
- Remoteness — states with above-average shares of people living in remote areas have higher spending needs.
- Socio-economic status — states with above-average shares of people from low socio-economic backgrounds have higher spending needs.
- Number of concession card holders — states with above-average shares of concession card holders have higher spending needs.
- Population shares —for some services each states' expense needs are the same per person.
- Service delivery scale — states which provide services to small population centres have higher spending needs.
- Wage costs — states facing greater wage cost pressures have higher spending needs.

Actual state expenses

3 The first step in calculating assessed expenses is identifying actual state expenses on welfare services.[1] States collectively spent 8.5% of their total recurrent expenses on welfare services in 2022–23. Table 1 shows expenses broken down by component and Table 2 outlines actual expenses by state in 2022–23.[2]

Table 1 Welfare expenses by component, 2022–23

	2022-23	
	$pc	**$m**
Child protection and family services	335	8,816
NDIS	407	10,701
Concessions	95	2,486
Other welfare	114	2,990
Homelessness services	52	1,380
Total	**1,002**	**26,374**
Proportion of total expenses (%)		**8.5**

Table 2 Welfare expenses by state, 2022–23

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Welfare ($m)	7,645	6,352	5,622	3,040	2,223	668	379	445	26,374
Welfare ($pc)	927	946	1,044	1,072	1,211	1,167	821	1,772	1,002
Proportion of total expenses (%)	**7.7**	**8.1**	**9.6**	**8.9**	**11.9**	**9.4**	**5.9**	**7.3**	**8.5**

[1] The adjusted budget calculations use ABS Government Finance Statistics data to determine actual state expenses. For further detail see the adjusted budget chapter of the *Commission's Assessment Methodology*.

[2] Tables in this chapter, unless otherwise stated, use 2022–23 data.

Structure of assessment

4 Table 3 outlines the drivers that influence expenses in each component.

Table 3 Structure of the welfare assessment

Component	Driver	Influence measured by driver
Child protection and family services	Socio-demographic composition	Age, Indigenous status, remoteness and socio-economic status influence the use and cost of services.
	Regional costs	The cost of providing services increases as the level of remoteness increases.
	Service delivery scale	The lack of economies of scale when providing services to small populations affects costs.
	Wage costs	Differences in wage costs between states affect costs.
NDIS	Census state population	This driver reflects the method used to determine state contributions to the National Disability Insurance Agency to provide services through the NDIS.
Concessions	Socio-demographic composition	The number of Pension Concession Card, Health Care Card and Veterans' Benefit holders in each state affects costs.
Homelessness services	Socio-demographic composition	Age, Indigenous status, remoteness and socio-economic status influence the use and cost of services.
	Regional costs	The cost of providing services increases as the level of remoteness increases.
	Wage costs	Differences in wage costs between states affect costs.
	Cross-border costs	The ACT incurs additional costs in providing services to NSW residents.
Other welfare	Non-deliberative equal per capita	These expenses are not differentially assessed.
	Regional costs	The cost of providing services increases as the level of remoteness increases.
	Wage costs	Differences in wage costs between states affect costs.

Data

5 The data used in the assessment are outlined in Table 4.

Table 4 Data used in the welfare assessment

Source	Data	Updated	Component
Australian Institute of Health and Welfare (AIHW)	Number and characteristics of child protection substantiations	Annually	Child protection and family services
	Number and characteristics of users of specialist homelessness services	Annually	Homelessness services
ABS	Census population by state	5-yearly	NDIS
	Estimated resident population by state	Annually	Child protection and family services
			Other welfare
			Homelessness services
States	State spending on concessions	Annually	Concessions
Department of Social Services	Total state and in-kind contributions to the National Disability Insurance Scheme	Annually	NDIS
	Number of low-income and pensioner concession cardholders	Annually	Concessions
Department of Veterans' Affairs	Number of veterans concession cardholders	Annually	Concessions

Note: Data for the regional, service delivery scale and wage cost adjustments are also included in this assessment. The adjusted budget data sources are outlined in the adjusted budget chapter of the *Commission's Assessment Methodology*.

Assessment method

6 This section outlines the assessment method for each component.

Child protection and family services

7 The child protection and family services component has 2 sub-components:

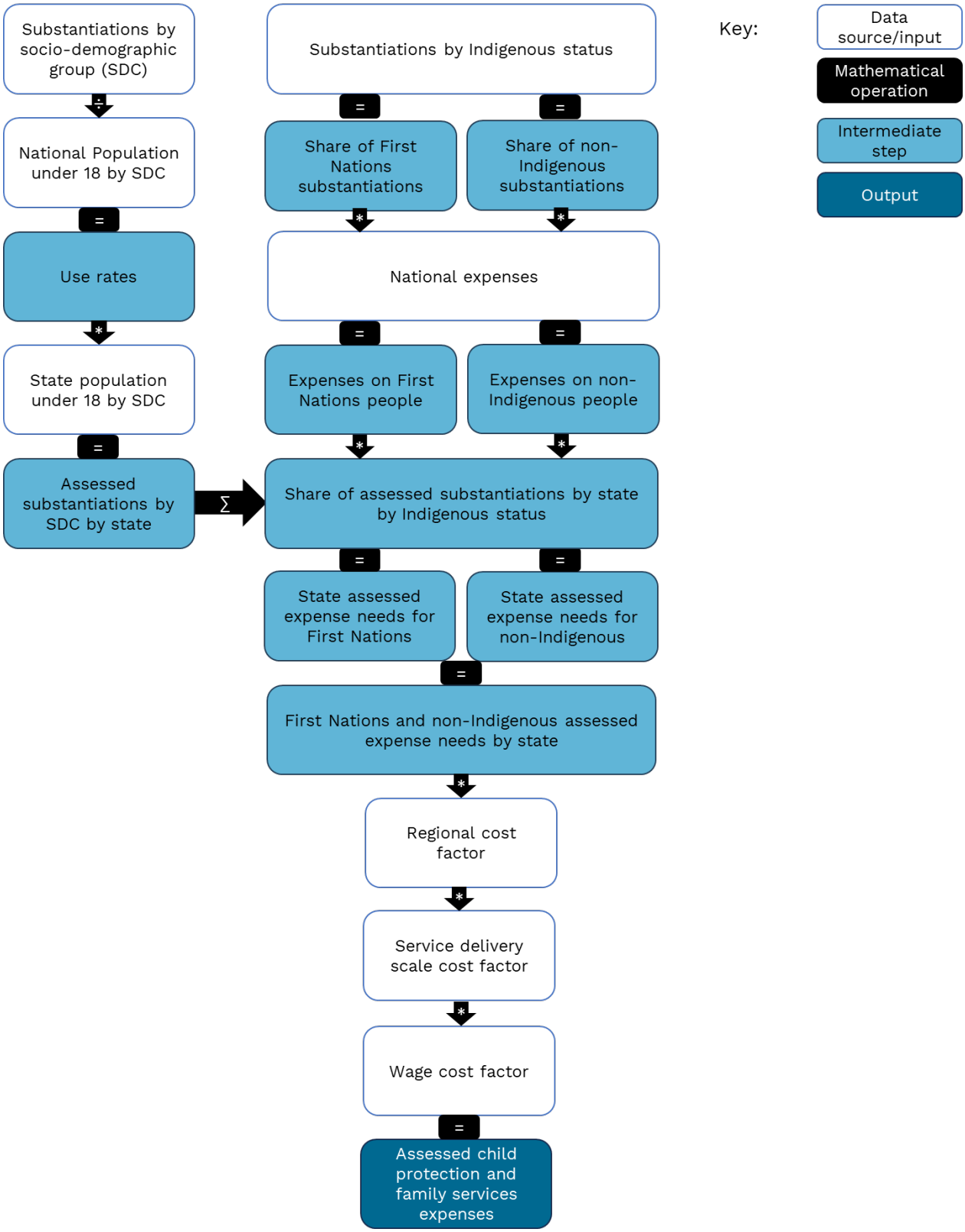
- child protection
- out of home care.

8 The key steps in the calculation of assessed expenses for each sub-component are as follows:

- derive sub-component expenses for child protection and out of home care services
- assess each sub-component using the same socio-demographic composition assessment
- aggregate assessed expenses for the 2 sub-components
- apply regional and service delivery scale costs
- apply wage costs.

9 Figure 1 shows each step of the child protection and family services assessment.

Figure 1 Child protection and family services assessment method



Sub-component expenses

10 The first step is to disaggregate total state child protection and family services expenses into spending on child protection and out of home care using data from the *Report on Government Services* because First Nations use of Out of Home Care services is materially different.[3,4]

11 State spending for child protection services and out of home care are further disaggregated by Indigenous status. This split is based on the share of total clients who identify as First Nations or non-Indigenous from data collected by the Australian Institute of Health and Welfare. Non-identifying clients are allocated according to the ratio of First Nations to non-Indigenous identifying clients.

12 Separate assessments are undertaken for spending on First Nations and non-Indigenous clients in each sub-component because the use of each type of service by First Nations people is materially different.

Child protection and out of home care socio-demographic assessment

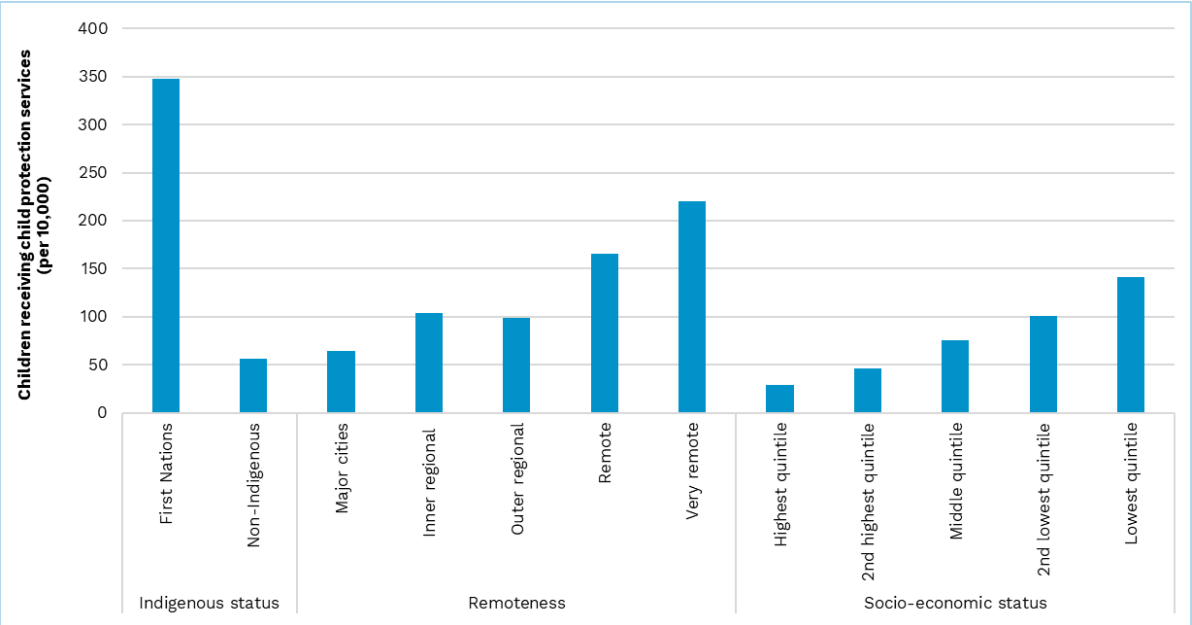
13 The socio-demographic assessments for child protection and out of home care services recognise that the socio-demographic composition of the population with respect to Indigenous status, socio-economic status and remoteness affect the use and cost of services in each state.

14 The assessed socio-demographic groups reflect population groups who enter the child protection system more frequently than other population groups. Children who identify as First Nations, live in remote areas or are from lower socio-economic status areas are more likely to enter the protection system compared to non-Indigenous children from major cities from higher socio-economic status areas (Figure 2).

[3] SCRGSP (Steering Committee for the Review of Government Service Provision), *Report on Government Services 2024*, Part F, Section 16: Child protection services, Productivity Commission, 2024, accessed 26 August 2024.

[4] In 2022–23, 34% of child protection substantiations were for First Nations children, while 44% of children in out of home care identified as First Nations despite comprising 7% of Australian children aged 0-17.

Figure 2 **Child (0–17) protection substantiations (per 10,000) by Indigenous status, socio-economic status and remoteness, 2022–23**



Source: Commission calculation based on AIHW (Australian Institute of Health and Welfare), *Data Tables: Child protection Australia 2022–23* [data set], AIHW, 2023, accessed 22 August 2024.

15 The child protection and out of home care socio-demographic assessments have the following steps:

- estimate the national average rate of substantiations by socio-demographic group
- estimate assessed substantiations for each state
- apportion national spending to states using the share of assessed substantiations in each state.

Estimate the national average rate of substantiations by socio-demographic group

16 To differentially assess states using their socio-demographic composition, the Commission estimates the national average substantiation rate for each population sub-group. The national average substantiation rate is used to reduce the influence of state policy choices by representing an average of state policies.

17 The substantiation rate calculation uses Australian Institute of Health and Welfare data on child protection substantiations for clients aged 0–17 years and the estimated resident population aged 0–17 years, cross-classified by the identified socio-demographic characteristics.

Estimate assessed substantiations by socio-demographic group by state

18 Assessed substantiations are calculated by multiplying the national average substantiation rate for each socio-demographic group by the corresponding population in each state.

Apportion state spending using assessed substantiations by state

19 Each state's share of total state child protection or out of home care expenses is equal to its share of assessed child protection substantiations by Indigenous status.

20 The assessed expenses for each state for child protection and out of home care services are subsequently aggregated for a component total before applying the regional cost, service delivery scale and wage cost adjustments.[5]

Applying the regional costs adjustment

21 The regional costs adjustment accounts for the additional costs states face in providing services in remote locations. The child protection component uses the general regional cost gradient because of a lack of suitable data to estimate a component-specific measure of these costs. Further details on the general cost gradient are in the geography chapter of the *Commission's Assessment Methodology*.

Applying the service delivery scale costs adjustment

22 The child protection and family services component also includes a service delivery scale adjustment. Service delivery scale estimates the additional costs to states from a lack of economies of scale when providing services in remote and very remote Australia. It reflects that the average cost per client increases when providing services to small populations. For example, the cost of group homes per child is likely to be higher when there are fewer children requiring assistance. Further details on service delivery scale costs are in the geography chapter of the *Commission's Assessment Methodology*.

Applying the wage costs adjustment

23 Wage costs are a significant share of the total cost of providing child protection and family services. Differences in wage costs between states have a differential effect on the cost of providing welfare services. The child protection and family services assessment uses the Commission's general method for measuring the influence of wage costs. Further details on the wage costs adjustment are in the wage costs chapter of the *Commission's Assessment Methodology*.

National Disability Insurance Scheme (NDIS)

24 States provide funding to the National Disability Insurance Agency (NDIA) to facilitate the National Disability Insurance Scheme (NDIS).

25 State NDIS contributions are agreed in advance and set out in Commonwealth-state intergovernmental agreements.[6] The contribution of a state to the NDIS is based on each state's share of the national population at the most recent census, currently the 2021 Census. The assessment uses these shares to assess state NDIS spending. Each state's share of total state NDIS contributions is fixed between censuses.

[5] Out of home care is assessed using child protection substantiations, because of confidentiality concerns with disaggregating the number of children in out of home care.

[6] Commonwealth-State NDIS intergovernmental agreements are published at: National Disability Insurance Agency (NDIA), *Intergovernmental agreements*, NDIA website, 2022, accessed 26 August 2024.

Concessions

26 State concessions for pensioners and low-income households include concessions for:

- electricity and other energy
- water and wastewater
- council rates.

27 Total state spending on concessions is assessed using each state's share of eligible concession card holders (low-income health card, pension cards, and veterans' benefits). Each card type is treated identically.

28 Data on the number of concession card holders is collected from the relevant Commonwealth agency. Low-income health and pension cards are collected from Services Australia and veterans' benefit cards are collected from the Department of Veterans' Affairs.

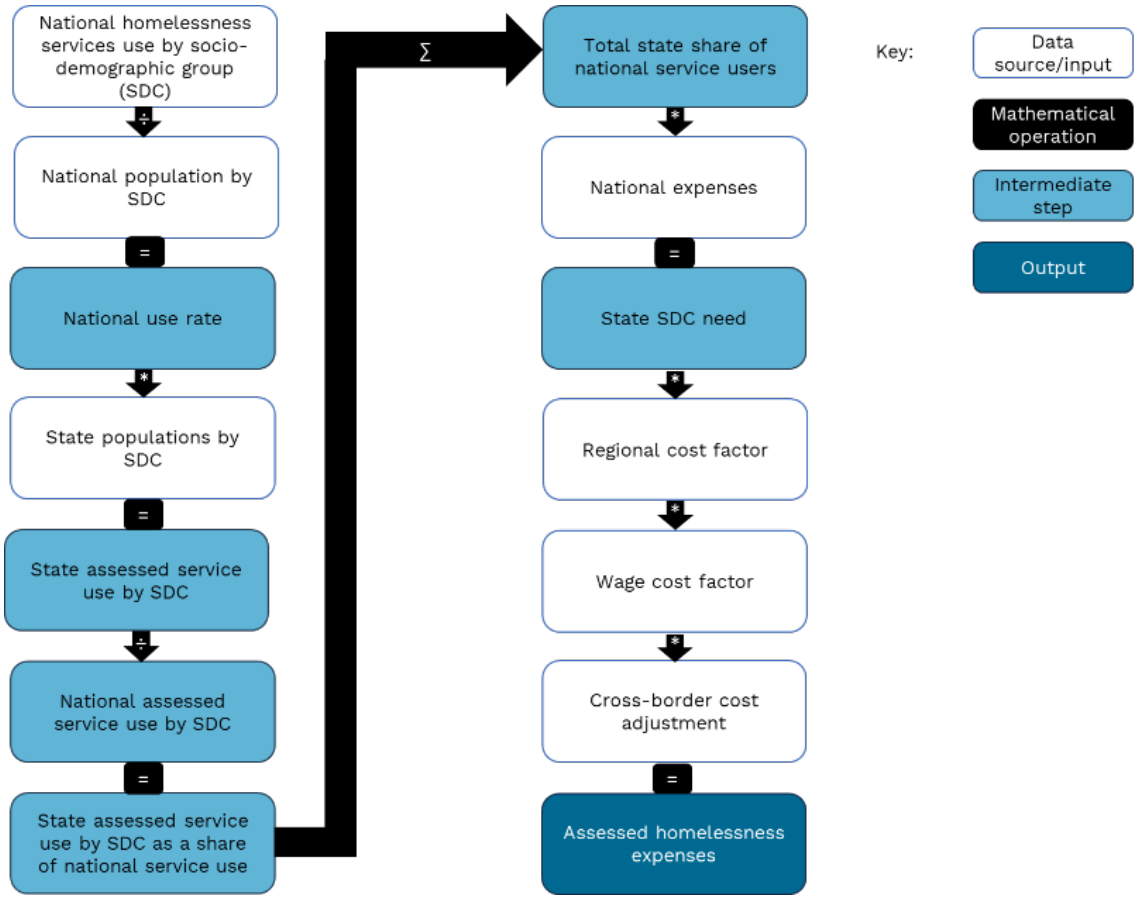
Homelessness services

29 The homelessness services assessment has the following steps:

- estimate state homelessness services spending
- assess state spending using a socio-demographic composition assessment
- apply regional costs
- apply wage costs.

30 Figure 3 shows each step of the homelessness services assessment.

Figure 3 Homelessness services assessment method



Estimating state homelessness services spending

31 State spending on homelessness services is not identified in the ABS Government Finance Statistics and therefore this information is collected from the states. States report homelessness services expenses to the Commission cross-classified by the classification of the functions of government – Australia (COFOG-A) as defined in the ABS Government Finance Statistics framework.

32 Where states report spending in a category other than welfare, such as housing, the Commission reclassifies the relevant expenses into the welfare category. If a state is unable to provide homelessness services expenses by COFOG-A, the Commission uses annual homelessness spending from the *Report on Government Services* and uses a weighted average of state reported spending by category to make an adjustment.[7] For example, a 6-state average may indicate that 10% of state homelessness services spending is in the housing category. For states which do not provide COFOG-A classified data, it is assumed that 10% of reported homelessness services spending from the *Report on Government Services* is classified in housing.

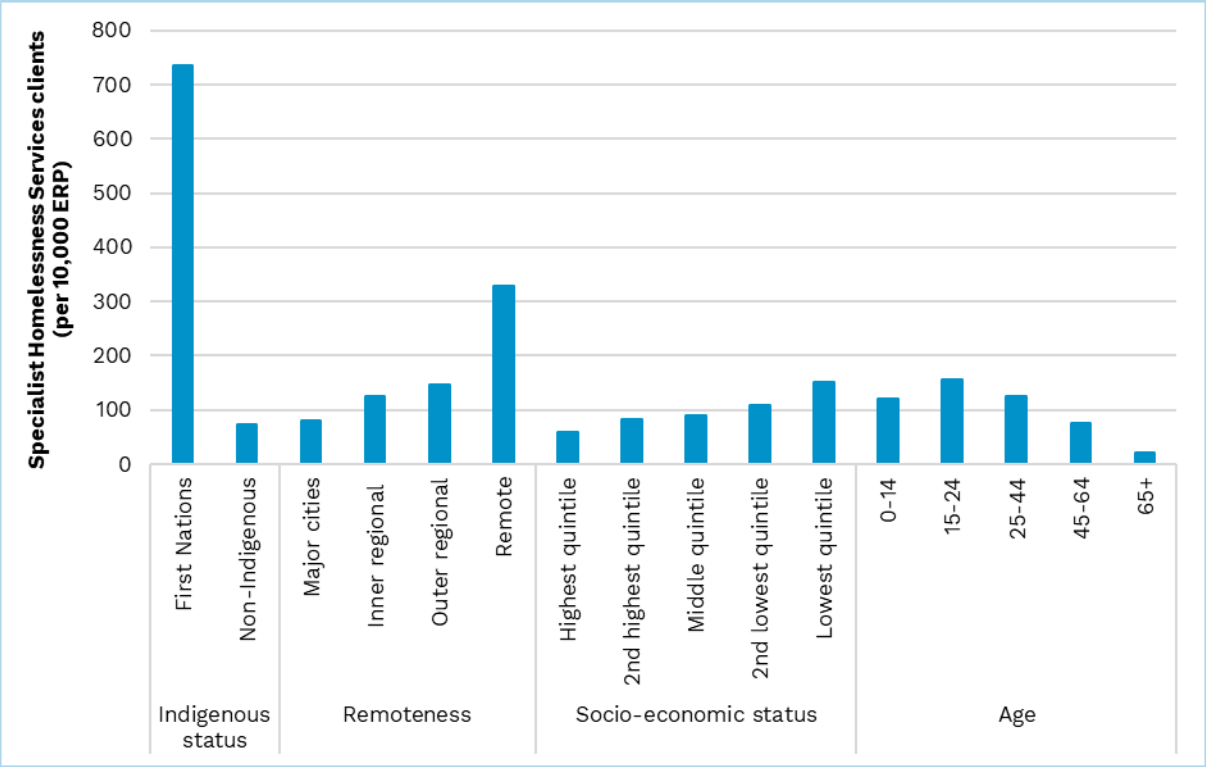
[7] SCRGSP, *Report on Government Services 2024*, Part G, Section 19: Homelessness services, Productivity Commission, 2024, accessed 26 August 2024.

Homelessness services socio-demographic assessment

33 The socio-demographic assessment for homelessness services recognises that the socio-demographic composition of the population with respect to age, Indigenous status, socio-economic status and remoteness affect the use and cost of services in each state.

34 The drivers of service use were informed by the target population groups from the National Housing and Homelessness agreement. In the agreement, First Nations people, welfare recipients, young adults and the elderly were considered priority groups. In the subsequent National Social Housing and Homelessness agreement, which began on 1 July 2024, First Nations people are the sole priority group.[8] Figure 4 shows homelessness services clients per 10,000 people for each socio-demographic group.

Figure 4 **Specialist Homelessness Services clients per 10,000 population by socio-demographic group, 2022–23**



Note: Remote and very remote Australia have been aggregated into a single remote category to reduce the impact of lower service provision in very remote Australia on the assessment.

Source: Commission calculation based on AIHW (Australian Institute of Health and Welfare), *Specialist Homelessness Services Collection data cubes 2011–12 to 2022–23* [data set], AIHW, 2023, accessed 22 August 2024.

35 Subsequently, regional costs, wage costs, and cross-border cost adjustments are applied to capture the cost of providing services in regional and remote Australia, the impact of differences in state wage levels, and the provision of homelessness services by the ACT to residents of New South Wales.

[8] DSS (Department of Social Services), *National Agreement on Social Housing and Homelessness*, DSS , 2024, accessed 26 August 2024.

Estimating the national average rate of service use by different population groups

36 Data on the use of homelessness services cross-classified by population groups is sourced from the Australian Institute of Health and Welfare. Instances of service use are compared against the size of the corresponding cross-classified estimated residential populations to estimate the use rate for homelessness services for each socio-demographic group.

Estimate assessed users of homelessness services by socio-demographic group by state

37 The national average rate of homelessness services use is used to estimate the number of clients by state under average state policy.

38 National average use rates are multiplied by state estimated resident populations cross-classified by the same socio-demographic characteristics to estimate assessed clients under average policy.

Apportion state spending using share of assessed service clients by state

39 Each state's assessed need for spending on homelessness services is equal to its share of assessed clients.

Applying the regional costs adjustment

40 The regional costs adjustment is applied as outlined in paragraph 21.

Applying the wage costs adjustment

41 The wage costs adjustment is applied as outlined in paragraph 23.

Applying the cross-border costs adjustment

42 The homelessness services assessment also recognises the cost to the ACT of providing homelessness services to New South Wales residents. It is estimated using the national average cost per homelessness service client and the number of New South Wales residents accessing services in the ACT, net of ACT residents accessing services in New South Wales.

Other welfare

43 The assessment of other welfare is undertaken in 3 steps:

- assess total other welfare spending equal per capita
- apply regional costs
- apply wage costs.

44 Other welfare is assessed as a non-deliberative equal per capita assessment because the Commission could not identify a suitable driver of need. As a result, each state's spending need is their population share of national other welfare spending.

45 The expenses in this component include but are not limited to:

- non-NDIS disability services
- state-provided aged care services
- national redress scheme for institutional child sexual abuse
- support for refugees.

Applying the regional costs adjustment

46 The regional costs adjustment is applied as outlined in paragraph 21.

Applying the wage costs adjustment

47 The wage costs adjustment is applied as outlined in paragraph 23.

GST distribution in the 2025 Review

48 Table 5 shows the GST impact of the assessment in the 2025 Review.

Table 5 GST impact of the welfare assessment, 2025–26

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total effect
	$m	$m	$m	$m	$m	$m	$m	$m	$m
Child protection and family services	111	-797	392	67	-70	50	-68	315	935
NDIS	11	-7	-6	-8	5	4	1	1	22
Concessions	-15	-28	37	-39	44	22	-22	1	104
Other welfare	0	-4	-4	8	-5	-1	2	5	14
Homelessness services	-10	-73	49	6	-8	6	-8	37	99
Total ($m)	**97**	**-910**	**469**	**34**	**-34**	**80**	**-95**	**360**	**1,039**
Total ($pc)	**11**	**-127**	**82**	**11**	**-18**	**139**	**-197**	**1,398**	**37**

Note: Magnitude and direction of GST impact can change from year to year.

13. Services to communities

Overview

1 The services to communities assessment covers state and territory (state) spending on subsidies for the provision of water, wastewater services and electricity. It also covers a range of expenses for community development and environmental protection services. It has the following components:

- electricity subsidies — remote community subsidies and other subsidies
- water and wastewater subsidies — small community subsidies and other subsidies
- First Nations community development
- other community development
- environmental protection.

2 The assessment recognises that services to communities expense needs are influenced by the following.

- Remoteness
  - For electricity subsidies, states with more people living in remote and very remote communities have higher spending needs.
  - For water subsidies, states with more people living in communities of fewer than 3,000 people outside of major cities have higher spending needs.
- First Nations people — for First Nations community development, states with higher shares of First Nations people living in discrete First Nations communities have higher spending needs.
- Wage costs — states facing greater wage cost pressures have higher spending needs.

Actual state expenses

3 The first step in calculating assessed expenses is identifying actual state expenses.[1] States collectively spent 4.6% of their total recurrent expenses on services to communities in 2022–23. Table 1 shows expenses broken down by component and Table 2 outlines actual expenses by state in 2022–23.[2]

[1] Adjusted budget calculations use ABS Government Financial Statistics data to determine actual state expenses. For further details see the adjusted budget chapter of the *Commission's Assessment Methodology*.

[2] Tables in this chapter, unless otherwise stated, use 2022–23 data.

Table 1 Services to communities expenses by component, 2022–23

	2022-23	
	$pc	$m
Water subsidies	33	880
Electricity subsidies	109	2,865
Environmental protection	243	6,400
First Nations community development	14	367
Other community development	144	3,801
Total	**544**	**14,314**
Proportion of total expenses (%)		**4.6**

Table 2 Services to communities expenses by state, 2022–23

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Services to communities ($m)	3,986	4,341	1,797	2,528	736	178	254	493	14,314
Services to communities ($pc)	483	646	334	892	401	311	551	1,963	544
Proportion of total expenses (%)	**4.0**	**5.5**	**3.1**	**7.4**	**3.9**	**2.5**	**4.0**	**8.1**	**4.6**

Structure of assessment

4 Table 3 outlines the drivers that influence expenses in each component.

Table 3 Structure of the services to communities assessment

Component	Driver	Influence measured by driver
Water subsidies		
Small communities	Small communities	Costs are higher for small communities.
	Regional costs	The cost of providing services increases as the level of remoteness increases.
	Wage costs	Differences in wage costs between states affect costs.
Other	Equal per capita	Population drives the use and cost of services.
Electricity subsidies		
Remote communities	Remote communities	Costs are higher for remote communities.
	Regional costs	The cost of providing services increases as the level of remoteness increases.
	Wage costs	Differences in wage costs between states affect costs.
Other	Equal per capita	Population drives the use and cost of services.
First Nations community development	Population in discrete First Nations communities	The cost of providing services in discrete First Nations communities is higher.
	Regional costs	The cost of providing services increases as the level of remoteness increases.
	Wage costs	Differences in wage costs between states affect costs.
Other community development	Equal per capita	Population drives the use and cost of services.
	Regional costs	The cost of providing services increases as the level of remoteness increases.
	Wage costs	Differences in wage costs between states affect costs.
Environmental protection	Non-deliberative Equal per capita	These expenses are not differentially assessed.
	Regional costs (a)	The cost of providing services increases as the level of remoteness increases.
	Wage costs (a)	Differences in wage costs between states affect costs.

(a) Applied only to the protection of biodiversity and landscape sub-component.

Data

5 The data used in the services to communities assessment are outlined in Table 4.

Table 4 Data used in the services to communities assessment

Source	Data	Updated	Component
States	Electricity subsidies	Annually	Electricity — remote community subsidies
	Water subsidies	Annually	Water — small community subsidies
	First Nations community development expenses	Annually	First Nations community development
ABS	2021 Census	5-yearly	Electricity — remote community subsidies
			Water — small community subsidies
			First Nations community development

Note: Data for the wage costs adjustment are also included in this assessment.
The adjusted budget data sources are outlined in the adjusted budget chapter of the *Commission's Assessment Methodology*.

Assessment method

Electricity subsidies

6 Expenses for this component include subsidies to electricity service providers for services to households as well as general subsidies to households related to the supply of electricity. Subsidies include both operating subsidies and capital subsidies. The component does not include concession payments to households for electricity (for example, to pensioners and healthcare card holders), which are assessed in the welfare category.

7 There are separate assessments for remote community electricity subsidies and other electricity subsidies. The component is split because the average electricity network subsidy per capita is significantly higher in remote and very remote areas than in other areas, which reflects a combination of higher generation, transmission and/or distribution costs and lack of economies of scale in smaller communities.

8 State data are used to estimate actual electricity subsidies to remote and very remote communities and other electricity subsidies.

Remote community electricity subsidies

Driver

Populations in remote and very remote communities

9 Remote community electricity subsidies include subsidies for off-grid communities in remote and very remote areas. Off-grid communities that are not connected to a

major electricity network are the most costly communities for the supply of electricity. Subsidies for remote parts of on-grid electricity networks, where subsidies are due to higher costs, are also included in the assessment.

10 The high cost of supplying electricity to remote and very remote communities means that full cost recovery is not possible. Average state policy is to subsidise the supply of electricity to these communities.

11 The Commission uses the size of state populations in remote and very remote communities as the driver of need for state electricity subsidies. Population estimates are obtained from ABS Census data (Table 5).

Table 5 State population in remote and very remote communities, 2021–22

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Remote	26,856	3,293	71,817	91,685	44,753	8,616	n/a	52,345	299,365
Very remote	6,969	n/a	53,527	65,564	14,376	2,605	n/a	48,030	191,071

Source: ABS 2021 Census.

Applying regional costs

12 The assessment recognises that the cost of supplying electricity to very remote communities are higher than for remote communities. State data show that the per capita subsidy for very remote communities is over 3 times higher than the per capita subsidy for remote communities (Table 6).

13 The following steps are taken to derive the regional cost gradient.

- Total populations and subsidies are derived for remote and very remote locations, based on the criteria for communities assessed to need electricity subsidies.
- Total subsidies are divided by total population for both remote and very remote areas to give the average subsidy per capita in each geographic area.
- The cost weight for remote areas is set to one. For very remote areas, the cost weight is calculated by dividing the very remote subsidy per capita by the remote subsidy per capita (Table 6).

14 This cost gradient is fixed until the next review.

Table 6 Population and regional cost gradients for the electricity subsidies assessment

	Number of communities	Population	Total subsidy	Subsidy	Cost gradient
			$m	$pc	
Remote	5,522	299,365	109	365	1.000
Very remote	5,885	191,071	211	1,105	3.026

Source: Commission calculations using ABS and state provided data on electricity subsidies by location.

Applying wage costs

15 Wages costs are a significant share of the total cost of providing remote communities electricity subsidies. Differences in wage costs between states have a differential effect on the cost of providing remote communities electricity subsidies. The services to communities assessment uses the Commission's general method for measuring the influence of wage costs. Details on how this is calculated is in the wage costs chapter of the *Commission's Assessment Methodology*.

Method

16 The following steps are taken to determine assessed expenses for each state.

- Census data are used to determine the proportion of each state's population living in remote and very remote communities.
- Those proportions are applied to state populations in each assessment year to determine the number of people living in these communities.
- The regional cost gradient (Table 6) is applied to the population in remote and very remote communities to derive a weighted population for each state.
- Total remote communities electricity subsidies are multiplied by each state's share of the total weighted population to give a state's assessed subsidies.
- Wages costs are applied to give assessed expenses for each state.

Other electricity subsidies

17 Some states subsidise the supply of electricity to communities outside of remote and very remote communities. The Commission considers these subsidies are likely to be more reflective of individual state policy decisions rather than reflecting an underlying driver of need. Therefore, these electricity subsidies are assessed on an equal per capita basis and do not impact the GST distribution.

Water subsidies

18 Expenses for this component include subsidies to water and wastewater service providers for services to residential households. Subsidies include both operating subsidies and capital subsidies.

19 There are separate assessments for small community water subsidies and other water subsidies.

20 State data are used to estimate spending on small community water subsidies and other water subsidies.

Small community water subsidies

Driver

Populations in small communities

21 On average, water supply operating costs per connection are higher for small utilities. Small water utilities do not have the economies of scale of large utilities,

particularly for infrastructure and the operation and maintenance of water treatment works.

22 The high cost of supplying water to small communities means that full cost recovery is not possible. Average state policy is to subsidise the supply of water to these communities.

23 The Commission uses the size of state populations in small communities as the driver of need for state water subsidies. Small communities are defined as communities outside of major cities with fewer than 3,000 people. Population estimates are obtained from ABS Census data. Table 7 shows the size of state populations in small communities in 2021–22 (census year).

Table 7 State population in small communities, 2021–22

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Inner regional	610,371	449,229	332,813	103,872	112,800	38,897	3,399	n/a	1,651,380
Outer regional	249,769	148,739	219,879	82,238	92,830	119,887	n/a	10,093	923,436
Remote	23,446	3,293	53,440	31,354	26,050	8,616	n/a	18,286	164,486
Very remote	6,969	n/a	49,351	45,237	14,376	2,605	n/a	41,113	159,650

Source: ABS 2021 Census.

Applying regional costs

24 There are additional costs in supplying water to small communities as remoteness increases due to the higher costs of fuel and other inputs. To recognise this, cost weights are applied to populations in outer regional, remote and very remote communities.

25 The following steps are taken to derive the regional cost gradient.

- Total populations and subsidies are derived for inner regional, outer regional, remote and very remote locations, based on the criteria for communities assessed to need water subsidies.
- Total subsidies are divided by total population for each geographic area to give the average subsidy per capita.
- The cost weight for inner regional is set to one. For outer regional, remote and very remote locations, the cost gradient is calculated by dividing each region's subsidy per capita by the inner regional subsidy per capita.

26 Table 8 shows the regional cost weights for the 2025 Review. These cost weights are fixed until the next review.

Table 8 Small community water subsidies regional cost gradient

	Inner regional	Outer regional	Remote and very remote
Regional cost weights	1.000	2.171	4.448

Note: Due to uncertainties around the data comprehensiveness, remote/very remote is aggregated.
Source: Commission calculation based on state data.

Applying wage costs

27 Wages costs are a significant share of the total cost of providing small community water subsidies. Differences in wage costs between states have a differential effect on the cost of providing small community water subsidies. The services to communities assessment uses the Commission's general method for measuring the influence of wage costs. Details on how this is calculated is in the wage costs chapter of the *Commission's Assessment Methodology*.

Method

28 The following steps are taken to determine assessed expenses.

- Census data are used to determine the proportion of each state's population living in small communities.
- Those proportions are applied to state populations in each assessment year, to determine the number of people living in these communities.
- The regional cost gradient (Table 8) is applied to the populations in small communities to derive a weighted population for each state.
- Total remote communities electricity subsidies are multiplied by each state's share of the total weighted population to give a state's assessed subsidies.
- Wages costs are applied to give assessed expenses for each state.

Other water subsidies

29 Some states subsidise the supply of water to communities other than those defined as 'small communities' by the Commission. The Commission considers these subsidies are likely to be more reflective of individual state policy decisions rather than reflecting an underlying driver of need. Therefore, these water subsidies are assessed on an equal per capita basis and do not impact the GST distribution.

First Nations Community Development

30 Expenses for this component include support for the governance and management of discrete First Nations communities, in recognition of their greater needs due to their smaller populations with low incomes, remoteness (in most cases) and unique issues associated with land tenure arrangements. This component includes spending on co-ordinating capital works programs, developing community plans, and educating community leaders about planning processes.

31 State data are used to determine expenses for First Nations community development.

Driver

First Nations population living in discrete First Nations communities

32 The assessment is based on the number of First Nations people living in discrete First Nations communities. The costs states incur on First Nations community development are likely to increase in proportion to the number of people states have in these communities.

33 A discrete First Nations community is defined as Statistical Areas Level 1s (SA1s) with populations that are more than 50% First Nations, as measured by census data.[3]

34 Census data are used to determine the proportion of each state's population living in discrete First Nations communities.

Applying regional costs

35 A significant portion of spending relates to remote service delivery rather than head office costs. It is not practicable to directly measure the effect of remoteness on the component, due to the diversity of services included in this component. Therefore, the general regional cost gradient is applied to expenses in the First Nations community development component. Detail on the calculation method for the general regional cost gradient is in the geography chapter of the *Commission's Assessment Methodology*.

Applying wage costs

36 Wages costs are a significant share of the total cost of providing First Nations community development services. Differences in wage costs between states have a differential effect on the cost of providing First Nations community development services. The services to communities assessment uses the Commission's general method for measuring the influence of wage costs. Details on how this is calculated is in the wage costs chapter of the *Commission's Assessment Methodology*.

Method

37 The following key steps are used in the calculation of assessed expenses for First Nations community development.

- First Nations populations in discrete First Nations communities from ABS census are divided by the total First Nations population to derive the proportion of each state's First Nations population, by remoteness area, living in discrete First Nations communities.
- This proportion is applied to state populations to determine the number of people living in these communities in each assessment year.
- The general regional cost gradient is applied to these people to derive a weighted population.
- Total First Nations community development expenses are multiplied by each state's share of the total weighted population to give a state's assessed spending.
- Wages costs are applied to give assessed expenses for each state.

Other community development

38 Other community development expenses cover a wide variety of state activity broadly relating to community-related administration and planning including

[3] Australian Bureau of Statistics, Statistical Area Level 1, ABS website, 2021, accessed 15 October 2024.

regulating land use, administering zoning laws and planning and development of public facilities. This component also includes expenses related to community amenities such as the design, installation, operation and maintenance of street lighting, provision of facilities such as public toilets, drinking fountains, bus shelters, cemeteries and crematoria.

Driver

State population

39 State population is used as the driver of need for spending on other community development. The costs states incur on community development are likely to increase in proportion to state population.

Applying regional costs

40 There are additional costs associated with providing other community development services as remoteness increases. It is not practicable to directly measure the effect of remoteness on these expenses due to the diversity of services included in the component. Therefore, a general regional cost gradient is applied to expenses in the other community development component. Detail on the calculation method for the general regional cost gradient is in the geography chapter of the *Commission's Assessment Methodology*.

Applying wage costs

41 Wages costs are a significant share of the total cost of providing community development services. Differences in wage costs between states have a differential effect on the cost of providing community development services. The assessment uses the Commission's general method for measuring the influence of wage costs. Details on how this is calculated are in the wage costs chapter of the *Commission's Assessment Methodology*.

Environmental protection

42 Expenses for this component include those for the following services:

- waste and wastewater management
- pollution abatement
- research and development on environmental protection
- protection of biodiversity and landscape including national parks and wildlife services.[4]

Driver

43 Environmental protection expenses are assessed on an equal per capita basis. This is a non-deliberative equal per capita assessment. Environmental protection covers a

[4] See the adjusted budget chapter of the *Commission's Assessment Methodology* for a list of all the functions of government included in services to communities. Full descriptions are available in ABS, *Australian System of Government Finance Statistics: Concepts, Sources and Methods*, Appendix 1 Part C, ABS, 2015, Canberra.

wide variety of services, and it is neither practical to disaggregate these expenses nor possible to identify a single broad driver for assessing total spending.

Applying regional costs

44 The costs of providing services related to the protection of biodiversity and landscape are likely to increase with remoteness.

45 The general regional cost gradient is applied to the protection of biodiversity and landscape sub-component of environmental protection. It is not practicable to directly measure the effect of remoteness on these service expenses, given the scope and diversity of the component. Further information on the general regional cost gradient is in the geography chapter of the *Commission's Assessment Methodology*.

46 The remainder of the environmental protection component covers a range of expenses that are heavily influenced by the number of urban centres, or relate to regulatory activities, research and other activities which may be largely undertaken in central offices. Therefore, regional costs are not a driver of expense needs for the remainder of the component.

Applying wage costs

47 Wages costs are a significant share of the total cost of providing environmental protection services. Differences in wage costs between states have a differential effect on the cost of providing environmental protection services. The assessment uses the Commission's general method for measuring the influence of wage costs. Details on how this is calculated are in the wage costs chapter of the *Commission's Assessment Methodology*.

GST distribution in the 2025 Review

48 Table 9 shows the GST impact of the services to communities assessment in the 2025 Review.

Table 9 GST impact of the services to communities assessment, 2025–26

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total effect
	$m	$m	$m	$m	$m	$m	$m	$m	$m
Water subsidies	-32	-55	25	9	14	24	-9	25	96
Electricity subsidies	-154	-152	37	139	17	-2	-10	125	318
Environmental protection	6	-1	-9	8	-8	-2	3	3	21
First Nations community development	-91	-103	25	31	-13	-8	-7	166	222
Other community development	0	-5	-4	8	-5	-1	2	5	15
Total ($m)	**-271**	**-316**	**73**	**196**	**5**	**10**	**-21**	**324**	**608**
Total ($pc)	**-31**	**-44**	**13**	**64**	**3**	**18**	**-44**	**1,260**	**22**

Note: Magnitude and direction of GST impact can change from year to year.

14. Justice

- Following state consultation, the Commission decided to postpone the implementation of method changes in the justice assessment until the 2026 Update. The Commission considered that it was not feasible to validate, analyse and consult states on all the 2022–23 and 2023–24 justice data in time for the 2025 Review. Further details on state consultation on this assessment is in the justice chapter of *Review Outcomes*.
- For the recommended GST relativities for 2025–26 as contained in 2025 Review report, the 2020 Review method was applied. The Commission altered the 2020 Review justice method in the 2024 Update by suspending the national capital assessment and retaining the use of ABS 2016 Census' First Nations estimated residential population. This method is described below.
- The Commission will release revised *Commission's Assessment Methodology* and *Review Outcomes* chapters for the justice assessment with the 2026 Update.

Overview

1 The justice assessment covers state and territory (state) recurrent spending on police services, law courts, legal services, prisons and corrective services. It has the following components:

- police
- criminal courts
- other legal services
- prisons.

2 The 2020 Review assessment recognises that justice expense needs are influenced by the following.[1]

- First Nations people — states with a higher proportion of First Nations people have higher spending needs.
- Age — states with a higher proportion of people in the 15–44-year-old age range have higher spending needs.
- Socio-economic status — states with a higher proportion of people from low socio-economic backgrounds have higher spending needs.
- Remoteness — states that provide justice services in more remote locations have higher spending needs.
- Wage costs — states facing greater wage cost pressures have higher spending needs.

[1] The Commission altered the 2020 Review justice assessment method following state consultation in the 2024 Update. An assessment of additional costs incurred by the ACT due to its reliance on the Australian Federal Police as the provider of its policing services was suspended in the 2024 Update and removed as part of the 2025 Review process (see the national capital chapter of *Review Outcomes*). Additionally, the Commission retained the use of ABS 2016 Census' First Nations estimated residential populations. These changes will continue to be applied in the 2025–26 application year.

Actual state expenses

3 The first step in calculating assessed expenses is identifying actual state expenses.[2] States collectively spent 8.8% of their total recurrent expenses on justice services in 2022–23. Table 1 shows expenses broken down by component and Table 2 outlines actual expenses by state in 2022–23.[3]

Table 1 Justice expenses by component, 2022–23

	2022-23	
	$pc	**$m**
Police	527	13,854
Criminal courts	120	3,164
Other legal services	105	2,770
Prisons	284	7,482
Total	**1,037**	**27,270**
Proportion of total expenses (%)		**8.8**

Table 2 Justice expenses by state, 2022–23

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Justice ($m)	8,388	6,545	5,358	3,622	1,699	460	416	782	27,270
Justice ($pc)	1,017	974	995	1,278	925	804	902	3,111	1,037
Proportion of total expenses (%)	**8.5**	**8.3**	**9.1**	**10.7**	**9.1**	**6.5**	**6.5**	**12.8**	**8.8**

[2] Adjusted budget calculations use ABS Government Finance Statistics data to determine actual state expenses, see the adjusted budget chapter of the *Commission's Assessment methodology*.

[3] Tables in this chapter, unless otherwise stated, use 2022–23 data.

Structure of assessment

4 Table 3 outlines the drivers that influence spending needs in each component.

Table 3 Structure of the justice assessment

Component	Driver	Influence measured by driver
Police	Socio-demographic composition	Age, Indigenous status and socio-economic status influence the use and costs of services.
	Regional costs	The cost of providing services increases as the level of remoteness increases.
	Wage costs	Differences in wage costs between states affect costs.
Criminal courts	Socio-demographic composition	Age, Indigenous status, socio-economic status and remoteness influence the use and costs of services.
	Regional costs	The cost of providing services increases as the level of remoteness increases.
	Wage costs	Differences in wage costs between states affect costs.
Other legal services	Non-deliberative equal per capita	These expenses are not differentially assessed.
	Regional costs	The cost of providing services increases as the level of remoteness increases.
	Wage costs	Differences in wage costs between states affect costs.
Prisons	Socio-demographic composition	Age, Indigenous status socio-economic status and remoteness influence the use and costs of services.
	Regional costs	The cost of providing services increases as the level of remoteness increases and the size of prisons decreases.
	Wage costs	Differences in wage costs between states affect costs.

Note: This table outlines the Commission's method for the 2025–26 application year.

Data

5 The data used in the assessment are outlined in Table 4.

Table 4 Data used in the justice assessment

Source	Data	Updated	Component
States	Police and court costs by district	5-yearly during methodology reviews	Police and criminal courts
	Offender and defendant counts by socio-demographic composition		Police and criminal courts
	Prison location, prisoner numbers by security classification and costs		Prisons
ABS	Police proceedings counts	5-yearly during methodology reviews	Police
	Geographical data to map state use and cost data into remoteness areas		Police, criminal courts and prisons
	Defendants finalised		Criminal courts
	Estimated residential population counts by socio-demographic composition (for use rates)		Police and criminal courts
	Estimated residential population counts by socio-demographic composition (for use rates)	Annually	Prisons
	Estimated residential population counts by socio-demographic composition (for assessed expenses)		Police, criminal courts and prisons
	Estimated residential population counts by region		Other legal services
	Prisoner counts by socio-demographic composition		Prisons
Productivity Commission – *Report on Government Services*	Magistrates' court costs and finalisations	5-yearly during methodology reviews	Criminal courts
	Criminal court costs		Criminal courts
	Civil court costs	Annually	Other legal services
Australian Institute of Health and Welfare (AIHW)	Juvenile detainee counts by socio-demographic composition	Annually	Prisons

Note: Data for the wage costs adjustment are also included in this assessment.
The adjusted budget data sources are outlined in the adjusted budget chapter of the *Commission's Assessment Methodology*.

Assessment method

6 The following section outlines the method for assessing state spending for police, criminal courts, other legal services and prisons. The assessment methods are informed by observed relationships in data provided by the states in the 2020 Review.

7 The Commission will release a revised description of the justice assessment, with relevant method changes with the 2026 Update.

Police component

8 Expenses for this component include:

- police services
- research and development — public order and safety.

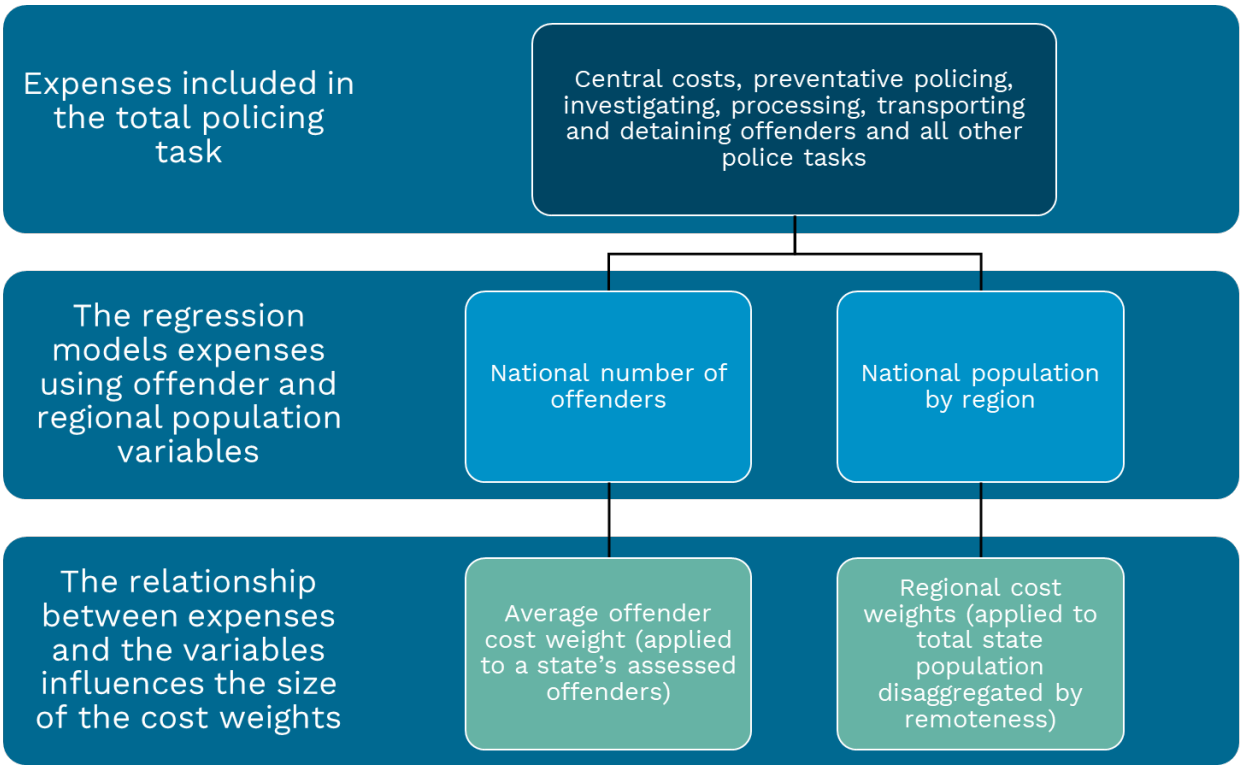
9 The police assessment is based on the geographic distribution of state populations and the number of assessed offenders in a jurisdiction, with an adjustment for wage costs.

10 The assessment uses a regression model to estimate the national average cost for policing activities associated with:

- offenders — this is a national average per offender policing cost
- regional cost of policing — this is a per capita policing cost weight for each remoteness area that is not dependent on offender numbers (it includes all costs not already captured in the national offender cost weight described above).[4]

11 The cost estimates produced in the regression inform the offender and regional cost weights. The offender cost weight is applied to the number of assessed offenders in each state, while the regional cost weights are applied to the population in each remoteness area (see Figure 1).

Figure 1 Overview of the method for estimating police costs in the police regression



Note: Expenses and offender numbers come from state-provided data. Population comes from ABS data. State-provided offenders are scaled to total proceedings estimated using ABS data. Expenses are also scaled to state totals in ABS' Government Finance Statistics.

[4] Costs associated with higher cost offenders (those who cost more than the national offender cost weight) are also reflected in the regional cost weights.

Step 1 – derive offender and regional cost weights

12 To inform the regression, the Commission uses state and ABS data. State data on police district expenditure and offender numbers are mapped to ABS geographical regions and population data to allow for a regional specification. State offender and expenses data are then scaled to ABS total proceedings data to ensure greater comparability and robustness.

13 Table 5 shows the cost weights produced in the 2020 Review.

Table 5 Police regression cost weights using 2015–16 and 2016–17 data

Description	Cost weight
Offender cost weight	20.0
Regional cost weights	
People living in major cities	1.0
People living in inner regional areas	1.5
People living in outer regional areas	1.7
People living in remote areas	5.4
People living in very remote areas	6.9

Note: Cost weights presented in this table are rounded to one decimal place. Data from 2015–16 and 2016–17 inform regression cost weights. Cost weights will be held constant until the 2026 Update.

Step 2 – applying cost weights

Offenders

14 To reflect that the number of offenders impacts the cost of the policing task, the offender cost weight is applied to assessed offenders in each state. The number of assessed offenders is derived by applying the national average offender rate for a given socio-demographic sub-population to a state's share of such populations. The socio-demographic composition sub-groups include a cross-classification of Indigenous status, age and socio-economic status. To ensure comparability of data, the police assessment uses an estimated residential population that preserves the Indigenous status proportions reported in the 2016 Census. In total, there are 40 socio-demographic composition sub-groups used in the police assessment. The characteristics of these sub-groups are shown in Table 6.

Table 6 Socio-demographic composition sub-groups for the police assessment

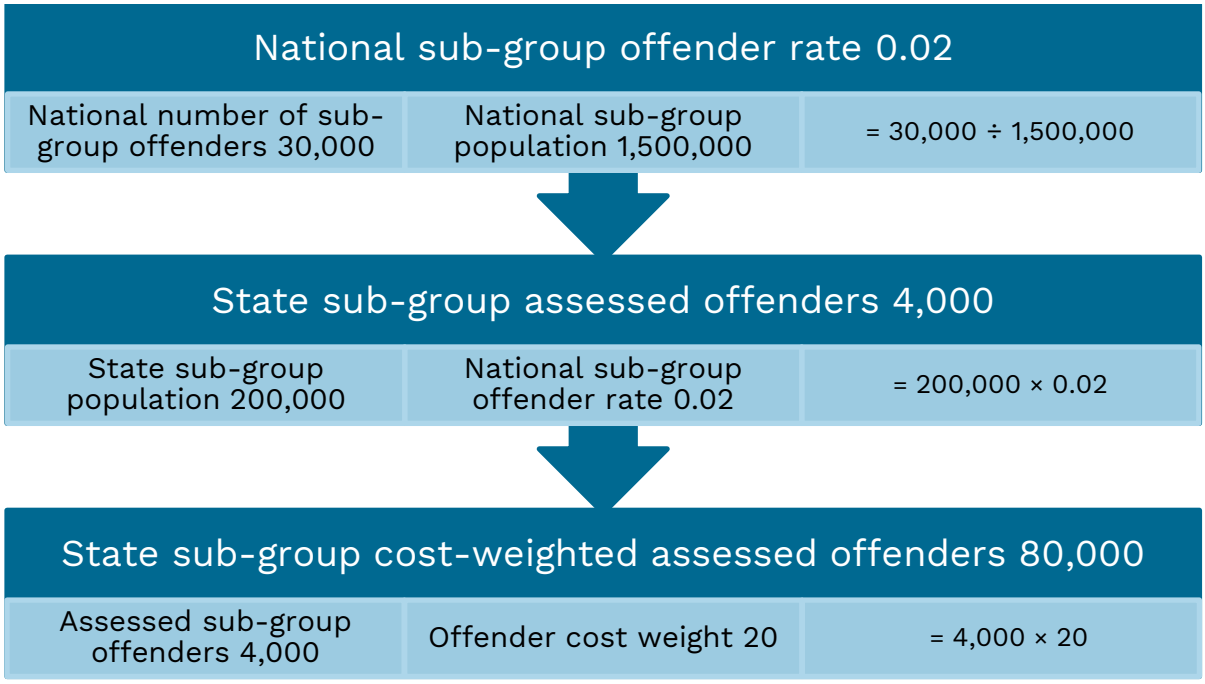
Offenders			
Indigenous status	Age	Socio-economic status [a]	
		First Nations [b]	Non-Indigenous
First Nations	0-14	Most disadvantaged (40%)	Most disadvantaged (20%)
Non-Indigenous	15-24	Middle quintile (20%)	2nd most disadvantaged (20%)
	25-44	Least disadvantaged (40%)	Middle quintile (20%)
	45-64		2nd least disadvantaged (20%)
	65+		Least disadvantaged (20%)

(a) An offender's Indigenous status determines the socio-economic status index the Commission will apply. For First Nations offenders, the Commission uses the Indigenous Relative Socioeconomic Outcomes index. For non-Indigenous offenders, the Commission uses the non-Indigenous Socio-Economic Indexes for Areas index.

(b) In the 2020 Review, the Commission decided that there would be 3 First Nations socio-economic status groups for offenders and 5 socio-economic status groups for defendants and prisoners.

15 Figure 2 outlines the process for calculating assessed offender expenses for a single socio-demographic composition sub-group. This process is repeated for each of the 40 sub-groups described above with the results summed to derive assessed cost-weighted offenders for each state.

Figure 2 Method for calculating a state's assessed cost-weighted offenders for a single socio-demographic composition sub-group



Note: Worked example based on hypothetical data.

Regional populations

16 To reflect that spending on the policing task increases as a state's population becomes more remote, regional cost weights are applied directly to state populations in each remoteness area.

17 Table 7 illustrates how a state's assessed regional population is calculated.

Table 7 Calculating assessed regional populations

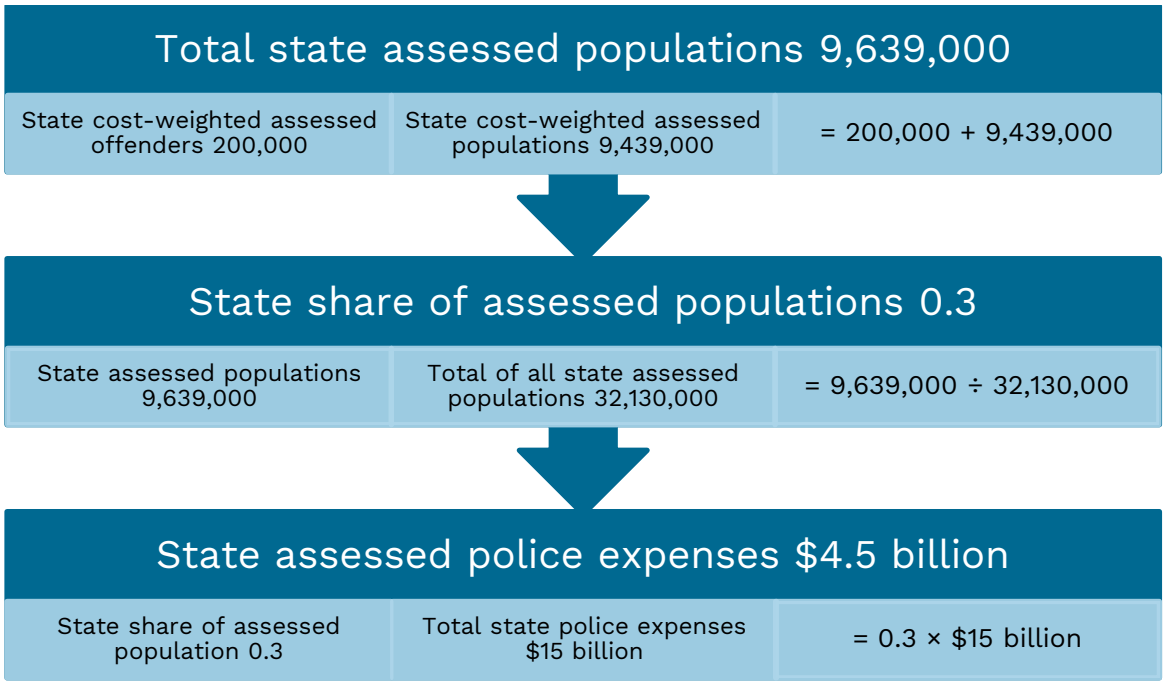
Remoteness	Population	Cost weight	Assessed population
	No.		No.
Major cities	6,003,080	1.0	6,003,080
Inner regional	1,700,000	1.5	2,556,034
Outer regional	380,000	1.7	655,223
Remote	30,000	5.4	162,525
Very Remote	9,000	6.9	62,138
Total	**8,122,080**		**9,439,000**

Note: Worked example based on hypothetical data. Cost weights presented in this table are rounded to one decimal place. The calculated assessed population reflects the use of unrounded cost weights.

Step 3 – derive assessed police expenses

18 The cost-weighted assessed offenders and populations are combined. To calculate a state's assessed police expenses, total police expenses are multiplied by the state's share of assessed populations. See Figure 3 for a worked example.

Figure 3 Method for calculating assessed police expenses



Note: Worked example based on hypothetical data.

Step 4 – applying wage costs

19 Wage costs are a significant share of the total cost of providing police services. Differences in wage costs between states have a differential effect on the cost of providing police services. The police assessment uses the Commission's general method for measuring the influence of wage costs. Details on how this is calculated are in the wage costs chapter of the *Commission's Assessment Methodology*.

20 As a final step, expenses are rescaled to total police expenses, giving final assessed expenses.

Criminal courts component

21 Expenses for this component include:

- criminal courts
- public prosecution
- legal aid related to defendants in criminal courts
- other legal services associated with criminal courts.

22 The criminal courts assessment is based on a socio-demographic composition assessment of the number of finalised defendants with adjustments for regional costs and wage costs.[5]

Step 1 – calculate criminal court expenses

23 To calculate the total component expenses, the Commission uses the proportion of court expenses that states identify as being criminal court related to split ABS Government Finance Statistics courts data into criminal court and other legal services expenses. This split assigns 51% of total court expenses in Government Finance Statistics to the criminal court component.[6]

Step 2 – derive defendant use rates

24 State data are used to determine the socio-demographic composition profile of defendants.[7] The socio-demographic composition sub-groups include a cross-classification of Indigenous status, age, remoteness and socio-economic status. There are 250 socio-demographic composition sub-groups used in the criminal courts assessment. The characteristics of these sub-groups are shown in Table 8.

[5] The Commission uses the ABS' definition of a finalised defendant in the assessment: 'A person or organisation for whom, all charges relating to the one case have been formally completed (within the reference period) so that they cease to be an item of work to be dealt with by the court'. ABS, Criminal Courts, Australia methodology, 2022-23, ABS website, 2024, accessed 24 May 2024.

[6] The split between criminal courts and other legal services expenditure was calculated using data provided in the 2020 Review. The split was then held constant for the review period. This split will be updated with new state data, provided during the 2025 Review, and applied in the revised justice assessment in the 2026 Update.

[7] Data on the socio-demographic composition profile of defendants include only New South Wales, Queensland, Western Australia, South Australia and the Northern Territory as other states were unable to provide Indigenous status for their defendants.

Table 8 Socio-demographic composition sub-groups for the criminal courts assessment

Defendants			
Indigenous status	**Age**	**Remoteness**	**Socio-economic status**
First Nations	0-14	Major cities	Most disadvantaged (20%)
Non-Indigenous	15-24	Inner regional	2nd most disadvantaged (20%)
	25-44	Outer regional	Middle quintile (20%)
	45-64	Remote	2nd least disadvantaged (20%)
	65+	Very remote	Least disadvantaged (20%)

Note: Defendants with an unknown Indigenous status are attributed a status based on the Indigenous status proportions within each of the estimated residential population sub-groups. Defendants with an unknown age socio-economic status or remoteness are not assigned to a sub-group. In effect, this treatment weights these defendants in proportion to the known characteristics of defendants.

25 Once state defendant numbers are assigned to each of the sub-groups, the number of defendants from each state are scaled to ABS defendant numbers to improve comparability of the data. During this process, the proportions of defendants from each of the sub-groups are held constant.

26 The national average defendant rate for each sub-group is then calculated as the proportion of each of the 250 sub-groups who are finalised defendants.

Step 3 – calculate assessed defendants

27 The number of assessed defendants is derived by applying the national average defendant rate for each of the 250 socio-demographic composition sub-groups to that population in each state. Figure 2 provides a worked example of a similar process in the police component.

28 To ensure comparability of data, the courts assessment uses an estimated residential population that preserves the Indigenous status proportions reported in the 2016 Census.

Step 4 – deriving and applying regional cost weights

29 A regional cost gradient is used to apply regional costs in criminal courts.

30 This gradient is calculated by scaling state criminal court expenses and finalisation numbers to data in the Productivity Commission's *Report on Government Services*, giving a magistrates' court spend per finalisation.[8] The relative spend per finalisation is then calculated for non-remote and remote areas.

31 To ensure the gradient is only applied to the magistrates' courts' share of expenses, the relative spend per finalisation is multiplied by the magistrates' court share of expenses in the *Report on Government Services* data. Table 9 shows the criminal courts cost weights produced in the 2020 Review.

[8] State-provided data from New South Wales, Queensland, Western Australia and the Northern Territory were used to derive the regional cost gradient. Most states were unable to meaningfully attribute costs to different districts. The Commission was restricted to those data that both contained remote areas and where costs were not proportional to the number of cases.

Table 9 Criminal courts regional cost weights

Remoteness	Cost weights
Major cities	1.000
Inner regional	1.000
Outer regional	1.000
Remote	1.206
Very remote	1.206

Source: Based on state and *Report on Government Services* data from 2015–16 and 2016–17.

32 Regional cost weights are then applied to assessed defendants in each remoteness area to derive cost-weighted assessed defendants.

33 To calculate a state's assessed defendant expenses, total criminal courts expenses are multiplied by the state's share of weighted assessed defendants, see Figure 3 for a worked example of a similar process in the police component.[9]

Step 5 – applying wage cost factor

34 Wage costs are a significant share of the total cost of providing criminal court services. Differences in wage costs between states have a differential effect on the cost of providing criminal court services. The criminal courts assessment uses the Commission's general method for measuring the influence of wage costs. Details on how this is calculated are in the wage costs chapter of the *Commission's Assessment Methodology*.

35 As a final step, expenses are rescaled to total criminal courts expenses, giving final assessed expenses.

Other legal services component

36 Other legal services is a non-deliberative equal per capita assessment, with adjustments for regional and wage costs. The other legal services component includes court and legal expenses not captured in the criminal courts component.

37 Expenses for the other legal services component include those legal services not associated with the prosecution or defence of criminal legal cases. This covers a wide range of functions including:

- civil courts
- Attorney-General departments
- crown solicitors
- law reform commissions.

[9] The criminal courts assessment uses cost-weighted defendants when calculating assessed expenses, it does not use cost-weighted populations.

Step 1 – calculate other legal service expenses

38 The Commission uses ABS Government Finance Statistics data to determine the shares of total state expenses in criminal courts and other legal services. This creates a 51:49 split between criminal courts and other legal service expenses respectively.

39 Other legal services expenses are then assessed for each state on an equal per capita basis.

Step 2 – applying regional cost factor

40 The regional cost gradient for criminal courts is applied to the civil court part of other legal services.

41 As most other legal services are provided from a centralised location, the regional cost factor only applies to the civil court-related expenses of the other legal services component. These expenses are identified using civil courts expenses reported in the *Report on Government Services*.

42 Expenses are then rescaled to total other legal services expenses.

Step 3 – applying wage cost factor

43 Wage costs are a significant share of the total cost of providing other legal services. Differences in wage costs between states have a differential effect on the cost of providing other legal services. The other legal services assessment uses the Commission's general method for measuring the influence of wage costs. Details on how this is calculated are in the wage costs chapter of the *Commission's Assessment Methodology*.

44 As a final step, expenses are rescaled to total other legal services expenses, giving final assessed expenses.

Prisons component

45 The prisons assessment is based on the number of assessed prisoners in a jurisdiction, with adjustments for regional and wage costs.

46 Expenses within the prisons component include:

- prisons
- juvenile detention
- community corrections expenses such as supervision of bail, parole or home detention, program participation and community work orders.

Step 1 – derive prisoner use rates

47 The Commission uses ABS data on prisoners and Australian Institute of Health and Welfare data on juvenile detainees to determine the socio-demographic composition of prisoners. The socio-demographic groups used in the prisons component are the same as in the criminal courts component and are outlined in Table 8.

48 The Commission imputes socio-economic status from defendants to prisoners. This is because it is not possible to directly measure socio-economic status for prisoners as data are not available.

49 The national average prisoner rate for each population sub-group is then calculated as the proportion of each of the 250 socio-demographic composition sub-groups who are prisoners.

Step 2 – calculate assessed prisoners

50 The number of assessed prisoners is derived by applying the national average prisoner rate for each of the 250 socio-demographic composition sub-groups to that sub-groups' population in each state. Figure 2 provides a worked example of a similar process in the police component.

51 To ensure comparability of data, the prisoner assessment uses an estimated residential population that preserves the Indigenous status proportions reported in the 2016 Census.

Step 3 – deriving and applying regional weights

52 A regional adjustment is applied to recognise the additional cost of service delivery in remote areas. The Commission uses a regression, which uses state data on remoteness and prisoner counts by security classification, to predict expenses in each corrective centre.

53 The prisons regression outputs inform the calculation of a regional cost gradient, which captures the costs associated with remoteness and prison size. Table 10 shows the prisons regional cost weights produced in the 2020 Review.

Table 10 Prisons regional cost weights

Remoteness	Cost weights
Major cities	1.00
Inner regional	1.00
Outer regional	1.00
Remote	1.17
Very remote	1.17

Source: Based on state data from 2015–16 and 2016–17.

54 Regional costs are applied to assessed prisoners in each remoteness area to derive cost weighted assessed prisoners.

55 To calculate a state's assessed prisoner expenses, total prisons expenses are multiplied by the state's share of weighted assessed prisoners, see Figure 3 for a worked example of a similar process in the police component.[10]

Step 4 – applying wage costs

56 Wage costs are a significant share of the total cost of providing prison services. Differences in wage costs between states have a differential effect on the cost of providing prison services. The prisons assessment uses the Commission's general method for measuring the influence of wage costs. Details on how this is calculated are in the wage costs chapter of the *Commission's Assessment Methodology*.

57 Expenses are then rescaled to total prisons expenses, giving final assessed expenses.

GST distribution in the 2025 Review

58 Table 11 shows the GST impact of the assessment in the 2025 Review.

Table 11 GST impact of the justice assessment, 2025–26

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total effect
	$m	$m	$m	$m	$m	$m	$m	$m	$m
Police	-218	-476	198	158	19	87	-60	292	754
Criminal courts	-10	-100	33	14	6	6	-17	67	127
Other legal services	6	1	-7	5	-5	-2	2	1	15
Prisons	-76	-581	192	137	-21	16	-52	384	729
Total ($m)	**-298**	**-1,155**	**416**	**314**	**-2**	**108**	**-127**	**744**	**1,582**
Total ($pc)	**-34**	**-161**	**73**	**103**	**-1**	**186**	**-262**	**2,894**	**57**

[10] The prisons assessment uses cost-weighted prisoners when calculating assessed expenses, it does not use cost-weighted populations.

15. Roads

Overview

1 The roads assessment covers state and territory (state) recurrent spending on the maintenance of roads, bridges, tunnels and other related services. It has the following components:

- rural roads
- urban roads
- bridges and tunnels.

2 The assessment recognises that roads expense needs are influenced by the following.

- Longer road networks — states with longer roads will have higher spending needs.
- Greater traffic volumes — states with more traffic will face higher spending on traffic control and safety measures, such as signage and traffic lights.
- Greater heavy vehicle use — states with greater heavy vehicle use need to spend more as this increases pavement wear and tear, requiring maintenance to restore the pavement.
- Longer bridge and tunnel lengths — states with more bridges and tunnels need to spend more on maintenance and repairs as these structures are more expensive to build and maintain than regular roads.
- Remoteness of the rural road network — states with a higher proportion of the rural road network in more remote areas will have higher spending needs.
- Wage costs — states facing greater wage cost pressures have higher spending needs.

Actual state expenses

3 The first step in calculating assessed expenses is identifying actual state expenses.[1] States collectively spent 3.7% of their total recurrent expenses on roads in 2022-23 (Table 1). Table 1 shows expenses broken down by component and Table 2 outlines actual expenses by state in 2022–23.[2]

4 Recurrent expenses include state spending on roads funded through the maintenance portion of the Infrastructure Investment Program for roads (around 3% of payments under this program, or $350 million in 2022–23). The remaining payments are assessed in the investment category, with 50% of national network

[1] Adjusted budget calculations use ABS Government Financial Statistics data to determine actual state expenses. For further details see the adjusted budget chapter of the *Commission's Assessment Methodology*.

[2] Tables in this chapter, unless otherwise stated, use 2022–23 data.

payments and their related expenditure removed from the adjusted budget and 50% assessed by applying state needs for roads investment.[3]

Table 1 Roads expenses by component, 2022–23

	2022-23	
	$pc	$m
Rural roads	206	5,409
Urban roads	199	5,247
Bridges and tunnels	28	735
Total	**433**	**11,391**
Proportion of total expenses (%)		**3.7**

Table 2 Roads expenses by state, 2022–23

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Roads ($m)	5,273	2,832	1,477	1,242	201	170	96	100	11,391
Roads ($pc)	639	422	274	438	109	296	208	400	433
Proportion of total expenses (%)	**5.3**	**3.6**	**2.5**	**3.7**	**1.1**	**2.4**	**1.5**	**1.7**	**3.7**

Structure of assessment

5 Table 3 outlines the drivers that influence expenses in each component.

Table 3 Structure of the roads assessment

Component	Driver	Influence measured by driver
Rural roads	Length	The length of the road network influences costs.
	Traffic	Traffic volume influences costs.
	Heavy vehicles	Heavy vehicles damage roads and affects costs.
	Regional costs (a)	The cost of providing services increases as the level of remoteness increases.
	Wage costs	Differences in wages between states affect costs.
Urban roads	Length	Large cities require more roads.
	Traffic	Traffic volume influences costs.
	Heavy vehicles	Heavy vehicles damage roads and affects costs.
	Wage costs	Differences in wages between states affect costs.
Bridges and tunnels	Length	The length of bridges and tunnels influences costs.
	Heavy vehicles	Heavy vehicles damage bridges and tunnels and affect costs.
	Regional costs (a)	The cost of providing services increases as the level of remoteness increases.
	Wage costs	Differences in wages between states affect costs.

(a) Applied to rural road lengths and bridge and tunnel lengths only.

[3] Commonwealth payments for National Network Roads are assessed 50% as not having an impact on GST because roads and transport infrastructure projects can have national objectives related to the efficient movement of people and goods, which the Commission's assessments do not capture.

Data

6 The data used in the assessment are outlined in Table 4.

Table 4 Data used in the roads assessment

Source	Data	Updated	Component
States	Bridge and tunnel lengths	5-yearly during methodology reviews	Bridges and tunnels
National Transport Commission	Expenses by state	Annually	All components; weights each component
	Heavy vehicle cost allocation	5-yearly during methodology reviews[(a)]	All components; distributes expenses between sub-components
	Traffic trend data	Last updated with 2019–20 data[(b)]	Splits urban/rural traffic and heavy vehicle use
Bureau of Infrastructure, Transport and Regional Economics	Road use data	Annually	All components; traffic and heavy vehicle use
ABS	Urban population	Annually	Urban road length
Pitney Bowes	Synthetic rural road network	Last updated during the 2020 Review	Rural road length

(a) The National Transport Commission reviewed its heavy vehicle cost allocation structure in 2021–22 but did not change it, therefore the allocation proportions used in the 2025 Review are the same as per the 2020 Review.

(b) Traffic trend data was based on the ABS' *Survey of Motor Vehicle Use*, which was discontinued after 2019–20. See paragraphs 19 to 21 for more detail.

Note: Data for the wage costs adjustment are also included in this assessment.

The adjusted budget data sources are outlined in the adjusted budget chapter of the *Commission's Assessment Methodology*.

Assessment method

Allocating expenses by component and driver

7 National Transport Commission data are used to apportion total roads expenses between components (rural roads, urban roads and bridges and tunnels); and between the drivers of cost (road length, traffic volume and heavy vehicle use).

8 Urban roads refer to the state road network within urban centres of 40,000 or more people, based on the National Transport Commission definition. Rural roads are other state roads.

9 Table 5 shows the National Transport Commission reported expenses and attribution. These data are used to allocate state spending to the 3 components (rural roads, urban roads and bridges and tunnels) and across the 3 drivers for each of these components.

Table 5 National Transport Commission state expenses by purpose, 2022–23

	Total spend, 2022–23				Allocation to driver		
	Rural	Urban	Bridges and tunnels	Total	Road length	Road traffic volume	Road heavy vehicle use
NTC expense categories	$m	$m	$m	$m	%	%	%
A: Servicing and operating	912	586	0	1,498	0	100	0
B: Road pavement and shoulder construction							
B1: Routine maintenance	536	353	0	889	24	38	38
B2: Periodic surface maintenance	606	417	0	1,023	30	10	60
C: Bridge maintenance/rehabilitation (a)	0	0	537	537	67	0	33
D: Road rehabilitation	855	1,178	0	2,034	55	0	45
E: Low-cost safety/traffic	775	1,027	0	1,802	0	100	0
G: Other miscellaneous activities							
G1: Corporate services	507	490	72	1,069	(b)	(b)	(b)
G2: Enforcement of heavy vehicle regulatory costs	79	76	0	154	0	0	100
G3: Vehicle registration	195	188	28	410	(b)	(b)	(b)
G4: Driver licensing	126	122	18	266	(b)	(b)	(b)
H: Other road-related payments							
H3: Spending on local access roads in unincorporated areas	25	24	0	50	(b)	(b)	(b)
H4: Direct spending on council managed local access roads	575	555	0	1,130	(b)	(b)	(b)
H5: Any other direct state spending on local access roads	79	76	0	155	(b)	(b)	(b)
Total	**5,271**	**5,091**	**655**	**11,017**			

(a) Spending on tunnels also falls under this category.
(b) Spending on most miscellaneous services and local roads are allocated between drivers in the same proportion as the total for other National Transport Commission expense categories.
Source: National Transport Commission (NTC), *State roads expenditure data 2022–23* [unpublished data set], NTC, 2023.

10 The allocated drivers for each National Transport Commission expense category are summed to estimate a total spend across 9 subcomponents (Table 6). These shares of spending are applied to total spending on roads.

Table 6 Shares of spending by component and driver, 2022–23

	Length	Traffic volume	Heavy vehicle use	Total
	%	%	%	%
Rural roads	9.9	24.8	13.1	47.8
Urban roads	10.9	22.7	12.6	46.2
Bridges and tunnels	4.0	0.0	2.0	5.9
Total	**24.8**	**47.5**	**27.6**	**100.0**

Source: NTC, *State roads expenditure data 2022–23*.

Rural roads

11 The assessment of rural roads recognises the influence of road length, traffic volume, and heavy vehicle use of state spending needs.

Rural road length

12 To achieve a policy neutral estimate of the length of the state road network outside urban centres of 40,000 or more, the Commission developed an assessed (or synthetic) rural state road network. This used an algorithm that measured rural roads by connecting all ABS Urban Centres and Localities, and connecting mines and gas wells to their nearest port, and connecting ports and national parks to their nearest locality.

13 The algorithm was run using 2018 data across the Pitney Bowes routable 'RouteFinder Links' dataset using its RouteFinder software to select the appropriate roads for inclusion. This dataset includes all accessible roads regardless of whether states classify them as state or local roads.[4]

14 All areas in Australia were allocated to the nearest urban centre. The centres with over 1,000 people were connected to all adjacent centres of over 1,000 people using the fastest driving route.[5] All localities of between 200 and 1,000 people were connected to the nearest 2 urban centres of over 1,000 people by the fastest route. These small centres were connected to 2 larger centres because on average, state road data indicated that small urban centres had 1.8 connections to other centres.

15 Roads on the synthetic road network were assumed to have 2 lanes, unless state data indicated they had more, in which case actual lane numbers were used.

16 Table 7 shows the measures of rural road lane-kilometres for the 2025 Review.

Table 7 Estimated rural road lane-kilometres, 2025 Review

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	km	km	km	km	km	km	km	km	km
Roads between towns	68,110	38,665	64,478	46,283	27,294	7,567	183	27,346	279,926
To ports	13	44	240	517	224	71	0	116	1,224
To mines	668	382	3,424	4,110	1,191	0	0	677	10,452
To national parks	6,985	1,496	13,913	3,894	2,597	1,035	162	1,177	31,260
Additional lanes	1,627	555	527	532	512	192	21	188	4,155
Total	**77,402**	**41,142**	**82,582**	**55,336**	**31,819**	**8,865**	**366**	**29,505**	**327,017**

Note: The rural road network assumes 2 lanes per road. The length of additional lanes was added using state-provided data.
Source: Pitney Bowes, *Routefinder Networks Australia 2018.05* [unpublished data set], Pitney Bowes, 2018; and state data.

[4] Four-wheel drive roads, restricted access roads and access roads to private property were not considered to be broadly accessible and were excluded.

[5] The fastest route was found by attributing a speed limit of 80 kilometres per hour to connector and local roads. Highways and motorways were assigned their actual speed limits.

Traffic volume

17 The National Transport Commission recognises that traffic volume has an impact on the cost of maintaining roads. Roads with expected high traffic volumes are usually built to higher standards and cost more to maintain. Roads with high traffic volumes also have a higher level of traffic control and safety measures (such as signage, traffic lights and worker protection requirements during maintenance work).

18 Estimates of the share of vehicle kilometres travelled on arterial roads that are in urban and rural areas are derived from National Transport Commission data for each state. These shares are applied to the Bureau of Infrastructure, Transport and Regional Economics estimates of total vehicle kilometres travelled in each state to estimate urban and rural vehicle kilometres travelled in each state.

19 These traffic volume data were based on the ABS' Survey of Motor Vehicle Use. This survey was a major source for traffic data but has been discontinued by the ABS. The survey was last completed for 2019–20.

20 Due to the discontinuation of the survey, the National Transport Commission no longer provides traffic data split by rural and urban traffic. The road assessment uses the trend rural/urban traffic split calculated from the time series of surveys of motor vehicle use over the 7 years to 2019–20. Traffic data by vehicle type from the Bureau of Infrastructure and Transport Research Economics will continue to be updated annually. This will be based on historical Survey of Motor Vehicle Use data, smoothing techniques and additional data sources including fuel sales, motor vehicle registrations and fleet fuel efficiency.

21 The Bureau of Infrastructure and Transport Research Economics is investigating possible replacements for the Survey of Motor Vehicle Use. If the Commission finds these data fit for purpose in consultation with states, it may use them as the most reliable estimates of urban and rural traffic.

22 Rural traffic volume by state is shown in Table 8.

Table 8 Traffic volume in rural areas by state, 2022-23

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Rural traffic volume ('000 vehicle kilometres travelled)	12,135	9,180	8,631	4,966	3,910	1,097	0	570	40,488
State share of traffic (%)	30.0	22.7	21.3	12.3	9.7	2.7	0.0	1.4	100.0

Source: Bureau of Infrastructure, Transport and Regional Economics (BITRE), *Vehicle Kilometres Travelled 2023 estimates* [unpublished data set], BITRE, 2023; and National Transport Commission (NTC), *State roads trend data, 2020–21* [unpublished data set], NTC, 2021.

Heavy vehicle use

23 The National Transport Commission recognises in its cost allocation matrix that heavy vehicles cause more wear and tear to roads than cars, although average weights of passenger vehicles have been trending upwards over time. There are also regulatory costs associated with heavy vehicle use.

24 Total tonne-kilometres are estimated by applying National Transport Commission average gross mass values of articulated trucks and other heavy vehicles to the kilometres travelled by that class of 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. The heavy vehicle use in rural areas is shown in Table 9.

Table 9 Heavy vehicle use in rural areas by state, 2022–23

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Rural heavy vehicle use (million tonne km)	52,341	34,650	38,195	28,108	20,388	4,250	0	2,832	180,763
Share of heavy vehicle use (%)	29.0	19.2	21.1	15.5	11.3	2.4	0.0	1.6	100.0

Source: BITRE, *Vehicle Kilometres Travelled 2023 estimates*; and NTC, *State roads trend data, 2020–21.*

Applying regional costs

25 The Rawlinsons construction cost gradient is used to reflect the different cost of maintenance in different remoteness areas. Due to generalising from general construction costs to road maintenance, a 25% discount is applied to the Rawlinsons regional cost gradient, and the gradient is only applied to rural road length. As there are no comprehensive data on the distribution of rural traffic volumes and heavy vehicle use across remoteness areas, these elements do not have a regional cost weight applied to them.

Applying wage costs

26 Wages costs are a significant share of the total cost of maintaining roads. Differences in wage costs between states have a differential effect on the cost of rural road maintenance. The roads assessment uses the Commission's general method for measuring the influence of wage costs. Details on how this is calculated are in the wage costs chapter of the *Commission's Assessment Methodology*.

Urban roads

27 Like rural roads, the assessment of urban roads recognises the cost of road length, traffic volume, and heavy vehicle use. The relative importance of these drivers is shown in Table 6.

Urban road length

28 State populations within urban centres of 40,000 or more people are used as a proxy for urban road lengths. This geography matches the geography used by the Bureau of Infrastructure, Transport and Regional Economics and the National Transport Commission. Table 10 shows the state shares of urban population.

Table 10 Population in urban centres of 40,000 people or more, December 2022

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Urban population ('000)	6,763	5,723	4,482	2,369	1,397	365	460	130	21,690
Total population ('000)	8,246	6,717	5,385	2,832	1,836	572	461	251	26,300
Urban proportion of state (%)	82.0	85.2	83.2	83.7	76.1	63.8	99.7	52.0	82.5

Source: Australian Bureau of Statistics, *Estimated resident population December 2022*, ABS, 2024, accessed 1 August 2024.

Traffic volume

29 Traffic volume data are sourced from the Bureau of Infrastructure, Transport and Regional Economics using the same methods as for rural roads. Table 11 shows urban traffic volume by state.

Table 11 Traffic volume in urban areas by state, 2022–23

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Urban traffic volume ('000 vehicle kilometres travelled)	36,065	32,857	27,406	14,103	6,837	2,222	2,568	824	122,882
State share of traffic (%)	29.3	26.7	22.3	11.5	5.6	1.8	2.1	0.7	100.0

Source: BITRE, *Vehicle Kilometres Travelled 2023 estimates*; and NTC, *State roads trend data, 2020–21.*

Heavy vehicle use

30 Urban heavy vehicle use by state is calculated using the same methods as for rural heavy vehicle use. The results are shown in Table 12.

Table 12 Heavy vehicle use in urban areas by state, 2022–23

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Urban heavy vehicle use (million tonne kilometres)	84,727	65,183	58,777	24,519	12,844	4,430	1,629	1,523	253,632
Share of heavy vehicle use (%)	33.4	25.7	23.2	9.7	5.1	1.7	0.6	0.6	100.0

Source: BITRE, *Vehicle Kilometres Travelled 2023 estimates;* and NTC, *State roads trend data, 2020–21.*

Applying regional costs

31 The Commission does not apply a separate regional costs factor to urban roads expenses because there is no clear conceptual case that the location of major urban centres with more than 40,000 people would affect the cost of road maintenance.

Applying wage costs

32 Wages costs are a significant share of the total cost of maintaining roads. Differences in wage costs between states have a differential effect on the cost of urban road maintenance. The roads assessment uses the Commission's general method for measuring the influence of wage costs. Details on how this is calculated are in the wage costs chapter of the *Commission's Assessment Methodology*.

Bridges and tunnels

33 Bridges and tunnels cost significantly more to build and maintain than roads. They are required because of topological features such as waterways and changes in elevation. States also respond to safety issues and the complexity of their road and rail networks by building bridges and tunnels over or under other sections of the networks to avoid intersections. The total length of these structures is a primary driver of bridge and tunnel expenses.

34 Other influences on bridge and tunnel maintenance expenses and investment are the size of a state's road network, which increases the likelihood of bridges and tunnels, and traffic volume (including heavy vehicle use), which influences the type and size of bridges and tunnels and the maintenance costs.

Bridge and tunnel lengths

35 Bridge and tunnel lengths are measured by using actual lengths of bridges and tunnels managed by states, using state-provided data. Only structures of at least 4 metres in length are included to ensure comparability across datasets. These lengths are shown in Table 13.

Table 13 Bridge and tunnel lengths by state, 2024

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	km	km	km	km	km	km	km	km	km
Bridges	221,673	136,892	196,549	55,296	31,618	23,518	12,047	13,663	691,257
Tunnels	578	21	549	1,660	1,040	0	190	0	4,037
Total	**222,251**	**136,913**	**197,098**	**56,956**	**32,658**	**23,518**	**12,237**	**13,663**	**695,294**
Shares (%)	**32.0**	**19.7**	**28.3**	**8.2**	**4.7**	**3.4**	**1.8**	**2.0**	**100.0**

Source: State data.

36 The assessment does not account for differences in bridge and tunnel size and complexity. Given the variability in structure descriptions at this level of detail, it is not clear how such differences could be reliably measured.

Heavy vehicle use

37 The assessment of heavy vehicle use rates for bridges and tunnels uses total tonne-kilometre data for both urban and rural roads. These data are shown in Table 14.

Table 14 Estimated total heavy vehicle use by state, 2022–23

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Total heavy vehicle use (million tonne kilometres)	137,068	99,833	96,971	52,626	33,232	8,680	1,629	4,354	434,394
Share of heavy vehicle use (%)	31.6	23.0	22.3	12.1	7.7	2.0	0.4	1.0	100.0

Source: BITRE, *Vehicle Kilometres Travelled 2023 estimates.*

Applying regional costs

38 As with the rural roads component, the Commission applies the Rawlinsons regional cost gradient, with a 25% discount, to bridge and tunnel length expenses based on the length of bridges and tunnels by remoteness regions.

Applying wage costs

39 Wages costs are a significant share of the total cost of maintaining roads, bridges and tunnels. Differences in wage costs between states have a differential effect on the cost of bridge and tunnel maintenance. The roads assessment uses the Commission's general method for measuring the influence of wage costs. Details on how this is calculated are in the wage costs chapter of the *Commission's Assessment Methodology*.

Discounting the assessment

40 The Commission considers there is a conceptual case for the drivers in the road assessment, although given data limitation, there are uncertainties with some aspects of the assessment. The Commission is concerned with the reliability of:

- the synthetic rural road network as a reflection of state rural road length needs
- heavy and light vehicle traffic volume data
- the relative importance of road length, heavy and light vehicle traffic as drivers of expense needs
- the comprehensiveness of major drivers of differences in spending need.

41 Given the range of uncertainties, the Commission considers a discount of the assessment is warranted. Using a discount moves the assessment closer to equal per capita. The level of discount applied requires judgement, and across the Commission's assessments range from 12.5% to 25% depending on the level of uncertainty (discussed in the fiscal equalisation, supporting principles and assessment guidelines chapter of *Review Outcomes*). In relation to the roads assessment, the level of uncertainty is relatively low and the Commission considers a discount of 12.5% is appropriate. This discount is in addition to the 25% discount already applied to the Rawlinsons regional cost gradient, used in the assessment of rural road length and bridges and tunnels length.

GST distribution in the 2025 Review

42 Table 15 shows the GST impact of the assessment in the 2025 Review.

Table 11 GST impact of the roads assessment, 2025–26

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total effect
	$m	$m	$m	$m	$m	$m	$m	$m	$m
Rural roads	-198	-373	109	226	168	20	-96	144	667
Urban roads	-30	39	82	10	-68	-20	1	-15	132
Bridges and tunnels	1	-40	48	-8	-11	6	-4	8	62
Total ($m)	**-227**	**-374**	**240**	**229**	**90**	**5**	**-99**	**137**	**700**
Total ($pc)	**-26**	**-52**	**42**	**75**	**47**	**9**	**-205**	**532**	**25**

Note: Magnitude and direction of GST impact can change from year to year.

16. Transport

Overview

1 The transport assessment covers state and territory (state) expenses on urban and non-urban public transport services. It has the following components:

- urban transport
- non-urban transport.

2 The assessment recognises that transport expense needs are influenced by the following.

- Demand — urban centres with above-average population-weighted density have higher demand for public transport, which results in higher spending needs.
- Supply — the population of an urban centre and the presence of heavy rail influence the supply of public transport services. Passenger numbers (heavy rail, bus and light rail) are used to measure the amount of public transport provided in an urban centre. Urban centres with higher passenger numbers need to provide more public transport and have higher spending needs.
- Presence of transport modes — urban centres that require ferry services have higher spending needs.
- Topography — urban areas with greater slope have higher spending needs.
- Network complexity — urban centres with greater road travel distances have higher spending needs.
- Wage costs — states facing higher cost pressures have higher spending needs.
- Regional costs — the cost of providing services increases as the level of remoteness increases.

Actual state expenses

3 The first step in calculating assessed expenses is identifying actual state expenses.[1] States collectively spent 5.7% of their total recurrent expenses on public transport in 2022–23. Table 1 shows expenses broken down by component and Table 2 shows actual expenses by state.[2]

[1] Adjusted budget calculations use ABS Government Financial Statistics data to determine actual state expenses. For further details see the adjusted budget chapter of the *Commission's Assessment Methodology*.

[2] Tables in this chapter, unless otherwise stated, use 2022–23 data.

Table 1 Transport expenses by component, 2022–23

	2022-23	
	$pc	$m
Urban transport	604	15,899
Non-urban transport	65	1,700
Total	**669**	**17,599**
Proportion of total expenses (%)		**5.7**

Table 2 Transport expenses by state, 2022–23

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Transport ($m)	7,527	4,594	2,827	1,536	744	107	222	41	17,599
Transport ($pc)	913	684	525	542	405	187	482	165	669
Proportion of total expenses (%)	**7.6**	**5.8**	**4.8**	**4.5**	**4.0**	**1.5**	**3.5**	**0.7**	**5.7**

Structure of assessment

4 The transport assessment comprises 2 components: urban and non-urban transport. Table 3 outlines the drivers that influence spending needs in each component.

Table 3 Structure of the transport assessment

Component	Driver	Influence measured by driver
Urban transport	Urban centre characteristics	Population-weighted density, use and presence of public transport modes, distance to work and topography influence the use and cost of services.
	Urban population	Urban transport services vary by the share of the state population living in urban areas.
	Wage costs	Differences in wage costs between states affect costs.
Non-urban transport	Equal per capita	Population drives the use and cost of services.
	Wage costs	Differences in wage costs between states affect costs.
	Regional costs	The cost of providing services increases as the level of remoteness increases.

Data

5 The data used in the assessment are outlined in Table 4.

Table 4 Data used in the transport assessment

Source	Data	Update			Component
		Regression	Variables applied to coefficients	Other	
States	Net expense data	5 yearly during methodology reviews (a)			Urban transport
Geoscience Australia	Significant Urban Area slope	5 yearly during methodology reviews	Each census		Urban transport
Bureau of Infrastructure and Transport Research Economics	Kilometres travelled	5 yearly during methodology reviews	Annually, until 2026 Census data are available		Urban transport
ABS	Significant Urban Area and Urban Centre and Locality classifications	5 yearly during methodology reviews	Each census		Urban transport
	Census journey to work data (method of travel to work)		Each census		Urban transport
	Square kilometre population		Annually(b)		Urban transport
	Census journey to work (distance to work)		Each census		Urban transport
	Significant Urban Area population data		Annually		Urban transport
	State population data			Annually	Urban and Non-urban transport

(a) In the 2026 Update, the regression will be updated with state net expense data for 2023–24. After this, expense data will remain fixed until the next review.

(b) Population-weighted density is lagged by one year. This is because ABS population data for the square kilometre grid are not available until late March.

Note: Data for the wage costs adjustment are also included in this assessment.

The adjusted budget data sources are outlined in the adjusted budget chapter of the *Commission's Assessment Methodology*

Assessment method

6 The urban transport component uses a regression-based approach reflecting the conceptual drivers of urban transport costs. This is blended with state shares of urban populations.[3]

7 The non-urban transport component is assessed using a state's population share (equal per capita).

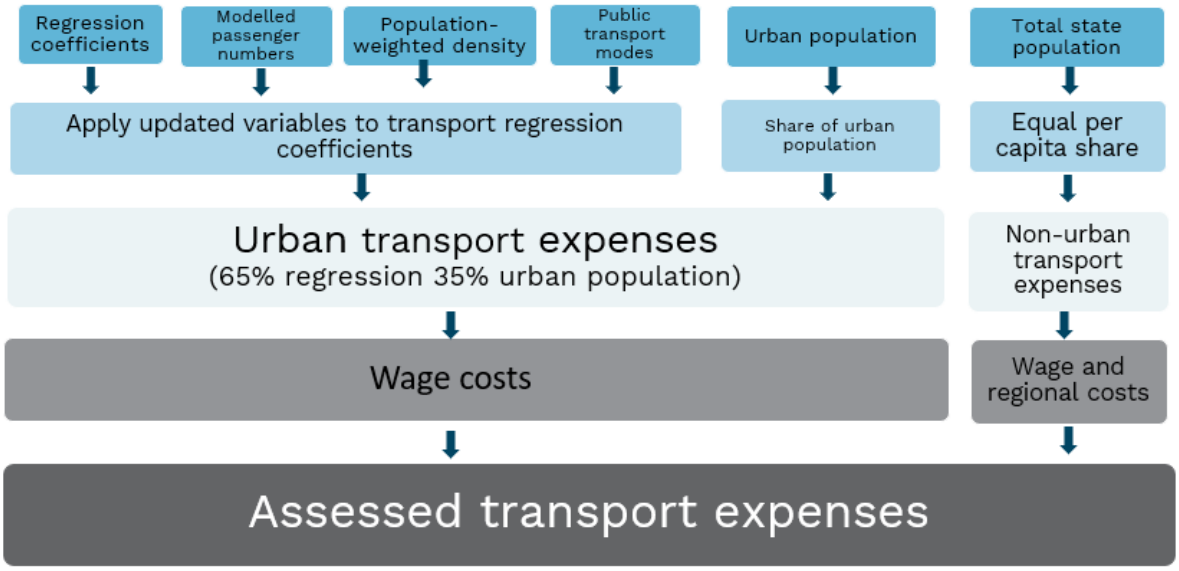
8 For both components, a wage cost adjustment is made to reflect differences in wage costs across states.

9 For the non-urban transport component, an additional regional cost adjustment is made to reflect the higher cost of providing transport services in remote areas.

10 For more information about these adjustments, refer to the wage costs and geography chapters of the *Commission's Assessment Methodology*.

11 Figure 1 presents a stylised flow diagram of the transport assessment.

Figure 1 Stylised representation of the transport assessment



[3] Blending was introduced in the 2020 Review to account for the inherent limitations in the model relating to the use of proxies and limited data. The blending shares are outlined below from paragraph 40.

Urban transport

12 Figure 2 shows the method used to assess urban transport expenses in each state.

Figure 2 Urban transport component assessment (recurrent)

Urban centre characteristics

Step 1 - Estimating urban centre characteristics regression coefficients

13 The Commission uses a regression model to calculate the net per capita costs of providing public transport in an urban area. The regression model allows the Commission to estimate the impact of urban centre characteristics on net per capita spending on urban transport.

14 Expenses and urban characteristics are assessed based on Significant Urban Areas, defined by the ABS as urban areas with a population above 10,000 (see Attachment A).

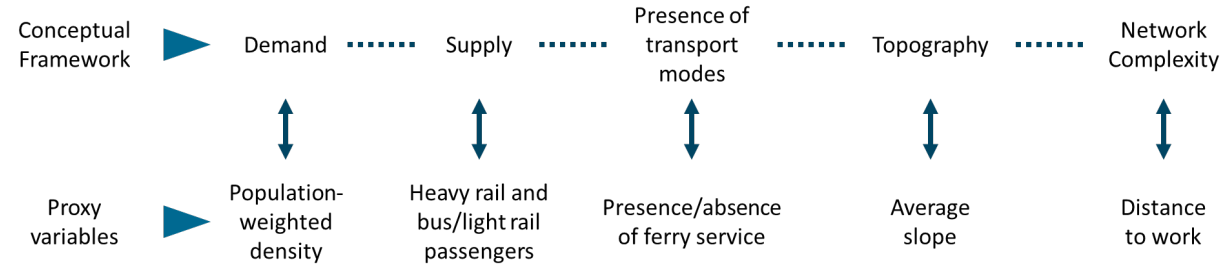
Conceptual drivers of urban transport spending

15 The variables selected for use in the regression model are based on the conceptual drivers of urban transport spending. They are: demand for urban transport, supply of urban transport services, network complexity, topography and the presence of transport modes. To capture these characteristics, proxy variables are used.

Proxy variables to capture drivers of urban transport spending

16 Figure 3 shows the proxy variables used to capture drivers.

Figure 3 Urban centre characteristics recognised in the transport regression model and the explanatory variables used to represent them



17 **Demand** is captured by population-weighted density. Higher density is associated with an increase in congestion on public roads, and a greater reliance on public transport. This higher demand for public transport necessitates the use of more frequent or higher capacity public transport services, which raises net expenses.

18 **Supply** is captured by heavy rail passenger numbers and bus and light rail passenger numbers.[4] Heavy rail accounts for high-capacity public transport, while bus and light rail services account for low-capacity public transport. This recognises that once cities become sufficiently large, heavy rail networks are unavoidable. Bus and light rail passengers are combined into a single measure as they are substitute forms of transport.

19 **Presence of transport modes** is represented by a ferry dummy variable to ensure the model captures all transport modes.

20 **Topography** is captured by slope. Slope reflects differences in the topographic features of urban areas, which can influence transport spending.

21 **Network complexity** is captured by distance to work. It reflects increased costs associated with the greater complexity of transport networks. As urban cities extend, the complexity of individual trips increases, often requiring multi-modal interchanges and routes.

How variables are measured for use in the urban centre characteristics regression

22 Variables are derived for all urban areas across Australia. The assessment uses the ABS definition of an urban centre, Urban Centres and Localities contained within

[4] The model assumes the supply of public transport services (measured using passenger numbers) is equal to demand (measured using population-weighted density).

Significant Urban Areas. See Attachment A for more details on the specification of urban areas and methods described below.

23 **Population-weighted density ($density_i$)**. First, the population density of cells in the square kilometre grid within an urban area is calculated.[5] The density of the cells is then weighted by their share of the urban area population. For example, if a cell has a density of 100 and a population share of 0.1, its contribution to population-weighted density is 10. The population-weighted density contribution of all cells are then combined to derive the population-weighted density of an urban area.

24 **Actual passenger numbers ($pax_{i,B+LR}$) ($pax_{i,HR}$)**. Passenger numbers are estimated for bus and light rail and heavy rail separately. Use rates for each mode are calculated by taking commuter use as a proportion of total urban area population. Commuter numbers are used as they reflect peak load on urban transport systems. Use rates are multiplied by the urban area populations to obtain actual passenger numbers. For example, if a third of commuters use heavy rail, heavy rail passenger numbers are estimated to equal one third of the urban area population. To account for economies of scale in public transport provision, the log of actual passenger numbers is used.

25 Use rates are then indexed using Bureau of Infrastructure and Transport Research Economics data on passenger kilometres travelled.[6] This adjustment will be removed if 2026 Census commuter data are incorporated into the assessment.[7]

26 **Distance to work ($dist_i$)**. Distance to work is calculated as the shortest distance between an individual's residence and their place of work.[8]

27 **Slope ($slope_i$)**. First, the average slope of Urban Centres and Localities is derived using data from Geoscience Australia. The slope of these Urban Centres and Localities are then weighted by their share of the total area of a Significant Urban Area. The weighted values for the Urban Centres and Localities with the urban area are combined to calculate the average slope of the area.

28 **Presence of a ferry service ($ferry_i$)**. An urban area is identified as having a ferry service if it has a ferry service that operates wholly within the urban area.[9]

[5] Urban Centres and Localities are used as the sub-areas within Significant Urban Areas.

[6] This adjustment was introduced in the 2025 Review to address the continued use of 2016 Census commuter data in the model. 2021 Census commuter data could not be incorporated into the assessment because they were impacted by COVID-19 restrictions.

[7] The assessment will be updated with 2026 Census data if they are deemed fit for purpose. Data are likely to be available for the 2028 Update.

[8] 2021 Census journey to work data are used. Because census respondents were required to provide their usual place of work, the Commission considered these data were not impacted by COVID-19 restrictions.

[9] Ferries that operate between Significant Urban Areas are not considered to be operating urban transport services. In the 2025 Review, 6 urban areas were identified as having an urban ferry service, Sydney, Melbourne, Brisbane, Perth, Newcastle-Maitland and Hobart.

Running the urban centre characteristics regression

29 The regression model can be specified as:

$$net\ exp_i = \beta_0 + \beta_1 density_i + \beta_2 ln(pax_{i,HR}) + \beta_3 ln(pax_{i,B+LR}) + \beta_4 dist_i + \beta_5 slope_i + \beta_6 ferry_i$$

30 The regression coefficients applied in the 2025 Review are provided in Table 5.

Table 5 Urban characteristics regression results, 2022–23

Variable	Coefficient
	($ per capita)
Intercept	-197.22
Population-weighted density	0.16
Heavy rail passengers (logged)	9.08
Bus and light rail passengers (logged)	10.74
Median distance to work	2.08
Average slope	12.51
Ferry dummy variable	40.45

Note: The urban transport regression uses net expense data from 2022–23.
80 urban areas with available data were used to estimate the regression.
These coefficients will be revised in the 2026 Update with 2023–24 state net expense data.

31 The regression estimates the impact of urban characteristics on the net per capita expenses in an urban area. For example, as Table 5 shows, an additional person per square kilometre in an urban area increases public transport demand and results in an additional cost of $0.16 per person.[10]

32 2022–23 state net expense data for each urban area are used to estimate costs associated with the drivers of need identified above.[11] For some smaller urban areas, a minimum cost of $20 per capita is applied to account for the fixed costs associated with transport services.

Step 2 - Applying the urban centre characteristics regression coefficients

33 To obtain spending estimates, the regression coefficients are applied to the characteristics for each individual Significant Urban Area.

34 For some variables, annual data can be used to account for the changing nature of urban areas, while other variables will remain fixed until new data become available. Table 6 outlines when variables are updated and the corresponding methods.

[10] Costs are applied to populations in urban areas.

[11] An average of 2022–23 and 2023–24 net expense data will be incorporated into the model in the 2026 Update.

Table 6 Updating variables applied to the regression coefficients

Variable	Updated	Method
Population-weighted density	Annually[(a)]	Same method used in the regression
Passenger numbers	Annually	Modelled passenger numbers, indexed by BITRE (see below)
Distance to work	When new census data become available	Same method used in the regression
Slope	When new census data become available	Same method used in the regression
Ferry	When new urban ferry services begin or existing ferry services cease	Urban areas included as required

(a) Population-weighted density is lagged by one year. This is because ABS population data for the square kilometre grid is not available until late March.

35 The urban areas to which the regression variables are applied will be updated following the release of the next Australian Statistical Geography Standard (expected in the 2028 Update).

Modelling passenger numbers

36 To remove the potential influence of policy decisions which can affect public transport use, passenger numbers are modelled using a separate regression model. The regression model assumes there is a constant relationship between the percentage growth in urban populations (pop_i) and the percentage growth in total passenger numbers (pax_i). This is captured by using the logarithm of both variables in the regression. The presence of rail is represented as a dummy variable ($train_i$), recognising the need for high-capacity public transport where passenger numbers are very high.

37 This model can be specified as:

$$ln(pax_i) = \beta_0 + \beta_1 ln(pop_i) + \beta_2 train_i$$

38 Consistent with the method used for estimating actual passenger numbers in the regression, Bureau of Infrastructure and Transport Research Economics data are used to index pre-pandemic data until 2026 Census data are available.

Step 3 - Estimating state expenses

39 Following application of the regression model the estimated per capita expenses for each urban area are multiplied by its population to obtain total net expenses. These expenses are aggregated by state to obtain total state net expenses.

Step 4 - Blending with urban population

40 The net expenses derived using the urban centre characteristics regression model are blended with state shares of urban populations.[12]

41 A blending ratio of 65:35 (urban centre characteristics regression model to urban population shares) will be applied to the recurrent transport assessment until

[12] Blending was introduced in the 2020 Review to account for the inherent limitations in the model relating to the use of proxies and limited data.

2026 Census commuter data are incorporated in the method for modelling passenger numbers. After this, the blending ratio will return to 75:25.[13]

42 Table 7 shows the relative shares of Significant Urban Area populations.

Table 7 State shares of urban populations, 2022–23

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	%	%	%	%	%	%	%	%	%
Urban population share	31.5	26.2	20.0	11.1	6.8	1.7	2.1	0.7	100

Step 5 - Applying wage costs

43 Wage costs are a significant share of the total cost of providing urban transport services. Differences in wage costs between states affect the cost of providing urban transport services. The urban transport assessment uses the Commission's general method for measuring the influence of wage costs. Details on how this is calculated are in the wage costs chapter of the *Commission's Assessment Methodology*.

44 Expenses are then rescaled again to total urban transport expenses, giving final assessed expenses.

Non-urban transport

45 The non-urban transport assessment is based on state populations to recognise that people in urban and non-urban areas utilise non-urban transport services.

46 There are also adjustments for wages and regional costs (see Table 8).

Table 8 Non-urban transport, 2022–23

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Equal per capital share	533	434	348	183	119	37	30	16	1,700
Wage cost adjustment	-2	-2	1	1	0	0	0	2	0
Regional cost adjustment	2	0	-2	1	-1	-1	1	0	0
Assessed expenses	**533**	**432**	**347**	**185**	**118**	**37**	**30**	**18**	**1,700**

Transport investment

Urban transport

47 The urban centre characteristics regression model used in the assessment of urban transport recurrent expenses is also used in the urban transport investment assessment.

[13] In the 2025 Review the blending ratio was temporarily increased to 65:35. This was to recognise data issues arising from COVID-19 which necessitated the continued use of older data. It was decided the ratio will be returned to 75:25 when fit-for-purpose 2026 data are available. This is likely to be the 2028 Update. See the transport chapter of *Review Outcomes* for more details.

48 The urban centre characteristics regression model is blended with urban population-squared at a ratio of 75:25.[14] Unlike urban population in the recurrent assessment, population-squared is not used to account for data limitations in the model. It is used to recognise the linear relationship between assets per capita and urban transport asset needs. This suggests that, compared with recurrent costs, infrastructure costs grow at a faster rate as population increases.

Non-urban transport

49 Investment in non-urban transport is distributed based on state populations.[15]

GST distribution in the 2025 Review

50 Table 9 shows the GST impact of the assessment in the 2025 Review.

Table 9 GST impact of the transport assessment, 2025–26

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total effect
	$m	$m	$m	$m	$m	$m	$m	$m	$m
Urban transport	1,052	480	-710	-196	-273	-207	-48	-98	1,532
Non-urban transport	-1	-2	-1	3	-1	0	0	2	5
Total ($m)	**1,051**	**478**	**-711**	**-193**	**-275**	**-207**	**-48**	**-96**	**1,529**
Total ($pc)	**121**	**67**	**-124**	**-63**	**-144**	**-358**	**-99**	**-372**	**55**

Note: Magnitude and direction of GST impact can change from year to year.

[14] Maintaining the blending ratio for investment in urban transport recognises that investment decisions were not as strongly affected by COVID-19 restrictions as recurrent spending.

[15] See the investment chapter of the *Commission's Assessment Methodology* for full description of the investment assessment methodology and the GST impacts.

Attachment A

Regression — urban centre characteristics

51 In the 2020 Review the Commission engaged a consultants, Jacobs and Synergies economic consulting, to identify a measure of urban transport needs.[16] The model proposed by the consultants and adopted by the Commission identifies the effect of urban centre characteristics on the level of net per capita expenses.

52 The model of urban transport characteristics is specified below.

$$net\ exp_i = \beta_0 + \beta_1 density_i + \beta_2 ln\ (pax_{i,HR}) + \beta_3 ln(pax_{i,B+LR}) + \beta_4 dist_i + \beta_5 slope_i + \beta_6 ferry_i$$

53 Where $net\ exp_i$ is net per capita state expenses on public transport by urban centres.

- Population-weighted density ($density_i$) is a proxy used to represent demand for public transport.[17] It is calculated as the sum of density of each square kilometre grid in all Urban Centres and Localities within a Significant Urban Area weighted by the grid's population share of the Urban Centres and Localities in the Significant Urban Area.
- Median commuter distance to work ($dist_i$) is a proxy representing network complexity. It is derived using 2021 Census data on the distance travelled (shortest path of the road network) between an individual's usual residence and place of work.
- Mean land slope ($slope_i$) represents the topography of urban centres, as measured by the average mean slope of the urban areas. The data was generated from a spatial analysis process developed by Geoscience Australia.
- The natural logarithm of passenger numbers by public transport mode ($pax_{i,HR}$ and $pax_{i,B+LR}$) is a proxy which accounts for the supply of public transport. Heavy rail passengers are considered separately from bus and light rail passengers.
- A dummy variable is included to control for the presence or absence of ferry services as a mode of transport ($ferry_i$).

54 Table A-1 shows the coefficients applied in the 2025 Review.

Table A-1 Urban centre characteristics – regression coefficients, 2025 Review

Variable	Coefficient	Standard error	Significance	P value
	($ per capita)			
Intercept	-197.22	41.51	<0.001	0.00001
Population-weighted density	0.16	0.03	<0.001	0.00001
Heavy rail passengers (logged)	9.08	4.82	<0.1	0.0636
Bus & light rail passengers (logged)	10.74	8.03		0.1852
Median distance to work	2.08	3.67		0.5733
Average slope	12.51	5.98	<0.05	0.0400
Ferry dummy variable	40.45	46.76		0.3898

Note: The level of significance is only shown for variables which have a p-value less than 0.1 (they are statistically different from zero).

[16] Jacobs and Synergies Economic Consulting, *Urban Transport Consultancy Stage 2*, Commonwealth Grants Commission, 2019.

[17] The method recommended by the consultants to calculate population-weighted density was revised by the Commission in the 2025 Review.

Measure of urban areas

55 The ABS definition of an urban centre, Urban Centres and Localities contained within Significant Urban Areas, is used to define urban areas for the purposes of the transport assessment.

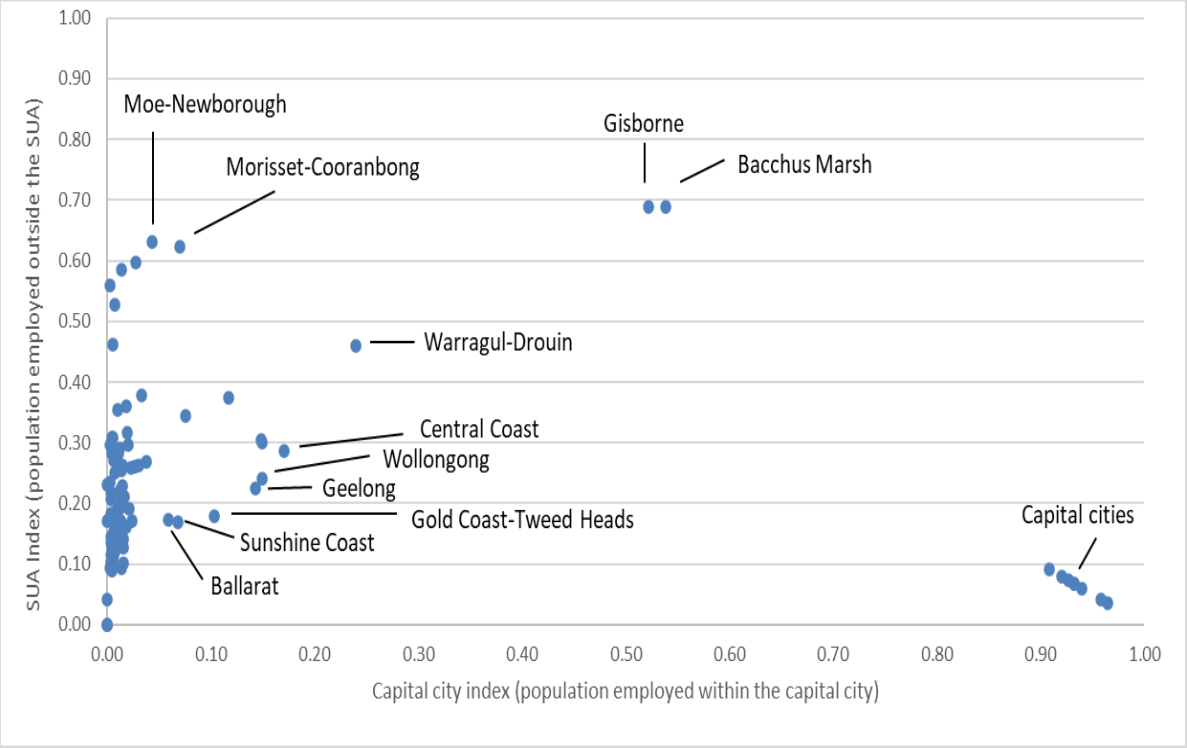
56 The Commission defines urban areas that have a highly integrated labour market with a neighbouring capital city as satellite cities. These cities are included as a part of the larger urban area in our calculations.

57 A Significant Urban Area is considered a satellite to a capital city if:

- it has a relatively high outside dependency index value (that is, a high proportion of people working outside the Significant Urban Area)
- it has a relatively high dependency to the capital city index value (that is, a high proportion of people working within the capital city Significant Urban Area).

58 To calculate these indices the Commission uses ABS journey to work data. A matrix is constructed detailing where people reside and work in each Significant Urban Area. The proportion of total people which work outside of the urban area, and the proportion of people in the urban area which work in the capital city are calculated. Figure A-1 shows the relevant indices for each Significant Urban Area.

Figure A-1 Satellite cities, 2021 Census



59 In the 2021 Census Bacchus Marsh and Gisborne meet the criteria for satellite cities. They have been amalgamated with Melbourne.

Population-weighted density

60 To calculate population-weighted density the Commission uses the ABS population grid and boundary files. While the square kilometre grid is fixed and both the Significant Urban Area and Urban Centre and Locality boundaries do not change between census years, the population files are updated annually.[18]

61 The square kilometres and associated populations are included in the measure if over 50 percent of the square kilometre is within the Urban Centre and Locality. This approach avoids issues of double counting as square kilometres are only allocated to a single Urban Centre and Locality.[19] Urban Centres and Localities are used instead of Significant Urban Area boundaries to ensure that sparsely populated areas on the fringes of Significant Urban Areas did not distort the density measure.

62 The density of each square kilometre area is then weighted by its relative share of the total Urban Centre and Locality population. The weighted densities of the square kilometres are then aggregated to obtain the population-weighted density of the entire Significant Urban Area.

Passenger numbers

63 To obtain the passenger numbers used in the regression the 2016 Census actual passenger number data are adjusted by an index based on Bureau of Infrastructure and Transport Research Economics data to obtain 2022–23 equivalents. Bureau of Infrastructure and Transport Research Economics data on passenger kilometres travelled is available for each state capital city, which is used to obtain indices for each Significant Urban Area in a state. 2021 Census passenger numbers are not appropriate for use because they are impacted by the COVID-19 pandemic. Passenger data used in the regression will remain fixed until the next review.[20]

64 The passenger numbers applied to the regression coefficients are modelled to remove policy influences. A regression model is used to account for the changing nature of public transport use as cities grow in size. The regression model can be specified as:

$$ln(pax_i) = \beta_0 + \beta_1 ln(pop_i) + \beta_2 train_i$$

65 Use rates for trains and bus/light rail passengers are then applied to the estimated total public transport passengers to obtain modelled passenger numbers for each Significant Urban Area.

[18] Population-weighted density used in the regression is fixed at 2022–23 levels. Population-weighted density applied to the regression is updated yearly with a lag of one year.

[19] Alternative approaches, including allocating square kilometres to urban areas based on where the centre of the square kilometre is placed resulted in implausibly high population-weighted density for some smaller Significant Urban Areas.

[20] The regression will be updated in the 2026 Update to incorporate 2023–24 net expense data. After the 2026 Update, the coefficients will remain fixed until the next review.

66 Once fit-for-purpose 2026 Census data are available, likely for the 2028 Update, the Bureau of Infrastructure and Transport Research Economics adjustment will be removed. Passenger numbers will continue to be modelled using a regression.

Distance to work

67 The ABS calculates distance to work by taking the shortest distance by road between a persons reported home address and usual work address. During the 2021 Census, the ABS released guidance advising people working at home due to COVID-19 restrictions to write the address they would normally work at. Therefore, the Commission considers the 2021 data are suitable for use in the 2025 Review.

17. Services to industry

Overview

1 The services to industry assessment covers state and territory (state) expenses on business regulation and development and state COVID-19 business support. It includes the following components:

- agriculture regulation
- mining regulation
- other industries regulation
- business development
- COVID-19 business support.

2 The assessment recognises that services to industry expense needs are influenced by the following.

- Size of regulated industry — states with larger industries have higher expense needs.
- Population shares — each states' expense needs are the same per person.
- Remoteness — states with remote workforces have higher expense needs.
- Wage costs — states facing greater wage cost pressures have higher spending needs.
- COVID-19 expenses — states with higher COVID-19 business support expenses covered by the national partnership agreements have higher expense needs.

Actual state expenses

3 The first step in calculating assessed expenses is identifying actual state expenses.[1] States collectively spent 3.8% of their total recurrent expenses on services to industry in 2022-23. Table 1 shows expenses broken down by component and Table 2 outlines actual expenses by state in 2022–23.[2]

Table 1 Services to industry expenses by component, 2022–23

	2022-23	
	$pc	**$m**
Agriculture regulation	42	1,100
Mining regulation	34	899
Other industries regulation	138	3,632
Business development	219	5,771
COVID-19 Business support	8	222
Total	**442**	**11,624**
Proportion of total expenses (%)		**3.8**

Table 2 Services to industry expenses by state, 2022–23

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Services to industry ($m)	5,679	2,821	1,352	1,221	125	143	16	269	11,624
Services to industry ($pc)	688	420	251	431	68	249	35	1,072	442
Proportion of total expenses (%)	**5.7**	**3.6**	**2.3**	**3.6**	**0.7**	**2.0**	**0.3**	**4.4**	**3.8**

[1] Adjusted budget calculations use ABS Government Finance Statistics data to determine actual state expenses. For further details see the adjusted budget chapter of the *Commission's Assessment Methodology*.

[2] Tables in this chapter, unless otherwise stated, use 2022–23 data.

Structure of assessment

4 Table 3 outlines the drivers that influence expenses in each component.

Table 3 Structure of the services to industry assessment

Component	Driver	Influence measured by driver
Agriculture regulation	Economic environment	The cost of providing regulatory services is dependent on the level of economic activity as measured by the size of the sector.
	Regional costs	The cost of providing services increases as the level of remoteness increases.
	Wage costs	Differences in wage costs between states affect costs.
Mining regulation	Economic environment	The cost of providing regulatory services is dependent on the level of economic activity as measured by the size of the sector.
	Regional costs	The cost of providing services increases as the level of remoteness increases.
	Wage costs	Differences in wage costs between states affect costs.
Other industries regulation	Economic environment	The cost of providing regulatory services is dependent on the level of economic activity as measured by the size of the sector.
	Population	Some regulatory functions such as consumer protection services target the total population rather than businesses or industries, which affects costs.
	Regional costs	The cost of providing services increases as the level of remoteness increases.
	Wage costs	Differences in wage costs between states affect costs.
Business development	Equal per capita	Population drives the use and cost of services.
	Wage costs	Differences in wage costs between states affect costs.
COVID-19 Business support	Actual Per Capita	State expenses reflect circumstances beyond state control.

Data

5 The data used in the assessment are outlined in Table 4.

Table 4 Data used in the services to industry assessment

Source	Data	Updated	Component
ABS	Output of industries by state for 2021–22	n/a	Agriculture regulation
			Mining regulation
			Other industries regulation
	% change in chain volume measures of production by state by industry	Annually	Agriculture regulation
			Mining regulation
			Other industries regulation
	Estimated resident population	Annually	Other industries regulation
			Business development
States	State spending on business development by industry	5-yearly	Agriculture regulation
			Mining regulation
			Other industries regulation
			Business development

Note: Data for the regional and wage costs adjustments are also included in this assessment.
The adjusted budget data sources are outlined in the adjusted budget chapter of the Commission's Assessment Methodology.

Assessment method

6 The following section outlines the Commission's method for deriving total state actual expenses for each regulation and business development component. It also describes the assessment method for each component.

Deriving state regulation and development expenses by industry

7 The services to industry assessment includes both regulation and development expenses. However, state expenses on business regulation and development are not identified in ABS Government Finance Statistics (GFS). Instead, ABS GFS classify state expenses by industry. As a result, before it can assess state expense needs, the Commission must first estimate state expenses on agriculture, mining and other industries regulation and business development.

8 Aggregate expenses on agriculture, mining and other industries are sourced from ABS GFS. The classification codes of government expenses for each industry are presented in Table 5.

Table 5 The classification of the functions of government – Australia concordance for each industry category

Agriculture	Mining	Other industries
421 Agriculture	431 Coal and other solid mineral fuels	411 General economic and commercial affairs
422 Forestry	432 Petroleum and natural gas	412 General labour affairs
423 Fishing and hunting	433 Nuclear fuel	442 Manufacturing
472 R&D – agriculture, forestry, fishing and hunting	434 Other fuels	443 Construction
	436 Non-electric energy	461 Distributive trade, storage and warehouse
	439 Fuel and energy n.e.c	462 Hotels and restaurants
	441 Mining of mineral resources other than mineral fuels	463 Tourism
	473 R&D – fuel and energy	464 Multipurpose development projects
		471 R&D – general economic, commercial and labour affairs
		474 R&D – mining, manufacturing and construction
		476 R&D – other industries
		499 Economic affairs n.e.c

9 State expenses on business regulation and development are subsequently disaggregated using data provided by the states. Every 5 years, during a review, the Commission asks states to provide data on their business development expenses. These data are used to estimate the average share of national expenses on business regulation and development activities in each industry category. The proportions are held constant between reviews. Table 6 shows the state and national average shares of agriculture, mining and other industry spending that are for business regulation and development.

Table 6 Share of state services to industry expenses on business regulation and development by industry

	2025 Review by State								2025 Review	2020 Review
	NSW	Vic	Qld	WA	SA	Tas	ACT	NT		
	%	%	%	%	%	%	%	%	%	%
Agriculture										
Regulation	15	73	49	97	58	27	na	6	44	50
Business development	85	27	51	3	42	73	na	94	56	50
Mining										
Regulation	81	97	96	94	90	79	na	81	91	80
Business development	19	3	4	6	10	21	na	19	9	20
Other industries										
Regulation	53	38	66	68	25	28	80	48	51	53
Business development	47	62	34	32	75	72	20	52	49	47

Note: na = not available.

Source: Commission calculation using state and ABS Government Finance Statistics data.

10 The Commission does not assess disaggregated state expenses on agriculture, mining and other industry business development because they are assessed to have the same drivers of need. Instead, the Commission aggregates business development activities for all industries and assesses them using the same drivers.

Agriculture regulation

11 The agriculture regulation assessment method has 3 steps:

- assess state agriculture regulation expenses using industry size
- apply the regional costs adjustment
- apply the wage costs adjustment.

12 The agriculture regulation method assumes a direct relationship between the size of the regulatory task and size of the regulated industry. It assumes that as industries grow the regulatory task increases and vice versa.

Assessing state agriculture regulation expenses using industry size

13 State expense needs for agriculture regulation are assessed using the output of the agriculture industry.

14 Each state's share of national agriculture regulation expenses is equal to its share of national agriculture industry output. This means that the larger a state's share of the output, the more a state is assessed to need to spend and vice versa.

15 Industry output for each state is measured using data sourced from the ABS through a special data request. The Commission obtained data for 2021–22. Data for years in the assessment period post 2021–22, are derived using the annual percentage change in the chain volume measure of industry value added. The percentage change in the chain volume measure represents the change in the volume of output of the measured industry.[3] The percentage change in chain volume measures are constant over time, excluding data revisions from the ABS. This ensures that the volume-based measure of industry output is contemporaneous with state expenses and reflects changes in the volume of activity in the regulated industries rather than changes in commodity prices.

Applying regional costs

16 In the agriculture regulation component, regional costs account for the additional costs states face in providing services in remote locations. The agriculture regulation component uses the general regional cost gradient because of a lack of suitable data to estimate a component-specific measure of regional costs. The general regional cost gradient is based on the average of regional cost gradients estimated from

[3] Australian Bureau of Statistics (ABS), *Western Australian Statistical Indicators Mar 2003 Demystifying Chain Volume Measures*, ABS, 2003, accessed 11 July 2024.

several sources. For details on how the general regional cost gradient is determined, see the geography chapter of the *Commission's Assessment Methodology*.

17 The general regional cost gradient for the services to industry category is weighted for each state using the share of total state employment in each remoteness classification. This results in states with larger metropolitan areas having a lower regional cost adjustment compared to more regional/remote jurisdictions.

18 Regional costs are applied as a scaling factor to assessed expenses, increasing the assessed expenses for states with a greater share of employment in regional and remote areas and lowering the assessed expenses for states with employment centralised in capital cities.

Applying wage costs

19 Wages costs are a significant share of the total cost of providing agriculture regulation services. Differences in wage costs between states have a differential effect on the cost of providing agriculture services. The services to industry assessment uses the Commission's general method for measuring the influence of wage costs. Details on how this is calculated are in the wage costs chapter.

Mining regulation

20 The mining regulation assessment has 3 steps:

- assess state mining regulation expenses using industry size
- apply the regional costs adjustment
- apply the wage costs adjustment.

21 Like the agriculture regulation assessment, the mining regulation assessment method assumes a direct relationship between the size of the regulatory task and size of the regulated industry. It assumes that as industries grow the regulatory task increases and vice versa.

Assessing state mining regulation expenses using industry size

22 The assessment method for mining regulation is the same as for agriculture regulation, with each state's assessed regulatory need based on its share of national mining activity.

23 The data sources and method of measuring mining industry size is identical to that for agriculture.

Applying regional costs

24 The regional cost factor is applied as outlined in paragraphs 16 to 18.

Applying wage costs

25 The wage cost factor is applied as outlined in paragraph 19.

Other industries regulation

26 Other industries regulation includes regulation of all industries and activities in a state except for agriculture, mining and public administration.

27 The other industries regulation assessment method has 4 steps:

- assess 75% of state other industries expenses using industry size
- assess 25% of state other industries expenses using an equal per capita assessment
- apply the regional costs adjustment
- apply the wage costs adjustment.

28 Like the agriculture and mining regulation assessments, the other industries regulation industry size assessment method assumes a direct relationship between the size of the regulated industry and the regulatory task. It assumes that as industries grow the regulatory task increases and vice versa.

29 However, in contrast to the agriculture and mining regulation assessment, some state regulation affects the entire state population, such as fair trading, rental bond services and civil and administrative appeals tribunals. As a result, the Commission assesses the need for these services using state populations.

Assessing state other industries regulation expenses

30 Seventy-five percent of state expenses on other industry regulation are assessed using state shares of industry output like the agriculture and mining regulation assessments. Other industry output is measured as the sum of all industry output excluding agriculture, mining, public administration and ownership of dwellings.

31 The remaining 25% of state expenses is assessed equal per capita, such that each state is assessed to spend its population share of national other industries regulation expenses.

32 The data sources and method of measuring industry size are identical to those for agriculture and mining.

Applying regional costs

33 The regional cost factor is applied to both the industry size and equal per capita assessed expenses as outlined in paragraphs 16 to 18.

Applying wage costs

34 The wage cost factor is applied to both the industry size and equal per capita assessed expenses as outlined in paragraph 19.

Business development

35 The assessment of business development is undertaken in 2 steps:

- assess state business development expenses equal per capita
- apply the wage costs adjustment.

36 Business development is a deliberative equal per capita assessment. This is because business development is aimed at supporting employment opportunities and development for state populations. Therefore, each state's need for business development expenses are equal to its population share of national business development expenses.

Applying wage costs

37 The wage cost adjustment is applied as outlined in paragraph 19.

COVID-19 business support

38 COVID-19 business support is assessed actual per capita. That is, assessed expenses are equal to the actual level of state expenses. An actual per capita assessment recognises that state expenses are driven by factors beyond state control and the Commonwealth distribution of COVID-19 business support payments reflects each state's spending need.

39 The COVID-19 business support expenses considered in the assessment are the payments under the 2021–22 Commonwealth-state agreements on business support payments, and the matching own source state expenses.[4] State COVID-19 business support expenses that are not covered by the national partnership agreements continue to be assessed where states report the expenses, predominately in the other industries regulation and business development assessments. COVID-19 business support will continue to be assessed while there is spending reported for the Commonwealth-state agreements.

[4] Commonwealth-state business support payments include the Business support payment (JobSaver) - New South Wales agreement and similar agreements for each state. The agreements are available at the Federal Financial relations website.

GST distribution in the 2025 Review

40 Table 7 shows the GST impact of the assessment in the 2025 Review.

Table 7 GST impact of the services to industry assessment, 2025–26

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total effect
	$m	$m	$m	$m	$m	$m	$m	$m	$m
Agriculture regulation	-92	-56	24	52	41	36	-19	14	167
Mining regulation	-194	-210	26	425	-39	-13	-15	22	472
Other industries regulation	79	6	-60	45	-49	-22	-2	2	133
Business development	11	3	-12	7	-9	-3	4	0	24
COVID-19 Business support	1,017	1,146	-1,043	-606	-398	-97	35	-54	2,198
Total ($m)	**821**	**889**	**-1,066**	**-77**	**-454**	**-99**	**3**	**-16**	**1,712**
Total ($pc)	**95**	**124**	**-186**	**-25**	**-239**	**-172**	**5**	**-64**	**62**

Note: Magnitude and direction of GST impact can change from year to year.

18. Wage costs

Overview

1 The wage costs assessment recognises that the wages states and territories (states) pay public sector workers are different across states, partly due to differences in labour markets beyond the control of state governments.[1] The assessment covers the wage-related portion of state expenses, both the direct employment of public sector workers and indirect employment through contracting and labour hire practices.

2 There are many factors leading to differences in state wages. The Commission's task is to identify differences between the wages for similar workers resulting from factors outside a state's control.

3 The Commission does this by measuring the differences in private sector wages across states and using the differences as a proxy for the non-policy driven differences in public sector wages. Differences in state private sector wages that cannot be attributed to differences in state workforce characteristics are used to calculate the assessed wage expenses within each expense category.

Structure of assessment

4 Wage costs are applied in every expense assessment category, using the relative state wage levels calculated in the wage costs assessment. These relative wage costs are applied to the proportion of expenses within each category that is wage related.

5 Using the Government Finance Statistics data, spending within each expense assessment category is classified using the economic type framework code to wage costs, non-wage costs or other (not entirely attributable either to wage costs or non-wage costs). The average wage share of attributable costs was estimated for each category for the years 2019–20 up to 2022–23. This share of costs is fixed for the 2025 Review period and applied to expenses in each assessment year. Wage shares of costs are shown in Table 1.

[1] The wages driver is applied across all expense category assessments.

Table 1 Wage costs by category, 2019–20 to 2022–23 averages

	Wage	Non-wage	Unattributed	Assessed proportion
	$m	$m	$m	%
Schools	35,932	12,944	2,391	72.8
Post-secondary education	3,728	2,898	1,545	56.8
Health	59,326	32,966	3,127	64.1
Housing	653	1,121	3,377	51.3
Welfare	3,860	7,171	13,541	48.2
Services to communities	3,531	5,144	4,605	47.0
Justice	18,032	7,460	604	70.5
Roads	1,859	5,545	3,948	36.9
Transport	1,332	8,630	6,842	31.9
Services to industry	3,343	3,945	10,743	53.6
Other expenses	11,615	12,141	7,923	51.4

Source: Commission calculation based on ABS Government Finance Statistics data.

Data

6 The data used in the assessment are outlined in Table 2.

Table 2 Data used in the wage costs assessment

Source	Data	Updated
ABS	Characteristics of Employment Survey data	Annually
	Wage Price Index	Annually
	Government Finance Statistics	5-yearly

Note: The adjusted budget data sources are outlined in the adjusted budget chapter of the *Commission's Assessment Methodology*.

Assessment method

7 The ABS Characteristics of Employment Survey data are used to estimate the differences in wages between individuals using a regression model. A state variable is included in the model to estimate the wage difference between states that cannot be attributed to differences in the characteristics of state workforces.

8 The model uses extensive controls to account for worker and workplace characteristics that influence individual wages, such as industry, occupation, education and experience. The model excludes all public sector employees to eliminate any direct effects of state government policy on wages.

9 Because the model uses survey data, the estimates produced include some random variation. Estimates are indexed and combined across years to generate more reliable relative wage levels than would be achieved with a single year of survey data.

10 These combined estimates of relative wage levels are then used to produce a wage cost factor for each state. This factor reflects the percentage difference from the national average wage level that cannot be explained by workforce characteristics.

11 A low-level discount of 12.5% is applied to the wage cost factors.[2] This reflects some uncertainty about the reliability of private sector wages as a proxy for public sector wage pressures, and the capacity of the model to control for all differences in employee productivity.

12 The discounted relative wage cost factor is applied to wage-related expenses in each expense category.

Estimating relative state wages through regression modelling

13 To assess the differential wage pressures faced by state governments, the Commission applies a linear regression model to measure relative wages for individuals using ABS Characteristics of Employment Survey data.

14 Data for the regression are restricted to data for individuals earning wages in the private sector, who usually work each week and who have provided answers in the survey to relevant questions for the control variables. School students under 20 years old are excluded. This results in a sample of over 15,000 respondents for each annual survey nationally.

15 The dependent variable in the regression is the log of hourly wages. The main predictor is state of usual residence. The regression coefficient for each state variable can then be converted into the expected percentage difference in hourly wage for a resident of that state compared with the all-state average.

16 To ensure that like individuals are being compared between states, many controls are included in the model. Characteristics of individuals that are correlated with hourly wages and are unequally distributed between state labour forces could bias state coefficients if not controlled for in the model.

17 The variables used, and the results of the Commission's regression model that were derived using data from the 2023 survey, corresponding to the 2023–24 assessment year, are shown in Table 3 below.

[2] The Commission's approach to discounting is outlined in the approach to horizontal fiscal equalisation chapter of the *Commission's Assessment Methodology*.

Table 3 Results of wage costs regression model, 2023–24

Variable	Estimated effect	95% confidence bounds	Variable	Estimated effect	95% confidence bounds
	%	%		%	%
State			Dependent child		
NSW	2.2	0.3 – 4.1	Has dependent child	1.2	-1.0 – 3.4
Vic	0.9	-0.6 – 2.3	Tenure		
Qld	-0.8	-2.6 – 1.1	Years employed in current job	0.4	0.3 – 0.6
WA	1.4	-1.2 – 4.0	Casual status		
SA	-4.5	-6.4 – -2.4	Has paid leave entitlement	-1.2	-3.8 – 1.4
Tas	-3.6	-5.7 – -1.4	Marital status		
ACT	4.9	1.4 – 8.5	Married	4.0	2.0 – 6.0
NT	-0.2	-3.2 – 2.9	Migrant status		
Usual hours			Australian born	—	—
1-34 (Part time)	-3.0	-5.7 – -0.2	Born in MESC (a) <10 years in Aust.	-2.4	-7.8 – 3.3
35-40 (Full time)	—	—	Born in MESC (a) 10-20 years in Aust.	4.3	-0.5 – 9.4
40+ (> Full time)	6.2	3.9 – 8.6	Born in MESC (a) >20 years in Aust.	6.7	2.9 – 10.5
Gender			Born in NESC (b) <10 years in Aust.	-9.3	-11.6 – -6.9
Male	6.8	5.2 – 8.4	Born in NESC (b) 10-20 years in Aust.	-5.3	-7.1 – -3.4
Age			Born in NESC (b) >20 years in Aust.	-3.6	-6.8 – -0.2
15-19	—	—	Education		
20-24	26.3	22.2 – 30.5	Less than year 12	-5.8	-8.3 – -3.3
25-29	32.7	27.9 – 37.7	Year 12	—	—
30-34	48.0	41.5 – 54.9	Certificate III or IV	-0.3	-2.8 – 2.4
35-39	50.9	43.9 – 58.3	Advanced diploma	4.3	1.5 – 7.2
40-44	56.7	50.7 – 62.9	Bachelor's degree	12.0	8.9 – 15.2
45-49	55.6	48.9 – 62.6	Graduate diploma/certificate	16.8	11.1 – 22.9
50-54	58.8	51.2 – 66.9	Post-graduate degree	18.8	13.7 – 24.1
55-59	59.8	52.2 – 67.8	Occupation		
60-64	49.0	40.9 – 57.5	3-digit ANZSCO minor groups	(c)	(c)
65+	52.9	43.7 – 62.6	Industry		
			ANZSIC Divisions	(d)	(d)

Note: Variable groups with more than 2 variables show reference variable as dashes. For example, all ages are measured relative to wage levels of 15–19-year-olds.

Variable groups with 2 possible outcomes show the measured variable relative to the unlabelled reference variable. For example, male wages are shown relative to female wages.

State coefficients are shown relative to the national average wage level.

Estimated effect is calculated as the exponent of the regression coefficient minus one.

(a) Main English-speaking countries are United Kingdom, Ireland, USA, Canada, South Africa and New Zealand.

(b) Non-English-speaking countries are all other countries.

(c) Effect for each of approximately 120 variables reflecting each 3-digit Australia New Zealand Standard Classification of Occupations minor group is not shown.

(d) Effect for each of 19 variables reflecting each Australia New Zealand Standard Industry Classification Divisions is not shown.

Source: Commission calculation using ABS Characteristics of Employment Survey data.

18 Estimates from the August 2023 survey data suggest that the ACT has the highest wages for similar private sector workers, and South Australia the lowest. A private sector worker in the ACT is on average expected to earn 4.9% more than the national average wage for similar workers, while a worker in South Australia earns on average 4.5% less than the national average wage for similar workers. The relatively wide ranges for the ACT and the Northern Territory estimates indicate the lower reliability of these estimates, due to smaller samples of private sector workers.

19 Effects in Table 3 are presented as the expected percentage difference in hourly wages compared with a reference category, for otherwise identical workers. For example, if 2 individuals were identical on all other items in the model, a man would be predicted to earn 6.8% more than a woman. The estimate for tenure implies that on average, all else being equal, every additional year working in the same job leads to a 0.4% increase in hourly wage.

20 The estimated effects for highest level of education imply that, all else being equal, average wages generally increase with each level of higher education. The age coefficients show expected wages increasing to a peak at around age 55–59, all else being equal. The coefficients for usual hours of work show that people who usually work more than full-time hours earn more for each hour that is recorded on their payslip than those who usually work exactly full-time hours, all else being equal. Similarly, working part time lowers the hourly wage for otherwise similar workers.

Combining annual estimates of relative state wages

21 As a result of small sample sizes, the coefficients for a state in a single year are not necessarily reflective of the underlying relative wage level in that state. This can unduly contribute to volatility in the assessment. Table 3 showed that the error margins for small states are larger than for large states.

22 The Commission combines the regression results from several survey years to generate a more reliable and less volatile estimate of relative state wages. This effectively increases the sample size used in the regression.

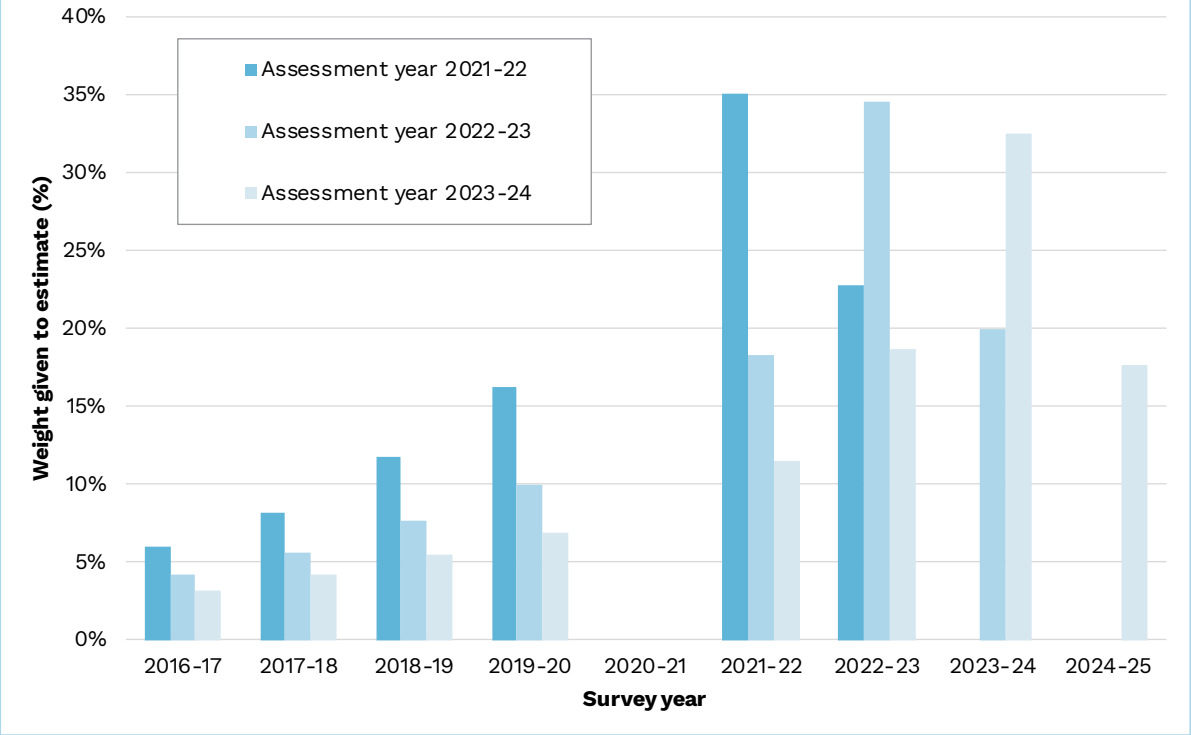
23 For each assessment year, regression results are used from the assessment year, the subsequent year and all previous years back to 2016–17, omitting 2020–21 due to COVID-19–related data concerns. For example, the 2023–24 assessment year relative state wage factors in the 2025 Review are based on data from surveys in each year from 2016–17 to 2024–25, excluding 2020–21. These results are indexed to the assessment year using the ABS state wage price index to account for differences in wage growth between states.[3]

[3] ABS, *Wage Price Index* (various issues), cat. no. 6345.0, table 2a.

24 State relative wages are calculated as a weighted average of estimates from each year of data, weighted by reliability of the estimate.[4] Survey estimates from years close to the assessment year of interest are given a higher weight than estimates from earlier years.[5]

25 The 2022–23 assessment year estimates were produced from a weighted average of 7 survey results. Figure 1 shows the weights used. The effect of discounting less relevant data is seen in that the 2016–17 survey contributed only 4% of the total, while the 2022–23 survey contributed 35%. The 2021–22 and 2023–24 surveys are both equally distant from the 2022–23 year of interest, but the 2023–24 survey estimates have a higher weight, reflecting that those estimates are on average more reliable than the ones from 2021–22.

Figure 1 Survey year weights for assessment years

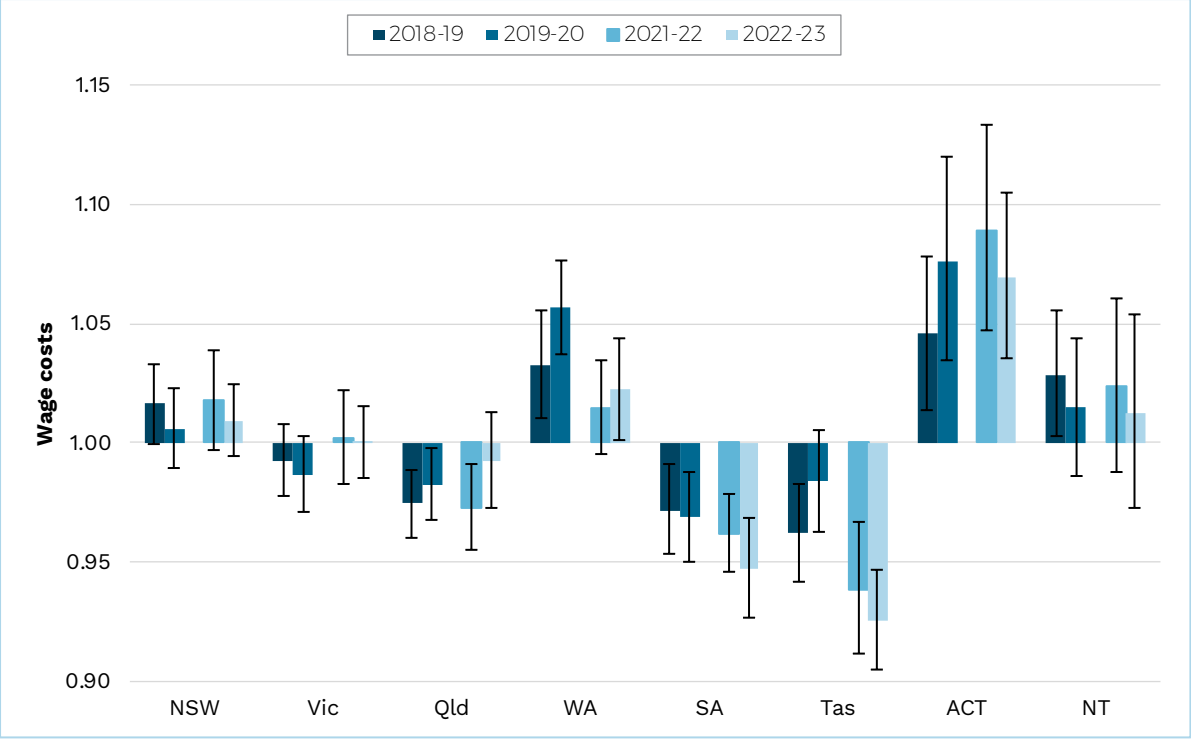


[4] Weights used are the inverse of each estimate's variance, as in standard fixed-effects meta-analysis techniques. M Borenstein, LV Hedges, JPT Higgins and HR Rothstein, 'A basic introduction to fixed-effect and random-effects models for meta-analysis', *Research Synthesis Methods*, 2010, 1:97–111.

[5] The variance associated with the indexation is estimated as the variance in annual relative state wage growth for all states. This approach overestimates the actual variance associated with indexation, producing lower weights for early years, and higher weights for survey years close to the assessment year.

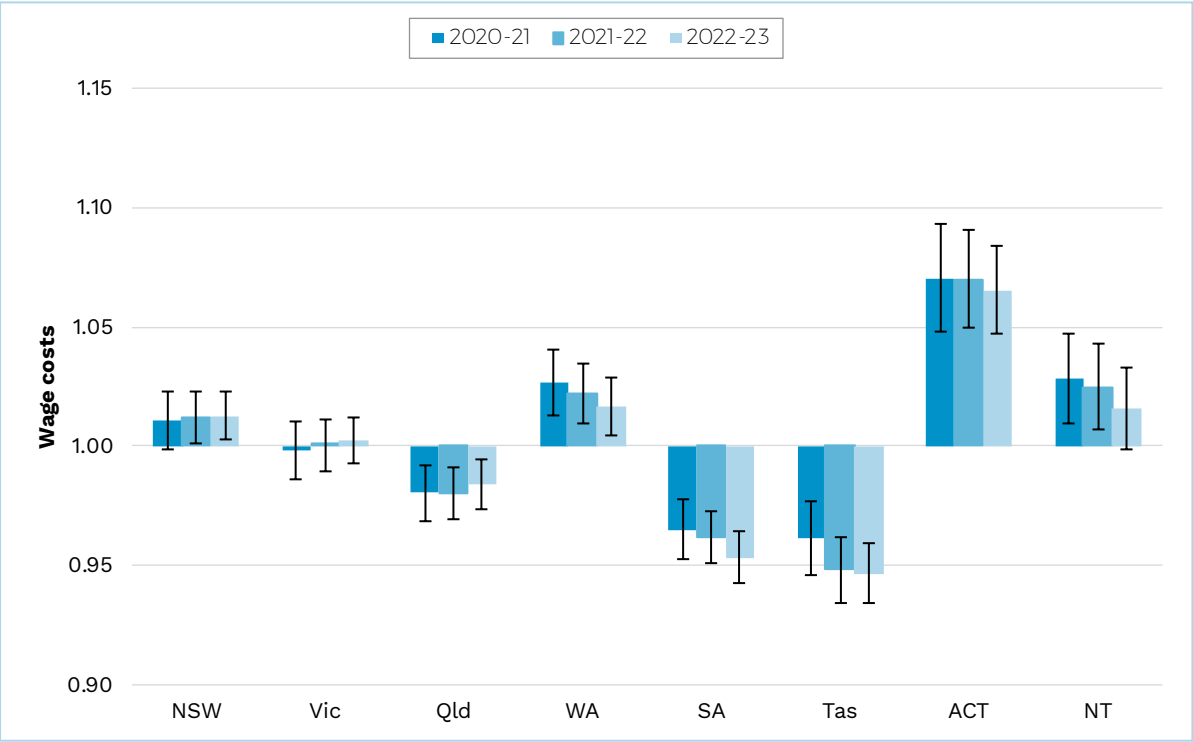
26 Annual estimates of relative state wages and the assessment year wage cost factors from combining these estimates are shown in Figure 2 and Figure 3.

Figure 2 Annual estimates of relative wages 2018–19 to 2022–23



Note: Data from 2020–21 are omitted as they are unreliable due to a combination of COVID-19 public health orders and JobKeeper payments.
Error bars show the 95% confidence intervals.

Figure 3 Smoothed wage cost factors (before discount)



Note: Error bars show the 95% confidence intervals.

Applying the discount

27 Before applying the wage cost factors produced using the combined regression estimates, they are first discounted by 12.5%. This is done to acknowledge some uncertainty about the reliability of private sector wages as a proxy for public sector wage pressures, and the capacity of the model to control for all differences in employee productivity.

28 The discounted factors are then multiplied by the wage cost proportion of expenses in each category to produce a category specific wage cost factor which is applied to the assessed expenses for the category.

29 After applying the wage cost factor to the assessed expenses in each category, the expenses are rescaled to ensure they sum to the total national expense for the category in each assessment year.

GST distribution in the 2025 Review

30 Table 4 shows the GST impact of the assessment in the 2025 Review.

Table 4 GST impact of the wage costs assessment, 2025–26

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total effect
	$m	$m	$m	$m	$m	$m	$m	$m	$m
Schools	130	35	-155	87	-108	-43	45	9	306
Post-secondary education	13	3	-15	9	-11	-5	5	1	31
Health	198	58	-210	130	-176	-78	62	15	463
Housing	6	-13	-11	18	-10	-4	2	11	37
Welfare	24	6	-28	16	-19	-9	6	3	55
Services to communities	17	4	-21	13	-16	-6	6	2	43
Justice	65	17	-75	45	-56	-24	19	9	155
Roads	13	4	-15	10	-12	-4	3	1	31
Transport	18	2	-19	10	-13	-3	6	0	36
Services to industry	20	4	-25	16	-17	-7	7	1	49
Other Expenses	56	15	-66	39	-58	-29	38	6	154
Total ($m)	**561**	**137**	**-640**	**392**	**-496**	**-211**	**199**	**60**	**1,347**
Total ($pc)	**65**	**19**	**-112**	**128**	**-261**	**-365**	**411**	**232**	**48**

Note: Magnitude and direction of GST impact can change from year to year.
Wage component of building costs in investment not included.

19. Geography

Overview

1 The cost of providing state services can vary with the location in which the service is delivered. Services are typically more expensive to provide in more remote areas, for example due to freight costs, staffing allowances, and the lack of economies of scale. Therefore, the geographic characteristics of a state or territory (state) can influence the expenses needed to service the state's population.

2 Most geographic assessments are covered in the relevant category chapter.[1] For example, in the health assessment, differential use and cost of services are estimated for populations disaggregated by age, Indigenous status, socio-economic status and remoteness. In other assessments, there are category-specific geographic measures. Examples include rural road length (roads assessment), definitions of urban centres (transport assessment) and populations in small communities (services to communities assessment).

3 The differential use and cost of services across remoteness areas is collectively described as the impact of population dispersion. This chapter outlines 2 cost-specific measures.

- Regional costs (higher unit costs) — there are additional costs per person of delivering comparable services, for example due to higher maintenance or supply costs in more remote locations.
- Service delivery scale (fixed costs by locality) — there are additional costs per person of delivering services in more isolated and smaller centres due to fixed costs.

4 Regional costs and service delivery scale costs are measured via cost gradients based on the ABS remoteness classifications. The remoteness classifications are:

- major cities
- inner regional areas
- outer regional areas
- remote areas
- very remote areas.[2]

5 The term 'gradient' refers to the quantification of how much more expensive each remoteness area is to service compared with a major city. These cost differences could reflect use rates, unit cost weights and unit costs driven by small scale. Where the Commission has constructed a category-specific assessment for regional costs or service delivery scale costs, the method is explained in the relevant chapter.

[1] The geography driver is applied across several expense category assessments.

[2] Australian Bureau of Statistics (ABS), *Remoteness Areas*, ABS website, 2023, accessed 19 June 2024.

6 Some assessments have data limitations such that a category-specific cost gradient cannot be measured. If there is a conceptual case for regional costs and potentially service delivery scale costs, the Commission applies the general cost gradient as a proxy.

7 Two general cost gradients are developed: one for regional costs only and one for both regional and service delivery scale costs. These gradients take data from a range of state services with specific measures of cost gradients to calculate a weighted average.

Structure of assessment

8 Table 1 outlines the use of regional costs and service delivery scale costs as drivers of need in expense assessments. It outlines for each category component whether regional costs and service delivery scale costs are assessed and how they are measured. Further details regarding the application of regional costs and service delivery scale costs within these assessments are in the relevant category chapters.

Table 1 Structure of the regional costs and service delivery scale costs assessments

Category	Component	Driver	Type of assessment
Schools	State funding of government schools	RC & SDS	Component-specific and used in the calculation of the general cost gradient
	State funding of non-government schools	RC & SDS	Component-specific
	Commonwealth funding of government schools	RC & SDS	Embedded in the Schooling Resource Standard
Post-secondary education	Post-secondary education	RC	Component-specific and used in the calculation of the general cost gradient
Health	Admitted patients	RC & SDS	Component-specific and used in the calculation of the general cost gradient
	Emergency departments	RC & SDS	Component-specific and used in the calculation of the general cost gradient
	Non-admitted patients	RC & SDS	Component-specific and used in the calculation of the general cost gradient
	Ambulatory community mental health	RC	General cost gradient
		SDS	Component-specific
	Balance of community and public health	RC & SDS	Component-specific
	Non-hospital patient transport	RC	Component-specific
	COVID spending	n/a	n/a
Housing	Social housing expenses	RC	General cost gradient and Rawlinsons
	Social housing revenue	n/a	n/a
	First home owner expenses	n/a	n/a

Category	Component	Driver	Type of assessment
Welfare	Child protection and family services	RC & SDS	General cost gradient
	National Disability Insurance Scheme	n/a	n/a
	Concessions	n/a	n/a
	Homelessness services	RC	General cost gradient
	Other welfare	RC	General cost gradient
Services to communities	Water subsidies	RC	Component-specific
	Electricity subsidies	RC	Component-specific
	First Nations community development	RC	General cost gradient
	Other community development and amenities	RC	General cost gradient
	Environmental protection	RC	General cost gradient (a)
Justice	Police	RC & SDS	Component-specific (b)
	Criminal courts	RC & SDS	Component-specific and used in the calculation of the general cost gradient
	Other legal services	RC & SDS	Category-specific (extrapolated from the criminal courts component) (c)
	Prisons	RC & SDS	Component-specific and used in the calculation of the general cost gradient
Roads	Rural roads	RC	Rawlinsons (d)
	Urban roads	n/a	n/a
	Bridges and tunnels	RC	Rawlinsons (d)
Transport	Non-urban transport	RC	General cost gradient
	Urban transport	n/a	n/a
Services to industry	Agriculture regulation	RC	General cost gradient
	Mining regulation	RC	General cost gradient
	Other industries regulation	RC	General cost gradient
	Business development	n/a	n/a
	COVID-19 Business support	n/a	n/a
Other expenses	Service expenses	RC	General cost gradient (e)
	Natural disaster relief	n/a	n/a
	Administrative scale	n/a	n/a
	Native Title and land rights	n/a	n/a
Investment	All	RC	Rawlinsons and used in the calculation of the general cost gradient

Note: RC refers to regional costs, SDS refers to service delivery scale costs.

(a) In the environmental protection component, regional costs are only applied to the protection of biodiversity and landscape sub-component.

(b) In the police component, regional costs and service delivery scale costs are measured together as a single cost gradient along with the differential use of police resources in different remoteness areas. Where assessed, differential use of services is considered separately from regional costs in all other categories.

(c) In the other legal services component, the costs gradient is only applied to the civil courts sub-component.

(d) In the roads assessment, Rawlinsons applies to road length.

(e) In the service expenses component, regional costs are only applied to a proportion of the expenses in the component.

Data

9 Data used in the calculation of geographic measures within category assessments are outlined in the relevant assessment chapters of the *Commission's Assessment Methodology*. The general cost gradient uses data on regional and service delivery scale costs from the following categories:

- schools (state funding of government schools)
- post-secondary education
- health (admitted patients, non-admitted patients and emergency departments)
- justice (prisons and criminal courts)
- investment (Rawlinsons).

Assessment method

10 The general regional cost gradient and the general regional and service delivery scale cost gradient are calculated using a weighted average of cost gradients from assessments where costs can be measured.

Calculating specific cost gradients

Schools

11 The Commission's schools assessment uses a regression of state funding of government schools to assess expenses per student in each government school. The coefficients for outer regional and combined remote (remote and very remote) areas reflect the additional costs of educating comparable students in these areas compared to major cities. The cost per student in each non-metropolitan area as a proportion of the base cost per student defines the regional cost gradient in schools.

12 The regression also estimates the fixed costs of running a school. The service delivery scale cost gradient is calculated by applying these fixed costs to the average school size in each remoteness classification.

13 Further details are in the schools chapter of the *Commission's Assessment Methodology*.

Post-secondary education

14 The regional cost gradient in the post-secondary education assessment is calculated using state data on loadings for training providers in regional and remote areas. A national average loading, weighted by enrolled contact hours, is calculated for each remoteness classification.

15 Further details are in the post-secondary education chapter of the *Commission's Assessment Methodology*.

Health

16 The Independent Health and Aged Care Pricing Authority publishes remoteness adjustments for patient treatment locations. The regional cost gradients for admitted patients, non-admitted patients and emergency departments come directly from the published adjustments of prices due to treatment location in remote and very remote areas.

17 The service delivery scale cost gradients for admitted patients, non-admitted patients and emergency departments are calculated by comparing the estimated cost of block funded hospitals using activity-based funding arrangements and the efficient cost of the same hospitals based on block funding arrangements, for each remoteness classification.

18 Further details are in the health chapter of the *Commission's Assessment Methodology*.

Justice

19 Data in the criminal courts component do not allow for regional costs and service delivery scale costs to be disaggregated. The regional and service delivery scale cost gradient for criminal courts is calculated by comparing average costs per court case in combined remote locations to average costs in major cities.

20 The prisons component uses a regression to predict funding per prisoner in each prison. The coefficient for combined remote areas reflects the additional cost of imprisoning an otherwise comparable person in a remote area compared to a major city. This coefficient represents the regional cost gradient in the prisons component.

21 The prisons regression also estimates the fixed costs of running a prison. The service delivery scale cost gradient for prisons is calculated by applying these fixed costs to the average prison size and comparing combined remote areas to major cities.

22 Further details are in the justice chapter of the *Commission's Assessment Methodology*.

Investment

23 The investment assessment uses the Rawlinsons cost indices, which contain state-specific cost gradients. The general cost gradient aims to assess differential costs in comparable remoteness areas on a national level. Therefore, the average of Rawlinsons state-specific gradients are used in the general cost gradient calculation.

24 Further details are in the investment chapter of the *Commission's Assessment Methodology*.

Calculating the general cost gradients

25 Each of the assessment components outlined above calculates the additional costs of providing services in more remote locations. The additional costs can be described using a cost gradient with major cities representing the base cost and being set equal to 1. The remaining remoteness areas then receive a value which describes how much more expensive the area is to service in comparison to the base cost.

26 The weighted average of these gradients is used to derive the general cost gradients. The weight for each component is based on its share of national spending. Table 2 outlines which components contribute to each gradient and the weight the components received in the calculation of the general cost gradients in 2022–23.[3]

Table 2 Components that contribute to the general cost gradients, 2022–23

Component	Contribution to regional cost gradient (%)	Contribution to regional and service delivery scale cost gradient (%)
Schools	21.7	29.5
Post-secondary education	4.4	0.0
Admitted patients	36.1	49.0
Emergency departments	3.8	5.2
Non-admitted patients	5.7	7.7
Criminal courts	0.0	2.6
Prisons	4.6	6.2
Investment (Rawlinsons)	23.8	0.0

Note: Weights are based on the share of national spending of the relevant components.

27 A discount of 25% is applied to the general cost gradients. The discount reflects the uncertainty associated with the proxy status of the data used.

28 The discounted general cost gradients for 2022–23 are outlined in Table 3.

Table 3 General cost gradients (discounted), 2022–23

	General regional cost gradient	General regional and service delivery scale cost gradient
Major cities	1.00	1.00
Inner regional	1.01	1.03
Outer regional	1.03	1.07
Remote	1.18	1.24
Very remote	1.27	1.48

Applying the general cost gradients

29 The discounted general regional cost gradient is applied to components, as shown in Table 1.

[3] Tables in this chapter, unless otherwise stated, use 2022–23 data.

30 The discounted general regional and service delivery scale cost gradient is applied to the child protection and family services component of the welfare assessment.

GST distribution in the 2025 Review

31 Table 4 shows the GST impact of population dispersion in all expense categories. This includes the effect of applying regional costs and service delivery scale costs, either as part of the application of the general cost gradient, or as category and component specific measures, as shown in Table 1. It also includes the effect of remoteness as part of socio-demographic composition, across a range of categories.

32 People in different remoteness areas have different rates of use of state services. The cost of delivering services is higher in more remote areas due to higher unit costs and higher fixed costs. Each of these factors is included in the impacts in Table 4.

Table 4 GST impact of population dispersion, 2025–26

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total effect
	$m	$m	$m	$m	$m	$m	$m	$m	$m
Schools	-231	-212	201	79	15	57	-24	115	467
Post-secondary education	-41	-37	24	15	6	15	-6	24	84
Health	-1,193	-915	750	128	16	624	-224	814	2,331
Housing	-150	-58	6	82	6	-9	-6	128	222
Welfare	-58	-45	18	10	-2	14	-5	68	110
Services to communities	-201	-217	66	154	34	25	-21	160	439
Justice	-436	-340	145	209	24	79	-50	370	827
Roads	-26	-24	15	19	-1	-2	-1	20	54
Transport	-3	-3	1	2	0	1	0	2	6
Services to industry	-8	-8	3	4	0	2	-1	7	17
Other expenses	-24	-25	11	14	3	5	-3	17	51
Total ($m)	**-2,372**	**-1,882**	**1,242**	**714**	**102**	**809**	**-340**	**1,725**	**4,593**
Total ($pc)	**-274**	**-263**	**217**	**234**	**54**	**1,401**	**-704**	**6,708**	**165**

Note: Magnitude and direction of GST impact can change from year to year.

20. Socio-economic status

Overview

1 A person's socio-economic status encompasses their income, education, employment and occupational status. Collectively, these affect the resources and opportunities available to a person and their quality of life, directly affecting their health and other social outcomes.

2 The socio-economic status of its residents is a significant driver of state and territory (state) spending on services. States provide some services specifically for individuals with socio-economic disadvantage, such as housing and concessions. Other services, such as hospitals, are provided universally but are used more by people with lower socio-economic status.

3 The Commission measures the average socio-economic status of people living in a particular area and uses that as a reflection of the state's socio-economic status.[1] This approach is due to limitations on quality and availability of individual level data for the Commission's purposes. The Commission uses separate measures for First Nations and non-Indigenous socio-economic disadvantage. This recognises that the relative socio-economic status of First Nations people in a location is often different to that of non-Indigenous people living there.

Structure of assessment

4 Table 1 outlines the use of socio-economic status as a driver of need in expense assessments. Further details regarding the application of socio-economic status within these assessments are in the relevant chapters of the *Commission's Assessment Methodology*.

Table 1 Structure of the socio-economic status assessment

Category	Socio-economic measures	Method
Schools	SEA	Regression approach
Post-secondary education	NISEIFA, IRSEO	Average costs over sub-populations
Health	NISEIFA, IRSEO	Average costs over sub-populations
Housing	Household Income	Average costs over sub-populations
Welfare	NISEIFA, IRSEO	Average costs over sub-populations
Justice	NISEIFA, IRSEO	Average costs over sub-populations

Notes: SEA: Socio-Educational Advantage (Australian Curriculum Assessment Reporting Authority).
NISEIFA: Non-Indigenous Socio-Economic Index for Areas (CGC).
IRSEO: Indigenous Relative Socioeconomic Outcomes index (Australian National University).

[1] The socio-economic status driver is applied across several expense assessments.

Data

5 The data used in the calculation of socio-economic status within category assessments are outlined in Table 2.

Table 2 Data used in the socio-economic status assessment

Source	Data	Updated
Australian Bureau of Statistics (ABS) Census of Population and Housing	Socio-Economic Indexes for Areas	5-yearly following release of census data
	Custom TableBuilder extracts	
Centre for Aboriginal Economic Policy Research (Australian National University)	Indigenous Relative Socioeconomic Outcomes index	

Assessment method

Area-based measures of socio-economic status

6 The Socio-Economic Indexes for Areas (SEIFA), produced by the ABS, are widely used to measure socio-economic status in Australia.[2]

7 The Commission uses a First Nations version and a non-Indigenous specific version of SEIFA. It does this for 2 reasons.

- In much of Australia, the First Nations population represents a relatively small proportion of the overall population. Consequently, the SEIFA score for a given area may not reflect the socio-economic conditions of the First Nations people there.
- The propensity of people to identify as First Nations people changes over time. Less disadvantaged people with relatively low use of state services have increasingly identified as being First Nations people, particularly in the south-eastern states. This does not reduce the need for services among the more disadvantaged First Nations population. Having a First Nations-specific measure of socio-economic status enhances the Commission's capacity to reflect differences in need among different groups of First Nations people.

8 The First Nations version of SEIFA is the Indigenous Relative Socioeconomic Outcomes index (IRSEO). It was developed by the Centre for Aboriginal Economic Policy Research at the Australian National University and uses the same principles as SEIFA.[3]

9 Non-Indigenous SEIFA data is produced by the Commission. It follows the published methodology for SEIFA, but only includes non-Indigenous people in the census-based component indicators.[4] The indicators are generated for all Statistical

[2] SEIFA includes 4 indexes. The Commission uses the Index of Relative Socio-Economic Disadvantage in this chapter unless otherwise specified.

[3] Centre for Aboriginal Economic Policy Research, *Area-level socioeconomic outcomes for Aboriginal and Torres Strait Islander Australians in the 2016 and 2021 Censuses*, Australian National University Website, 2023, accessed 16 September 2024.

[4] Australian Bureau of Statistics, *Socio-Economic Indexes for Areas (SEIFA), Australia methodology*, ABS, 2021, accessed 13 August 2024.

Areas Level 1 (SA1s) in Australia. Following the ABS published methodology, these indicators are combined to produce an index.[5]

10 The non-Indigenous SEIFA produces estimates of the socio-economic status of each of 57,602 SA1s, with an average non-Indigenous population of 415 in each SA1 at the 2021 Census.[6] The Indigenous Relative Socioeconomic Outcomes index produces estimates of the socio-economic status for 405 Indigenous Areas, with an average First Nations population of 1,973 in each Indigenous area at the 2021 Census.

11 Each area is classified into one of 5 quintiles, from most to least disadvantaged, each with 20% of the respective population.

12 Several of the Commission's expense assessments measure the national average state spend on people in each quintile for each service and apply that to the population in each state in each quintile (Table 1). This forms part of a disaggregated matrix using additional socio-demographic variables.

Other measures of socio-economic status

13 Socio-economic status is measured in slightly different ways in the schools and housing assessments. The Australian Curriculum Assessment and Reporting Authority produces a measure of the socio-educational advantage of individual school students based primarily on parental attributes. This measure is used in the Commission's regressions for the schools assessment. In the housing assessment, the Commission uses census data on household equivalised income.[7]

GST distribution in the 2025 Review

14 Table 3 shows the GST impact of socio-economic status in the 2025 Review. Six expense assessments (and associated investment components) assess needs relating to socio-economic status. Three different approaches are used, isolating different elements of socio-economic status. This means that a state might have an above-average need in one assessment and a below-average need in another.

15 School students in New South Wales, Queensland, South Australia, Tasmania and the Northern Territory have on average, lower socio-educational advantage than otherwise similar students in other state, increasing their assessed GST needs.

16 The housing assessment uses household income. Similar households in Victoria, South Australia and the Northern Territory have lower average incomes than the other states, increasing their assessed GST needs.

[5] The method uses principal components analysis to generate weights reflecting the relative importance of each indicator for the overall concept of socio-economic status.

[6] SA1s are part of the Australian Standard Geographic Classification. Australia is divided into 61,844 SA1s.

[7] This is household income adjusted according to the household composition. It reflects the economic resources available relative to a standardised household.

17 Other expense categories use Socio-economic Index for Area based measures, with different versions for First Nations and non-Indigenous populations. First Nations populations from areas with the same remoteness classification are on average more disadvantaged in New South Wales, Western Australia, South Australia and the Northern Territory than in the other states, increasing their assessed GST needs. Non-Indigenous populations from areas with the same remoteness classification are on average, more disadvantaged in Queensland, South Australia and Tasmania than in the other states, increasing their assessed GST needs.

Table 3 GST impact of the socio-economic status assessment, 2025–26

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total effect
	$m	$m	$m	$m	$m	$m	$m	$m	$m
Schools	-46	-197	184	5	34	44	-66	41	308
Post-secondary education	-17	6	12	-2	18	1	-15	-4	37
Health	-121	-34	203	-68	265	53	-159	-139	521
Housing	-13	12	0	-7	27	3	-16	-6	42
Welfare	6	-29	31	-23	39	19	-35	-7	94
Justice	39	-34	29	-84	108	28	-65	-21	204
Total ($m)	**-152**	**-277**	**458**	**-177**	**492**	**147**	**-355**	**-136**	**1,097**
Total ($pc)	**-18**	**-39**	**80**	**-58**	**258**	**254**	**-736**	**-529**	**39**

Note: Magnitude and direction of GST impact can change from year to year.

21. Other expenses

Overview

1 The other expenses assessment includes expenses not classified to specific expense categories. It has the following components:

- service expenses
- natural disaster relief
- administrative scale
- Native Title and land rights.

Service expenses

2 In 2022–23, the service expenses component was the largest component in the other expenses category and included spending for:

- other purposes (general public services, including administration, operation or support of executive and legislative bodies; and financial and fiscal affairs, such as the management of public debt, operation of the treasury and revenue agency, and production and dissemination of statistics on financial and fiscal affairs)
- public order and safety other than police, courts and prisons
- recreation, culture and religion
- communications.

Natural disaster relief

3 The natural disaster relief component covers net expenses that fall within the scope of the Commonwealth-State Disaster Recovery Funding Arrangements.[1]

4 Under the Disaster Recovery Funding Arrangements, states and territories (states) can be reimbursed for expenses incurred in response to an eligible disaster by the Commonwealth. The reimbursement amount depends on the type of spending undertaken by states and whether spending thresholds have been exceeded. The reimbursement rate for different types of spending and the method used to determine annual thresholds are outlined in the arrangements.

5 For state expenses to be eligible for reimbursement, they must have been incurred in response to an eligible disaster. An eligible disaster includes bushfires, earthquakes, floods, storms, cyclones, storm surges, landslides, tsunamis, meteorite strikes, tornados and some terrorist attacks. The process for the recognition of a natural

[1] National Emergency Management Agency (NEMA), Disaster Recovery Funding Arrangements 2018, NEMA, 2018, accessed 13 June 2024.

disaster and eligibility for relief spending is defined by the Disaster Recovery Funding Arrangements.

6 Expenses covered under the framework include:

- immediate reconstruction of public assets to their pre-disaster function
- emergency financial and non-financial assistance to individuals including food, clothing, temporary accommodation, and counselling
- financial support to businesses and organisations
- longer term community recovery activities.

7 State funding of expenses for which local governments are responsible is also covered by the Disaster Recovery Funding Arrangements.

8 This component excludes state spending on:

- events such as pandemics, droughts and oil or chemical spills
- some terrorist acts that are not eligible disasters under the Disaster Recovery Funding Arrangements[2]
- natural disaster mitigation
- any other expenses on natural disaster relief by a state that are not recognised under the Disaster Recovery Funding Arrangements framework.

Administrative scale

9 The administrative scale component recognises the unavoidable fixed costs incurred by states in delivering services. Administrative scale expenses are independent of the size of a state's service population and its socio-demographic composition. Such costs can be associated with:

- core head office functions of departments (for example, corporate services, policy and planning functions)
- services provided for the entire state (for example, judiciary, legislature, treasury, revenue office).

10 Not all fixed costs or 'head office type costs' are included in the administrative scale component. This component only accounts for minimum fixed costs that do not vary with the scale of service delivery. Remaining costs are part of the service delivery expenses of each category and assessed according to category needs.

Native Title and land rights

11 The Native Title and land rights component recognises expenses related to:

- the *Native Title Act 1993* (Cth)
- the *Aboriginal Land Rights (Northern Territory) Act 1976* (Cth)
- other related state legislation.

[2] National Emergency Management Agency (NEMA), Disaster Recovery Funding Arrangements 2018, NEMA, 2018, accessed 13 June 2024.

12 Expenses include the cost of administering legislation, negotiating or litigating claims and any ongoing costs associated with compensation and joint management of land. Expenses for Native Title and land rights vary depending on the number, type and nature of claims made in the state. This is impacted by historical circumstances and competing interests in land use.

13 States may also receive revenue related to Native Title and land rights including fees related to joint land management agreements and requests for information, and reimbursement from third parties in relation to compensation cases.

Actual state expenses

14 The first step in calculating assessed expenses is identifying actual state expenses.[3] States collectively spent around 13.3% of their total recurrent actual expenses on other expenses in 2022-23. Table 1 shows actual expenses broken down by component and Table 2 outlines actual expenses by state in 2022-23.[4]

Table 1 Other expenses by component, 2022–23

	2022-23	
	$pc	**$m**
Service expenses and Native Title and land rights	1,215	31,967
Natural disaster relief	217	5,708
Aggregate Administrative scale	123	3,241
Total	**1,555**	**40,917**
Proportion of total expenses (%)		**13.3**

Table 2 Other expenses by state, 2022–23

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Other Expenses ($m)	14,616	11,421	6,446	1,994	2,348	1,267	1,792	1,033	40,917
Other Expenses ($pc)	1,772	1,700	1,197	703	1,279	2,213	3,885	4,109	1,555
Proportion of total expenses (%)	**14.8**	**14.5**	**11.0**	**5.9**	**12.6**	**17.8**	**28.1**	**17.0**	**13.3**

[3] Adjusted budget calculations use ABS Government Financial Statistics data to determine actual state expenses. For further detail, see the adjusted budget chapter of the *Commission's Assessment Methodology*.

[4] Tables in this chapter, unless otherwise stated, use 2022–23 data.

Structure of assessment

Table 3 outlines the drivers that influence expenses in each component.

Table 3 Structure of the other expenses assessment

Component	Driver	Influence measured by driver
Service expenses	EPC (a)	Population drives the use and cost of services.
	Regional costs (b)	The cost of providing services increases as the level of remoteness increases.
	Wage costs	Differences in wage costs between states affect costs.
Natural disaster relief	APC	State expenses reflect circumstances beyond state control.
Administrative scale	Minimum size of administration	The fixed costs of administering a state that do not vary with the size of the state affect costs.
	Wage costs	Differences in wage costs between states affect costs.
Native Title and land rights	APC	State expenses reflect circumstances beyond state control.

(a) Population is considered the only driver for some categories of expenses but not all. For some expenses, other factors besides population may apply, but expenses are not differentially assessed.
(b) Applied to a subset of service expenses that was around 40% of total service expenses in 2022–23.

Data

15 Data used in the assessment are outlined in Table 4.

Table 4 Data used in the other expenses assessment

Source	Data	Updated	Component
States	Net state expenses for natural disaster relief measures covered by the Disaster Recovery Funding Arrangements	Annually	Natural disaster relief
National Emergency Management Agency	Commonwealth concessional interest rates, state revenue total	Annually	Natural disaster relief
ABS	State and Local Government Final Consumption Expenditure deflator	Annually	Administrative scale
Commission calculation	Minimum staffing structure	No	Administrative scale
States	Native title and land rights expenses	Annually	Native Title and land rights

Note: Data for the wage costs adjustment are also included in this assessment.
The adjusted budget data sources are outlined in the adjusted budget chapter of the *Commission's Assessment Methodology*.

Assessment method

16 Each component has its own assessment. Service expenses uses state population, regional costs and wage costs as drivers of assessed expenses. Natural disaster relief and Native Title use the actual spending of each state as the driver of assessed expenses. Administrative scale uses the minimum size of administration and wage costs as the drivers of assessed expenses.

Service expenses

Driver

17 The Commission considers that the most appropriate driver of state spending for most of these expenses is state population. It is a deliberative equal per capita assessment.

18 The exception is spending on natural disaster mitigation. Mitigation spending does not have a specific Classification of the Functions of Government - Australia (COFOG-A) code in the GFS framework. States report some mitigation spending against COFOG-A codes that align with the other expenses category and some that align with the services to communities category. State population is not the only driver of natural disaster mitigation expenses, but there are difficulties determining these drivers. There is a non-deliberative equal per capita assessment for mitigation expenses.

19 The implication of a deliberative versus non-deliberative equal per capita assessment is for the treatment of related Commonwealth payments. Expense needs are 'not assessed' for expenses for which a non-deliberative equal per capita assessment applies. Therefore, Commonwealth payments related to these expense types are treated as 'no impact'. For details on the treatment of Commonwealth payments, see the Commonwealth payments chapter of the *Commission's Assessment Methodology*.

Applying regional costs

20 Regional costs account for the additional costs states face in providing services in more remote locations. A category-specific measure of these costs cannot be directly measured because it is not practical to determine the effect of remoteness on each of the service expenses in this component. Therefore, a general regional cost gradient is applied. This is the weighted average of regional cost gradients estimated from several sources. For details on how it is determined, see the geography chapter of the *Commission's Assessment Methodology*.

21 Not all expenses in this component are affected by remoteness. The proportion of expenses to which regional cost factors are applied is updated annually to reflect changes to the reported expenses. For the 2022–23 year this proportion was around 40%.

Applying wage costs

22 Wages costs are a significant share of the total cost of service expenses. Differences in wage costs between states have a differential effect on the cost of providing services. The service expenses assessment uses the Commission's general method for measuring the influence of wage costs. Details on how this is calculated are in the wage costs chapter of the *Commission's Assessment Methodology*.

Natural disaster relief

Driver

23 For state spending on natural disaster relief, each state's assessed expenses are equivalent to the actual amount it spends on natural disaster relief, net of reimbursements from the Commonwealth, local governments and insurance payments. This approach, referred to as an actual per capita assessment, can be appropriate when state expenses are not influenced by state-specific policy decisions.

24 The component is assessed actual per capita because:

- states have limited ability to control the impact of natural disasters and associated relief expenses, and costs for providing natural disaster relief vary by the scale, severity, frequency and type of natural disaster
- the Disaster Recovery Funding Arrangements prescribe allowable types of expenses in response to natural disasters.

25 States experiencing natural disasters receive a higher share of GST revenue. This effectively shares the costs of responding to natural disasters between states.

Funding of local government expenses by states

26 The component includes the net payments made by states to local governments for the costs they incur in responding to natural disasters.

27 Under the Disaster Recovery Funding Arrangements, eligible expenses include payments made by states to local governments to assist them with their natural disaster relief and recovery activities.

28 Local governments in most states refund state governments for some of the funding provided by the states. State policies on the level of local government contributions vary, and so an actual per capita assessment of the local government contribution is not appropriate. Local government contributions are assessed using average contribution rates.

29 Where states report expenses net of the local government contribution, both the size of expenses for local governments and the amount of revenue received from the Commonwealth need to be increased. The contribution received from local governments is added to the state expenses to account for the missing expenses.

An adjustment is also made to the revenue received from the Commonwealth to account for the underreporting of expenses and therefore forgone revenue.

30 Since the ACT does not have a local government, the costs of relief that a local government would normally cover are covered by the ACT government. When disasters occur in the ACT, estimates of the proportion of the ACT's expenses that are local government-type expenses are made using the total actual expenses and the proportion of expense for states that cover local government spending. The estimated actual local government-type expense is then assessed using average contribution rates, as it is for other states, with the assessed contribution deducted from the assessed expenses.

Concessional interest rate loans and interest rate subsidies

31 Eligible forms of assistance under the Disaster Recovery Funding Arrangements for individuals, non-profit organisations, small businesses and primary producers include concessional interest rate loans and interest rate subsidies.

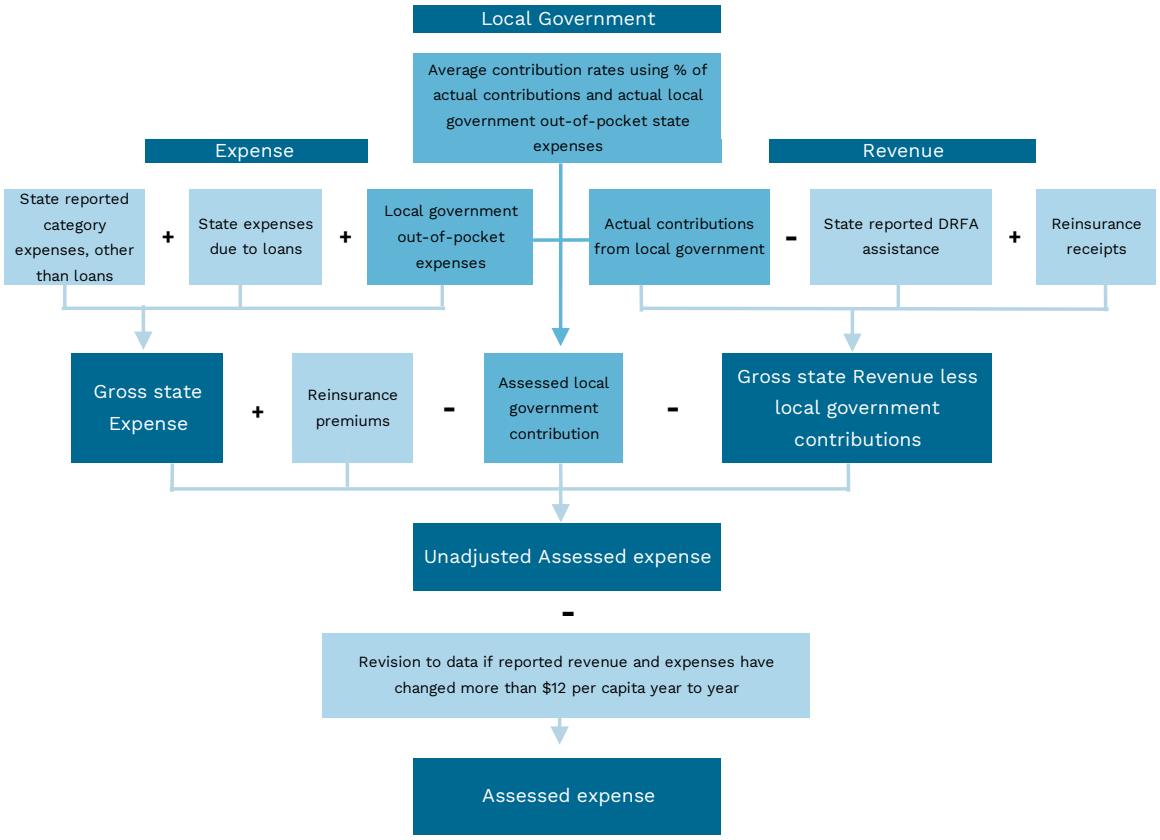
32 To ensure equivalent treatment of assistance provided in the form of concessional interest rate loans and interest rate subsidies, the Commission includes only the subsidy value of loans in the calculation of net expenses.

Revisions policy

33 In some years, states revise their net expenses for natural disaster relief, for example because of lags in reporting relief expenses to National Emergency Management Australia. Because needs are assessed on an actual per capita basis, where these revisions are material ($12 per capita), the Commission makes an adjustment to ensure that the correct expenses are assessed over time. If an adjustment is necessary, it will fully reflect the over- or under-statement of net expenses. Adjustments are only made for years that are current assessment years.

34 Figure 1 shows the calculation used to determine states' assessed expenses for natural disaster relief.

Figure 1 Flow Diagram of the natural disaster relief assessment



Administrative scale

Drivers

35 The Commission identifies the amount each state would need to spend to provide minimum head office staff. In per capita terms, this amount is greater for small states than large states.

36 This was derived using the following steps.

- Estimate an average minimum staffing structure.
  - Adjust for the ACT to remove staffing attributable to agriculture, non-urban transport, mining and First Nations communities.
  - Adjust for the Northern Territory to reflect additional staffing for engaging with First Nations stakeholders for policy development and coordination.
- Apply Commonwealth Public Service annual salaries from 2016–17 to the average minimum staffing structures; and increase by 17.3% to account for superannuation and long service leave.
- Use the State and Local Government Final Consumption Expenditure Deflator to index the quantum from 2016–17 dollars to assessment year dollars.

- Divide wage-related costs by 0.60 to derive the total cost of the administrative task for each state in 2016–17 dollars, as 60% of administrative task expenses are estimated to be wage-related.

Applying wage costs

37 Wages costs are a significant share of the total cost of administrative expenses. Differences in wage costs between states have a differential effect on the cost of administrative expenses. The administrative scale assessment uses the Commission's general method for measuring the influence of wage costs. Details on how this is calculated are in the wage costs chapter of the *Commission's Assessment Methodology*.

Native Title and land rights

Driver

38 Native Title and land rights is an actual per capita assessment. This means that a state's spending needs are assessed to be equal to its actual expenses. This approach is appropriate when state spending is not significantly influenced by state-specific policy decisions. Commonwealth legislation and national frameworks ensure that states approach Native Title and land rights matters in a similar way.

39 The Native Title and land rights component is assessed actual per capita to recognise that states have limited ability to control Native Title and land rights spending. This spending is driven by the number and type of Native Title and land rights claims within a state and competing interests in land use. These factors are often determined by historical circumstances and the individual nature of each claim.

40 To undertake the assessment, state-provided data are summed for each state to determine its expenditure. If a state has revenue related to the component, this is subtracted from its expenditures.

GST distribution in the 2025 Review

41 Table 5 shows the GST impact of the assessment in the 2025 Review.

Table 5 GST impact of the other expenses assessment, 2025-26

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total effect
	$m	$m	$m	$m	$m	$m	$m	$m	$m
Service expenses and Native Title and land rights	-72	-74	-58	200	-44	-20	11	57	268
Natural disaster relief	909	-701	172	-95	-163	-56	-52	-14	1,080
Aggregate Administrative scale	-703	-493	-303	77	202	369	412	437	1,498
Total ($m)	**134**	**-1,268**	**-189**	**182**	**-5**	**293**	**372**	**480**	**1,461**
Total ($pc)	**15**	**-177**	**-33**	**60**	**-2**	**507**	**770**	**1,868**	**52**

Note: Magnitude and direction of GST impact can change from year to year.

Part C

Capital Assessments

22. Investment

Overview

1 The assessment covers state and territory (state) gross investment.[1] It includes all investment by the general government sector as well as by housing and public transport public non-financial corporations.

2 The assessment is made up of 14 components. These reflect the investment associated with the 11 recurrent spending categories, as well as land. The roads and transport recurrent spending categories are reflected in the rural roads, urban roads, urban transport and non-urban transport investment assessments. The components are shown in Table 1.

3 The assessment recognises that investment expenditure needs are influenced by the following.

- Share of national need — the proportion of the national stock of infrastructure each state would hold to deliver national average standard services.
- Change in share of national need — states with a growing share of national need for assets require additional investment. States with a declining share of national need require less investment.
- Cost of construction — states with above average construction costs have higher expenditure needs.
- Wage costs — states facing greater wage cost pressures have higher spending needs.

[1] Gross investment includes total spending on assets. Net investment is gross investment less depreciation.

Actual state investment and assets

4 The first step in calculating assessed expenditure is identifying actual state investment, and the stock of assets held by states. States collectively invested around $59 billion in 2022–23, increasing the total value of their physical assets to $946 billion (Table 1).[2] Table 1 shows investment and stock of assets classified by component and Table 2 outlines investment by state.[3]

Table 1 Investment by component, 2022–23 (a)

	Gross investment		Value of stock of assets	
	$m	$pc	$m	$pc
Schools	6,359	242	98,305	3,737
Post-secondary education	788	30	10,650	405
Health	6,589	250	82,203	3,125
Housing	593	23	69,937	2,658
Welfare	160	6	1,970	75
Services to communities	1,338	51	18,452	701
Justice	2,099	80	24,845	944
Rural roads	6,618	252	215,729	8,200
Urban roads	10,644	405	163,475	6,214
Urban transport	17,971	683	193,043	7,338
Non-urban transport	70	3	1,255	48
Services to industry	1,169	44	4,643	176
Other expenses	1,960	74	61,693	2,345
Land	2,801	106	(b)	(b)
Total	**59,159**	**2,249**	**946,202**	**35,966**

(a) Gross investment is for the financial year 2022–23. Value of state assets is as at 30 June 2023.
(b) Data not collected

Table 2 Investment by state, 2022–23

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Investment ($m)	21,939	16,283	10,553	5,399	2,325	777	1,017	865	59,159
Investment ($pc)	2,660	2,424	1,959	1,904	1,266	1,357	2,206	3,443	2,249

[2] Adjusted budget calculations use ABS Government Financial Statistics data to determine actual state investment. For further detail see the adjusted budget chapter of the *Commission's Assessment Methodology*. Asset data is provided by states.

[3] Tables in this chapter, unless otherwise stated, use 2022–23 data.

Structure of assessment

5 Table 3 outlines the drivers that influence spending needs in investment. These drivers apply to each component except investment in land, which is assessed equal per capita.

Table 3 Structure of the investment assessment

Driver	Influence measured by driver
Share of national need	Differences in need for infrastructure between states affect costs.
Change in share of national need	The infrastructure needs of faster growing states affect costs.
Cost of construction	Differences in construction and wage costs between states affect costs.

Note: The measure of national need varies between components.

Data

6 The data used specifically for the investment assessment are outlined in Table 4. The assessment also uses data from the recurrent expense categories including a wide range of sources as inputs to each specific investment component. While differences between the recurrent and capital measures are covered in this chapter, the detailed explanation of recurrent methods for each component is in each relevant chapter.

Table 4 Data used in the investment assessment

Source	Data	Updated	Component
States	Capital stock data	Annually	All components
ABS	Investment data	Annually	All components
Rawlinsons	Rawlinsons construction cost indices	Annually	All components

Note: Data for the wage costs adjustment are also included in this assessment.
The adjusted budget data sources are outlined in the adjusted budget chapter of the *Commission's Assessment Methodology*.

Assessment method

7 The investment category comprises 14 components, representing the investment needs for the recurrent expense categories and an additional one for investment in land. Each component is constructed in the same way, except for investment in land which is assessed equal per capita.

8 The section below describes the construction of a typical investment component and details exceptions where applicable.

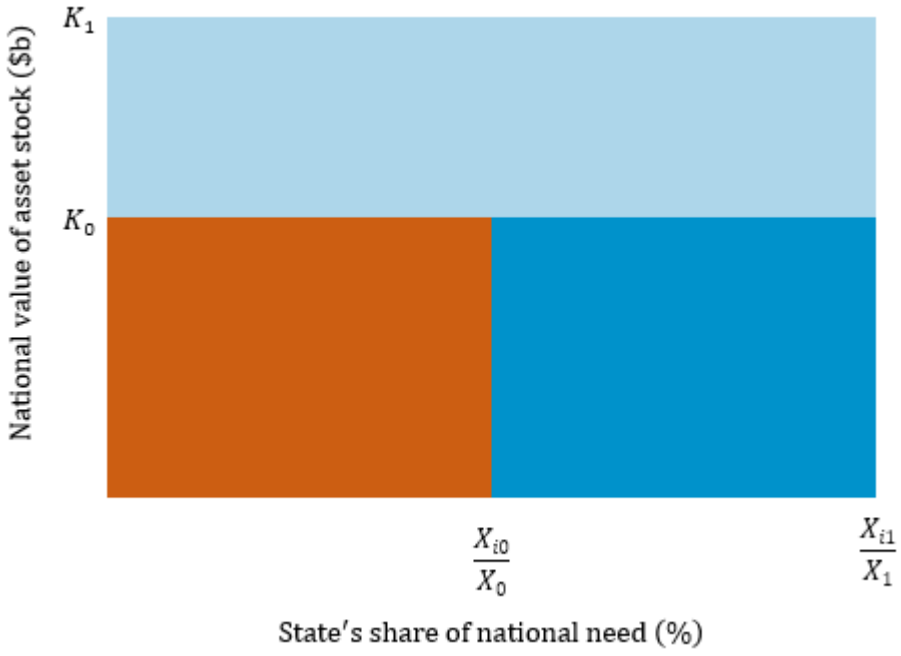
Investment framework

9 The investment assessment (Figure 1) assesses that each state's investment needs are its assessed share (x axis) of the national stock of assets (y axis) at the end of

the year less the equivalent concept at the start of the year. This is represented as the area of the 3 boxes in Figure 1, minus the area of the orange box.

10 For analytical purposes, the blue boxes representing total assessed investment can be divided in 2. The dark blue box represents the change in share of need for existing assets. This means, if states made no investment, equalisation would be served by the fixed stock of assets effectively being transferred from states with a declining share of need to states with an increasing share of need. The second element, known as capital deepening and represented by the light blue box, reflects that total investment (the growth in value of assets) is allocated to all states in proportion to their assessed share of need at the end of the year. This model assesses the cost of acquiring the investment needs of the states at national average prices. A final adjustment is made to reflect that some states have higher construction costs than others.

Figure 1 Investment framework



0 refers to year opening stocks and populations.
1 refers to closing stocks and population.
i refers to a state.
K refers to capital.
X refers to population.

11 This framework can be illustrated with investment in schools infrastructure (Table 5).

- At the start of 2022–23, New South Wales had 30.7% of all government school students. By the end of the year, this had fallen to 30.5%.
  - Therefore, New South Wales no longer required 0.2% of the $98.3 billion in school assets that states held at the start of 2022–23, and so its assessed needs reduced by $190 million.

- States collectively invested $6.4 billion in schools during 2022–23.
  - New South Wales needed 30.5% of that, or $1,937 million.
- Finally, as the cost of construction in New South Wales is about 2% more than average, the total construction costs increased by $43 million (i.e. 2% of its assessed investment needs of $1,937 million less $190 million).

Table 5 Investment assessment calculation, schools 2022–23

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	%	%	%	%	%	%	%	%	%
Opening share of need	30.66	24.33	22.01	11.20	6.60	2.12	1.74	1.33	100.00
Closing share of need	30.46	24.38	22.06	11.30	6.56	2.11	1.75	1.38	100.00
Change in share of need	-0.21	0.05	0.05	0.11	-0.03	-0.01	0.01	0.04	0.00
	$m	$m	$m	$m	$m	$m	$m	$m	$m
Change in share of need	-190	44	44	98	-31	-11	5	41	0
Capital deepening	1,937	1,550	1,403	719	417	134	111	88	6,359
Cost of construction	43	-71	-32	43	-1	-3	4	17	0
Total assessed investment	**1,790**	**1,523**	**1,414**	**860**	**386**	**120**	**121**	**146**	**6,359**

Measuring share of need

12 The Commission generally measures the need for infrastructure in a similar way to how it measures the need for recurrent spending on the related services. However, there may be some drivers that affect one and not the other. The divergences in methods are:

- that the wage costs assessment is not applied in calculating states' relative user populations (although it is used to calculate construction costs)
- where the impact of regional costs can be separately identified, it is not applied, but the impact of regional factors on the cost of construction is assessed
- where regional costs cannot be separately identified from other elements of the recurrent assessment, the regional costs element of the cost of construction is not applied to avoid double counting (see Table 7).

13 Table 6 indicates each component's measure of relative requirement for infrastructure.

Table 6 Measure of relative infrastructure need

Component	Measure of need
Schools	Recurrent expenses for government students only, and additional costs for Indigenous schools
Post-secondary education	Recurrent expenses with the Indigenous and remoteness cost-weights removed
Health	Recurrent expenses and cross-border hospital use
Housing	Recurrent expenses excluding the impacts of First home-owners grants and Indigenous households not in Indigenous specific housing
Welfare	Recurrent expenses excluding concessions and NDIS
Services to communities	Equal per capita
Justice	Recurrent expenses
Rural roads	Recurrent expense drivers with different weights used for aggregation
Urban roads	Recurrent expense drivers with different weights used for aggregation
Urban transport	A blend of urban population-squared (25%) and urban centre characteristics costs (75%).
Non-urban transport	Recurrent expenses
Services to industry	Recurrent expenses
Other expenses	Equal per capita

Justice, non-urban transport, services to industry

14 For these investment components the corresponding recurrent assessed expenses (excluding wage costs) are used as the measure of the share of national need, without further adjustment.

Other expenses, services to communities

15 For these investment components, population is used as the measure of share of national need.

Schools

16 The schools measure of share of national need is estimated as the share of government school students. Schools with large First Nations populations often provide additional services requiring infrastructure, such as kitchens. First Nations students in schools with at least 25% First Nations students are given the additional weight estimated for First Nations students in the recurrent regression.

17 This assessment is calculated using Australian Curriculum, Assessment and Reporting Authority and ABS student population data.

Post-secondary education

18 The post-secondary education measure of share of national need is calculated using the same socio-demographic composition method used to calculate its recurrent assessed expenses, using differences in enrolment rates, but not the cost-weights for First Nations students or for remoteness.

Health

19 The health measure of the share of national need is calculated using the same method used to calculate its recurrent assessed expenses, with one adjustment. A cross-border hospital services factor is applied to the assessed expenses for 3 components, admitted health, emergency departments, and non-admitted patients. The recurrent costs of cross-border hospital service use are incorporated in the national health funding agreement, so the Commission does not assess such needs. This agreement does not reflect the associated infrastructure costs, so the Commission recognises these costs.

20 The cross-border need is calculated as the ratio of hospital activity in a state to hospital activity for residents of a state, using data from the National Health Funding Body.

21 Spending assessed in the COVID-19 components is excluded.

Housing

22 The housing measure of share of national need is calculated using the same method used to calculate its recurrent assessed expenses for the social housing expenses component. The First Nations cost weight is applied only to Indigenous specific housing. First Nations households in mainstream housing do not attract the additional cost weight. Data on First Nations specific housing are sourced from the Productivity Commission's Report on Government Services.

Welfare

23 The welfare measure of share of national need is calculated using the same method used to calculate its recurrent assessed expenses for family and child welfare, homelessness services and other welfare. State recurrent spending on the National Disability Insurance Scheme and concessions is excluded.

Roads

24 Roads investment is assessed in 2 components: urban roads and rural roads. The share of national need is calculated using the same method used to calculate recurrent assessed expenses, although the relative importance of road length, road use and heavy vehicle traffic differs, are calculated using capital-specific weights from National Transport Commission data.

Urban transport

25 The urban transport measure of share of national need is calculated using the same method used to calculate its recurrent assessed expenses with one exception - blending. Both the recurrent and capital use measures blend the results of the regression model with a measure of urban population. However, while the recurrent assessment is blended with urban population in each urban centre, the capital assessment is blended with the square of urban population in each urban centre. The level of blending also differs. In the recurrent assessment, the urban population measure accounts for 35% of the final assessment, in the capital measure it is 25%.

Construction Costs

Inter-state costs

26 The inter-state construction cost factor is a blend of the Rawlinsons interstate capital city construction cost indices with the Commission's wage costs factors. The blending ratio is 50/50. These cost differentials are applied to all investment components except land.

Regional costs

27 The cost of construction gradient is calculated in several steps. Rawlinsons regional indices provide index numbers for 259 urban centres and localities across all states. The population weighted average index for each remoteness area is calculated, based on the population of each urban centre or locality with a Rawlinsons index value.

28 The population weighted average of these index numbers in each remoteness area for each state are combined to produce state factors. Population weighted averages are used for most services, except where the distribution of construction is likely to differ considerably from the distribution of the population, and where data are available for an alternative.

- In the rural roads assessment, the weighting for the averages is based on the length of road in each remoteness area in each state.
- In the urban roads assessment, the weighting is based on the population in urban areas of at least 40,000 people.

29 In some investment components, the measure of share of need, based on the equivalent recurrent assessment, incorporates a regional cost impact. Where this can be removed, a construction cost specific gradient is applied. Where it cannot be removed (in health and justice), the capital construction cost specific gradient is not applied, to avoid double counting. In components where services are not provided in regional and remote communities, such as for urban transport, a regional cost gradient is not applied. The application of the regional cost gradient is shown in Table 7.

Table 7 Regional cost gradient application

Investment component	Weighting of Rawlinsons regional cost gradient
Schools	Population
Post-secondary education	Population
Health	—
Housing	Population
Welfare	Population
Services to communities	Population
Justice	—
Rural roads	Rural roads
Urban roads	Urban population
Urban transport	—
Non-urban transport	Population
Services to industry	Population
Other expenses	Population

Negative investment

30 Occasionally a state is assessed to have negative assessed investment for a component. This can occur in a component, such as housing, which has a relatively large stock of assets and relatively low new investment. A state's share of national need may decline, but this is not offset by capital deepening. A negative assessed investment reflects that to maintain the average level of stock, the state would need to sell stock. In this scenario, construction cost factors are not applied. The costs associated with constructing new physical assets are not related to the disposal of physical assets.

Land

31 Developing new areas can involve both selling Crown land to developers, and buying land for state infrastructure. State policies on how much crown land to hold vary significantly. Due to these factors, the Commission has been unable to identify a driver of need for net purchasing of land. As such, investment in land is assessed equal per capita and stocks are not differentially assessed.

GST distribution in the 2025 Review

32 Table 8 shows the GST impact of the assessment in the 2025 Review.

Table 8 GST impact of the investment assessment, 2025-26

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total effect
	$m	$m	$m	$m	$m	$m	$m	$m	$m
Schools	-271	18	87	241	-85	-37	14	34	394
Post-secondary education	-6	-13	12	13	-3	-2	0	0	25
Health	-277	-289	191	185	54	59	-8	86	575
Housing	-98	-84	99	97	-10	-16	-10	21	218
Welfare	3	-9	5	2	-2	0	0	1	11
Services to communities	-11	-17	14	24	-6	-5	1	0	38
Justice	-36	-144	60	59	-6	5	-11	73	196
Rural roads	-547	-938	504	612	77	-15	-103	411	1,604
Urban roads	39	-81	203	100	-177	-68	11	-26	353
Urban transport	1,345	1,283	-1,185	-227	-587	-312	-163	-152	2,628
Non-urban transport	-4	2	2	5	-2	-2	0	0	9
Services to industry	-31	-47	5	79	-6	-1	-4	6	89
Other expenses	-60	-44	63	74	-18	-14	2	-3	139
Land	0	0	0	0	0	0	0	0	0
Total ($m)	**44**	**-364**	**58**	**1,263**	**-771**	**-410**	**-271**	**450**	**1,816**
Total ($pc)	**5**	**-51**	**10**	**414**	**-405**	**-709**	**-561**	**1,750**	**65**

Note: Magnitude and direction of GST impact can change from year to year.

23. Net borrowing

Overview

1 The net borrowing assessment seeks to provide states and territories (states) with the capacity to maintain their population shares of total net financial liabilities.[1]

2 Relative state population growth is the only driver of need, reflecting a relatively fast-growing state's ability to 'dilute' net debt among a larger population. Needs for the change in average net financial worth are assessed equal per capita.

3 When states collectively hold net financial liabilities:

- a state with below-average population growth will require more GST to have the capacity to end the year with the same net liabilities per capita
- a state with above-average population growth will require less GST to have the capacity to end the year with the same net liabilities per capita.

4 When states collectively hold net financial assets:

- a state with below-average population growth will require less GST to have the capacity to end the year with the same net assets per capita
- a state with above-average population growth will require more GST to have the capacity to end the year with the same net assets per capita.

5 The adjusted budget includes net borrowing to allow the Commission to directly recognise how states' financial positions are affected by differences in population growth. If the Commission did not assess net borrowing, then (while states are net borrowers), fast growing states would have a greater capacity to service their debt, and lower debt charges per capita.

Actual state net borrowing and net liabilities

6 At 30 June 2023, collectively, states held $343 billion in net liabilities. Western Australia held $12 billion in net financial assets, while all other states held net liabilities.[2] During 2022–23, Queensland and Western Australia were net lenders, while other states, and states in total, were net borrowers (Table 1).

[1] Or net liabilities.

[2] Net borrowing is derived in the adjusted budget calculations. For further detail see the adjusted budget chapter of the *Commission's Assessment Methodology*. Financial asset data is provided by states.

Table 1 Net borrowing and net financial worth by state, 2022–23

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	$m	$m	$m	$m	$m	$m	$m	$m	$m
Net liabilities, 30 June 2023	122,748	151,080	36,492	-12,318	23,671	2,397	10,542	8,637	343,249
Net borrowing, 2022-23	22,762	23,136	-7,833	-856	1,311	781	1,190	343	40,833
	$pc	$pc	$pc	$pc	$pc	$pc	$pc	$pc	$pc
Net liabilities, 30 June 2023	14,886	22,492	6,777	-4,350	12,896	4,189	22,859	34,451	13,051
Net borrowing, 2022-23	2,760	3,444	-1,455	-302	714	1,365	2,580	1,367	1,553

Note: Net liabilities and net borrowing are shown with no sign. Net financial assets and net lending are shown with a negative sign.

Structure of assessment

7 Table 2 outlines the drivers that influence the assessment.

Table 2 Structure of the net borrowing assessment

Component	Driver	Influence measured by driver
Net borrowing	Population growth	Differences in population growth between states affect the level of net liabilities per capita. States with above-average population growth will require less GST to have the capacity to end the year with the average net liabilities per capita.
	Population	Because the above driver accounts for the effects of population growth on start of year financial positions, the annual change in net liabilities is assessed on a per capita basis.

Data

8 The data used in the assessment are outlined in Table 3.

Table 3 Data used in the net borrowing assessment

Source	Data	Updated
Adjusted budget	Net borrowing/lending	Annually
States	Net financial position	Annually
ABS	Population	Annually

Note: Net borrowing/lending is derived as a residual in the adjusted budget calculations.

Assessment method

9 If a state holds its population share of net financial assets at the start of an assessment year, then the assessment gives it the capacity to hold its population share at the end of the assessment year.

10 The assessment calculates each state's population share of the closing stock of net financial assets for an assessment year (stock at 30 June). It subtracts this from each state's share of a calculated opening stock of net financial assets for that financial year (stock at 30 June for the previous year).

11 The stock of financial assets can change over a year because of state borrowing or saving, and because assets and liabilities are revalued. The revaluation of assets and liabilities should not affect the GST distribution, so the opening stock of net financial liabilities is calculated as the closing stock less net borrowing in the year.

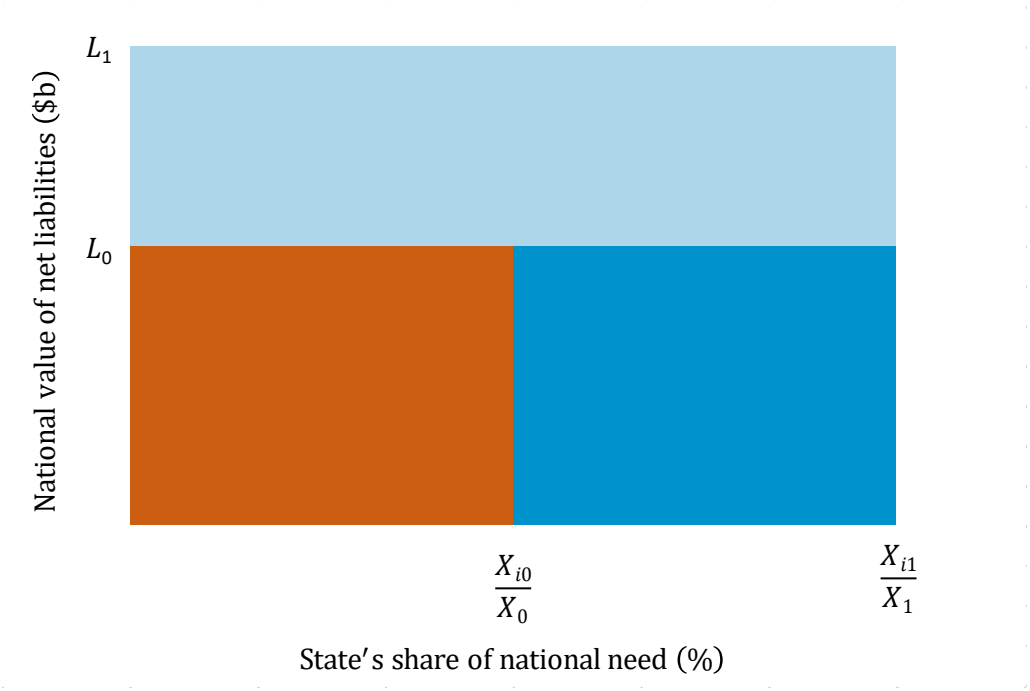
Illustration of assessment method

12 The assessment method is illustrated in Figure 1. The area of the 3 blocks represents a state's net liabilities at the end of the year. This is assessed as the national average net liabilities times its population share. From this, we subtract the orange box (the comparable concept at the start of the year).

13 The 2 blue boxes represent the assessed need for new borrowing. They can be separated into borrowing that is driven by:

- change in population share (fast growing states have their net liabilities diluted, creating an advantage in servicing accumulated debt, and therefore need less GST)
- the annual change in net liabilities (equal per capita on end of year populations).

Figure 1 Framework for net borrowing



Note: 0 refers to year opening stocks and populations.
1 refers to closing stocks and population.
i refers to a state.
L refers to net liabilities.
X refers to population.

GST distribution in the 2025 Review

14 Table 4 shows the GST impact of the net borrowing assessment in the 2025 Review. Differences between the states in population growth are the only driver of GST needs in this assessment. Since states collectively are in a net liability position, population growth reduces (or dilutes) the per capita value of those liabilities. Fast growing states such as Queensland and Western Australia require less GST reflecting the benefit of faster population growth when it comes to servicing accumulated debt. Slow growing states, like the Northern Territory, require more GST.

Table 4 GST impact of the net borrowing assessment, 2025-26

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total effect
	$m	$m	$m	$m	$m	$m	$m	$m	$m
Net Borrowing	269	-35	-207	-203	81	64	7	24	445
Total ($m)	**269**	**-35**	**-207**	**-203**	**81**	**64**	**7**	**24**	**445**
Total ($pc)	**31**	**-5**	**-36**	**-66**	**42**	**112**	**15**	**92**	**16**

Note: Magnitude and direction of GST impact can change from year to year.

Part D

Other

24. Commonwealth payments

Overview

1 The Commonwealth payments assessment covers payments for specific purposes made by the Commonwealth to the states and territories (states). Payments for specific purposes are an important source of revenue available to states to provide services and invest in infrastructure. States that receive a higher share of these payments are fiscally advantaged compared to states that receive a lower share. Therefore, payments for specific purposes are taken into account when determining each state's relative fiscal capacity and GST requirement.

2 The scope of the Commonwealth payments assessment is limited to payments for specific purposes listed in the Australia's Federal Financial Relations part of the Commonwealth's Final Budget Outcome.

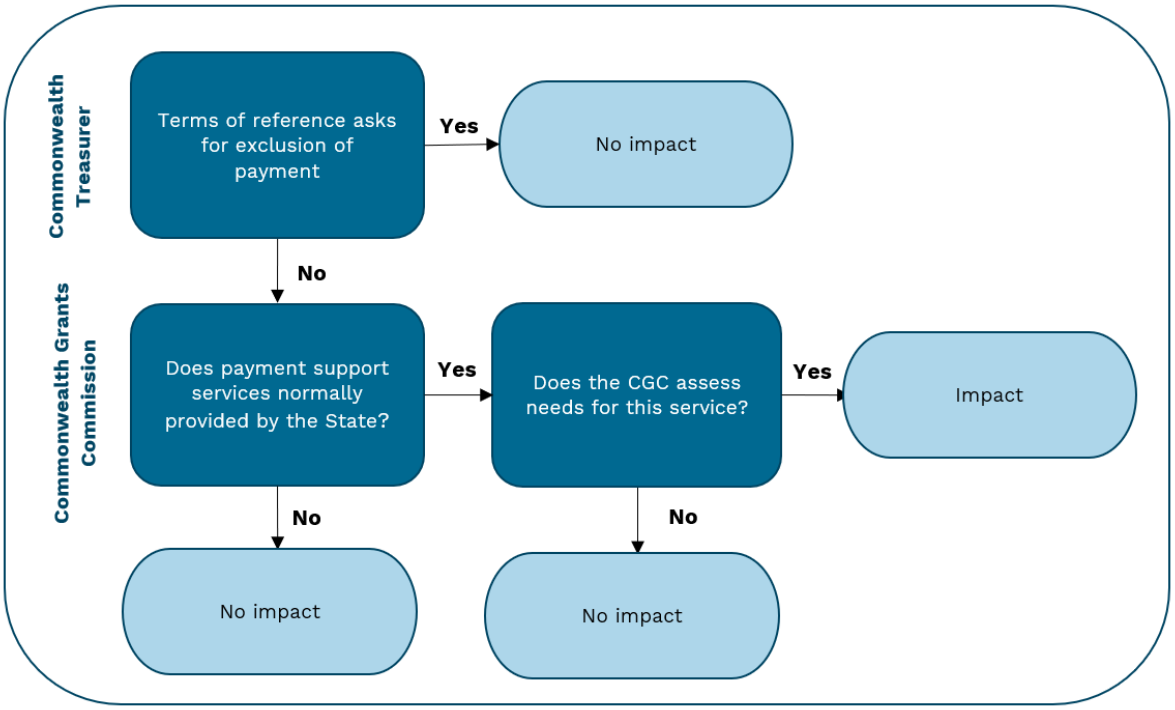
3 Not all of these payments affect the GST distribution. The Commission applies a principles-based framework to determine which Commonwealth payments impact the GST distribution. This ensures consistent and transparent outcomes. The following guideline is used to decide the treatment of payments on a case-by-case basis:

> payments which support state services, and for which expenditure needs are assessed, will impact the GST relativities.

4 Payments may also be excluded due to a terms of reference instruction from the Commonwealth Treasurer, known as 'quarantining'. The Commission has no role in a decision to quarantine a payment.

5 Figure 1 sets out the Commission's framework for the treatment of Commonwealth payments and whether a payment should impact the GST distribution.

Figure 1 Decision framework for the treatment of Commonwealth payments



Commonwealth payments to states

6 The total value of all Commonwealth payments to states in 2022–23 is shown in Table 1 and the per capita value of these payments is shown in Table 2.[1]

7 Approximately one-third of all payments from the Commonwealth to states affect the GST distribution (Impact payments), as shown in Table 3.

Table 1 Payments from the Commonwealth by state, 2022–23

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	$m	$m	$m	$m	$m	$m	$m	$m	$m
No impact payments	3,307	3,085	2,896	1,746	984	482	260	517	13,276
Terms of Reference	1,046	1,058	748	454	262	123	68	299	4,058
Commission decision	2,261	2,027	2,148	1,292	722	359	192	218	9,218
Impact payments	15,303	11,521	11,041	5,718	3,339	1,286	729	962	49,898
Payments assessed EPC	1,688	2,697	886	-35	454	52	169	25	5,936
Commonwealth payments treated as own-source revenue	0	0	0	1,474	0	0	0	0	1,474
GST	24,453	17,972	17,358	6,174	7,354	3,308	1,572	3,803	81,994
Total payments from the Commonwealth	**44,750**	**35,275**	**32,181**	**15,077**	**12,130**	**5,128**	**2,730**	**5,307**	**152,577**

Note: Negative amounts for payments assessed EPC occurs when the total of all Commonwealth payments reported in the Final Budget Outcome is greater than the value reported in Government Finance Statistics, excluding out of scope payments.

[1] The Commonwealth payments assessment uses payment data from *Final Budget Outcome* published by the Commonwealth of Australia in conjunction with ABS Government Financial Statistics data to determine total payments from the Commonwealth. Tables in this chapter, unless otherwise stated, use 2022–23 data.

Table 2 Payments from the Commonwealth per capita by state, 2022-23

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	$pc	$pc	$pc	$pc	$pc	$pc	$pc	$pc	$pc
No impact payments	401	459	538	616	536	841	564	2,056	505
Terms of Reference	127	158	139	160	143	215	148	1,190	154
Commission decision	274	302	399	456	393	627	416	867	350
Impact payments	1,855	1,715	2,050	2,017	1,818	2,246	1,580	3,829	1,897
Payments assessed EPC	205	402	164	-12	247	90	367	99	226
Commonwealth payments treated as own-source revenue	0	0	0	520	0	0	0	0	56
GST	2,965	2,675	3,223	2,178	4,005	5,776	3,408	15,133	3,117
Total payments from the Commonwealth	**5,425**	**5,251**	**5,974**	**5,318**	**6,607**	**8,954**	**5,919**	**21,117**	**5,800**

Table 3 Proportion of payments from the Commonwealth by state, 2022-23

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	%	%	%	%	%	%	%	%	%
No impact payments	7.4	8.7	9.0	11.6	8.1	9.4	9.5	9.7	8.7
Terms of Reference	2.3	3.0	2.3	3.0	2.2	2.4	2.5	5.6	2.7
Commission decision	5.1	5.7	6.7	8.6	6.0	7.0	7.0	4.1	6.0
Impact payments	34.2	32.7	34.3	37.9	27.5	25.1	26.7	18.1	32.7
Payments assessed EPC	3.8	7.6	2.8	-0.2	3.7	1.0	6.2	0.5	3.9
Commonwealth payments treated as own-source revenue	0.0	0.0	0.0	9.8	0.0	0.0	0.0	0.0	1.0
GST	54.6	50.9	53.9	41.0	60.6	64.5	57.6	71.7	53.7
Total payments from the Commonwealth	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Structure of assessment

8 Table 4 shows the structure of the assessment.

Table 4 Structure of the Commonwealth payments assessment

Component	Driver	Influence measured by driver
Payments affecting state fiscal capacities	Actual per capita	States which receive above-average per capita Commonwealth payments have greater fiscal capacity.
Other Commonwealth payments	Equal per capita	These payments are not differentially assessed.

Note: The Commonwealth payments category does not include GST payments or no impact payments. No impact payments are removed from the revenue and expenditure included in the adjusted budget (see Figure 2).

Data

9 The data used in the assessment are outlined in Table 5.

Table 5 Data used in the Commonwealth payments assessment

Source	Data	Updated
Commonwealth of Australia	Final Budget Outcome	Annually
Department of Infrastructure, Transport, Regional Development, Communications and the Arts	Details of road and rail payments	Annually
	Details of city and regional deals payments	Annually
Department of Health and Aged Care	Cross-border adjustment	Annually
	COVID-19 Health adjustment	Annually for life of payment

Note: Final Budget Outcome data also include additional tables related to 'through payments', reward payments, memorandum items, Financial Assistance Grants to local governments and Mid-Year Economic and Fiscal Outlook population and GST revenue figures.

Assessment method

10 The Commission applies the following guideline to decide the treatment of payments on a case-by-case basis.

> Payments which support state services, and for which expenditure needs are assessed, will impact the GST relativities.

11 The first consideration is whether the payment supports state services. If the payment supports states services, the second consideration is whether the Commission assesses expenditure needs for those services. Where the purpose of the payment broadly aligns with the assessment of expenditure needs, the Commission would consider 'needs are assessed' for the payment.

12 For most payments, making decisions on their treatment using the guideline is straightforward. For a minority of payments, making decisions can be more difficult and the Commission is required to use its judgement. This mainly arises due to difficulties in determining whether a particular payment supports a state service or relates to a Commonwealth function; or difficulties in deciding what the payment is for, and in that context, whether the Commission assesses expense needs.

13 Where there is substantial uncertainty about the payment's purpose or whether relative state expenditure needs are assessed, the Commission will default to an 'impact' treatment and include it in the GST calculation. States have an opportunity during the annual consultation process to provide evidence in support of a 'no impact' treatment.

14 In some cases, the Commission may decide a payment is for multiple purposes or serves both a state and non-state function. While the Commission's preference is to allocate based on the main purpose of the payment, in some cases the Commission will choose to split a payment. A payment may be split on a fixed proportion or using additional data provided by the Commonwealth departments shown in Table 5.

15 Impact and no impact treatments are implemented as follows.

- Payments affecting relativities (impact payments)
  - the revenue is assessed actual per capita in the Commonwealth payments category
  - the related expenditure is assessed using the same drivers as other expenditure in the relevant category.
- Payments not affecting relativities (no impact payments)
  - both the revenue and the related expenditure are removed from the adjusted budget.

16 Payments relating to royalties on offshore oil and gas and uranium are treated as own-source revenue and included in the mining revenue assessment.

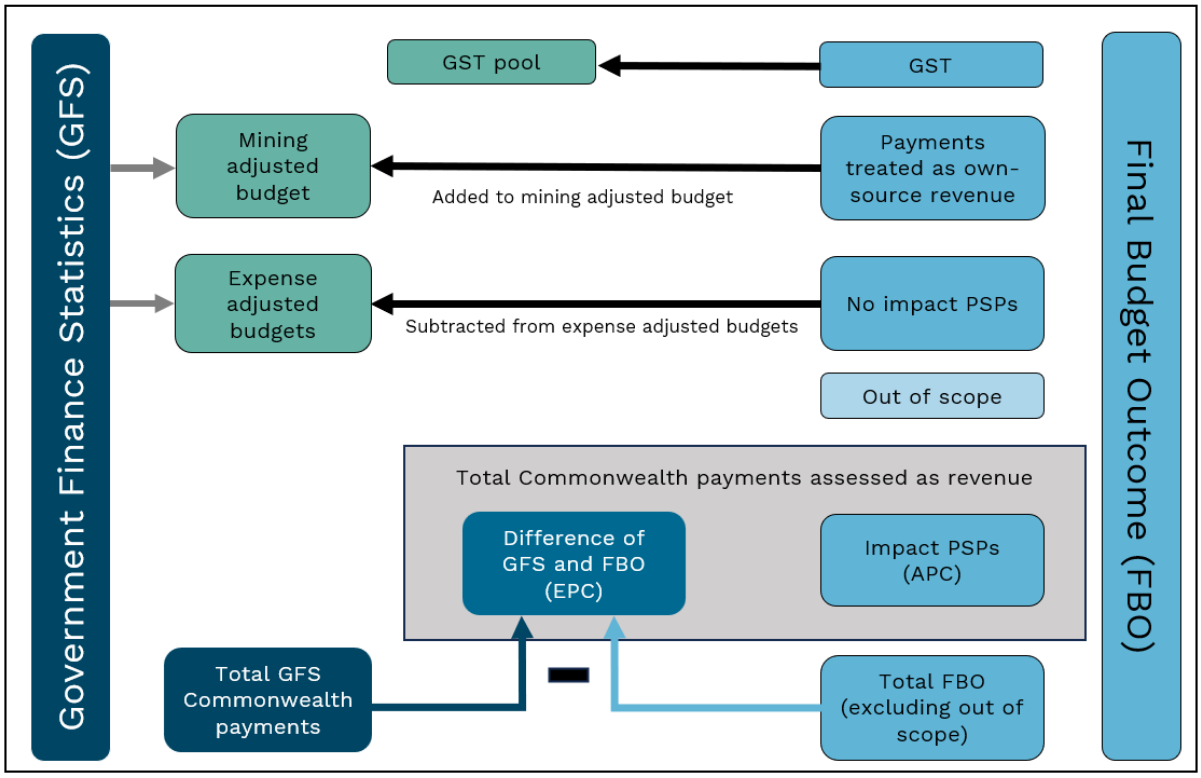
17 Some payments included in the Final Budget Outcome data and their corresponding expenditure are not captured in ABS Government Finance Statistics and are not therefore included in the adjusted budget data. These payments are treated as 'out of scope' in the Commonwealth payments assessment.[2]

18 Any remaining difference between the Commonwealth transfers recorded in ABS Government Finance Statistics and the value of payments published in the Final Budget Outcome is assessed equal per capita and does not affect the GST relativities. This difference partly comprises Commonwealth own-purpose expenses to states, which are outside the scope of the assessment.

19 Figure 2 summarises the Commission's treatment of Commonwealth transfers to states.

[2] Examples of out of scope payments include Quality Schools funding for non-government schools and funding for the Victorian Regional Rail program.

Figure 2 Treatment of payments from the Commonwealth to states



Note: PSPs (payments for specific purposes), FBO (Final Budget Outcome), APC (actual per capita), EPC (equal per capita).

GST distribution in the 2025 Review

20 Table 6 shows the GST impact of the assessment in the 2025 Review.

Table 6 GST impact of the Commonwealth payments assessment, 2024–25

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total effect
	$m	$m	$m	$m	$m	$m	$m	$m	$m
Commonwealth Payments	-109	984	-478	-181	328	-131	129	-542	1,442
Total ($m)	**-109**	**984**	**-478**	**-181**	**328**	**-131**	**129**	**-542**	**1,442**
Total ($pc)	**-13**	**137**	**-83**	**-59**	**173**	**-227**	**267**	**-2,106**	**52**

Note: Magnitude and direction of GST impact can change from year to year.

25. Adjusted budget

Overview

1 The adjusted budget is a comprehensive representation of state and territory (state) yearly budgets, broken down into the Commission's category and component structure. It provides a comparable and consistent representation of revenues, expenses and investments across the states. This provides a basis to identify what a state's revenue or expenditure may look like under average policy as part of the Commission's assessment of GST needs.

Scope

2 The adjusted budget covers all state-level financial transactions recorded in the operating statement of ABS Government Finance Statistics data. It includes activities of the general government sector, as well as public non-financial corporations that provide social housing and urban transport services.[1] A consolidation of both the general government and public non-financial corporation sectors forms the state sector for the purpose of assessing states' GST needs.

3 The types of financial transactions included in the adjusted budget are:

- revenues — including taxation, fees and charges, GST, Commonwealth payments and other revenue
- expenses — including wages, non-wage expenses, interest and transfers
- investment — including transactions in non-financial assets and depreciation[2]
- net borrowing or lending — including equity acquisitions and disposals, concessional loans, borrowing and other financing transactions.

4 While the adjusted budget does not generally include local government transactions, state-level Government Finance Statistics data include ACT municipal transactions. The Commission treats the ACT's municipal rate revenue as other revenue, and a portion of ACT's municipal expenses are likely captured in the other expenses category. These are assessed equal per capita and have little or no effect on state fiscal capacities.[3] The remaining expenses are likely captured in the relevant expense categories, however, the amounts are estimated to be small. Because the inclusion of the ACT's municipal transactions has little effect on assessed GST needs, they have been left in the data for simplicity.

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[1] Under the 2025 Review approach, activities of the Commonwealth, local government (except for the ACT), state public non-financial corporations other than those for social housing and urban transport, state public financial corporations, and non-government entities are not included in the adjusted budget. However, the adjusted budget includes transactions between these sectors and the state sector. Also, some types of non-state spending affect the amount states need to spend. For example, the schools and health assessments recognise the influence of non-state sector spending.
The reason for including housing and urban transport services public non-financial corporations (instead of all public non-financial corporations) is due to these 2 sectors having strong similarities to the services provided by general government agencies. They are not fully commercial and depend on government funds to meet recurrent expenses and investment. Their services stem from social policy objectives, and governments make the major policies on service delivery and charges.

[2] Transactions in non-financial assets mainly include acquisitions of non-financial assets including change in inventories, acquisitions of non-financial assets under new finance leases, own-account capital formation, acquisitions of other new non-financial assets, and acquisitions of second-hand non-financial assets. They also include disposals of non-financial assets (excluding depreciation), which are netted off acquisitions.

[3] In the other expenses assessment, a regional and wage cost adjustment is applied to a share of expenses. Therefore, there is a small impact on GST needs. Other revenue is assessed equal per capita and has no impact on GST needs.

Structure

5 Table 1 shows the structure of the adjusted budget. It is driven by the requirements of the category and component assessments.

Table 1 Structure of the adjusted budget, 2022–23

Categories / Items	Total 2022-23
	$m
GST revenue	81,994
Commonwealth payments	55,834
State own-source revenue (a)	
Payroll tax	34,066
Land tax	14,754
Stamp duty on conveyances	27,507
Insurance tax	7,321
Motor taxes	13,923
Mining revenue	36,342
Other revenue	47,685
Total state own-source revenue	**181,597**
Total revenue	**319,425**
Less	
Operating expenses	
Schools (b)	54,031
Post-secondary education (b)	7,654
Health (b)	94,650
Housing (b) (c)	2,832
Welfare	26,374
Services to communities	14,314
Justice	27,270
Roads	11,391
Transport (b) (c)	17,599
Services to industry (b)	11,624
Other expenses (b)	40,917
Total expenses	**308,656**
Equals	
Operating balance	**10,768**
Less	
Investment (Gross)	59,159
Equals	
Net borrowing (d)	**-48,391**

(a) Amounts for the ACT include municipal transactions.
(b) User charges are subtracted from expenses for these categories.
(c) Housing and urban transport include the consolidated transactions of general government and public non-financial corporation sectors.
(d) Consistent with ABS Government Finance Statistics, net borrowing is recorded as a negative number, while net lending is a positive number. It is calculated as a residual or balancing item in the adjusted budget.

Data

Data used in the adjusted budget

6 The Commission requires 5 years of data to produce relativities in an annual update. This includes data for the 3 assessment years (year 1 to year 3) and the 2 years prior to year 1 (year minus 1 and year 0).[4]

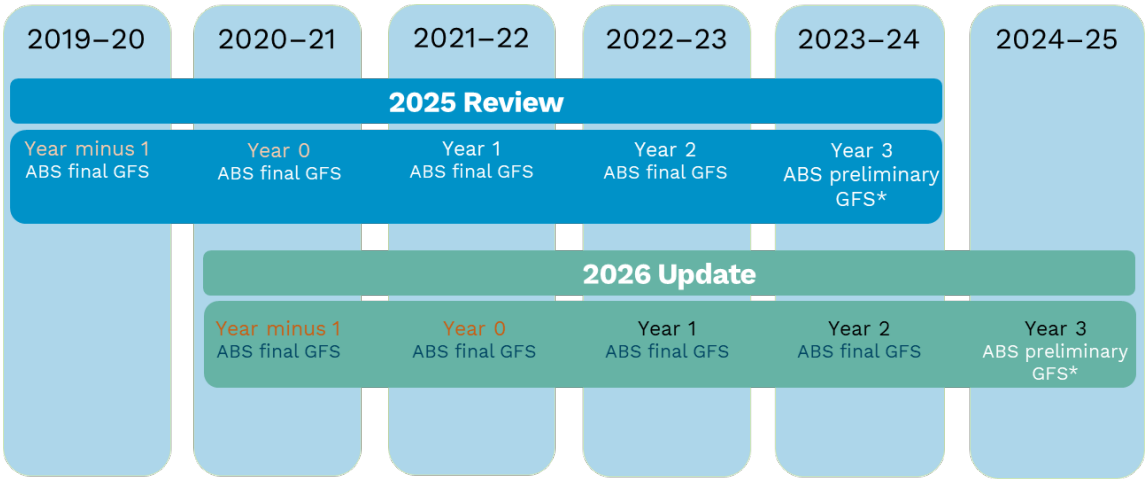
7 The Commission uses final Government Finance Statistics data from the ABS for year minus 1 to year 2, and preliminary ABS Government Finance Statistics data for year 3.

8 Preliminary ABS data are used for year 3 because the final ABS Government Finance Statistics data are not available in time for the annual update.[5] If the preliminary ABS data are not available in the time frame required, Government Finance Statistics data obtained directly from states are used instead. Final ABS data are subsequently used to replace the preliminary ABS data in the following update.

9 Where the Commission needs to make an adjustment to either final or preliminary ABS Government Finance Statistics data, the relevant data are requested from the ABS or states.

10 The adjusted budget data sources for 2025 Review and 2026 Update are shown in Figure 1.

Figure 1 Data used in each year of the adjusted budget



Note: *If preliminary ABS data are not available in the time frame required, state provided data are used instead.

[4] Data from year minus 1 and year 0 are used to derive factors for the investment assessment and for analysis of why a state's assessed GST needs change between updates.

[5] The Commission typically receives the final ABS Government Finance Statistics data, for the financial year ending in the previous calendar year (year 2), in April or May.

Government Finance Statistics data

11 The Commission uses ABS Government Finance Statistics data for the state general government sector and housing and urban transport public non-financial corporations.

- General government sector data include all government units and non-profit institutions controlled by government.
- Public non-financial corporations data include urban transport and housing government-controlled corporations and quasi-corporations mainly engaged in the production of market goods and/or non-financial services.[6]

12 Table 2 provides a summary of the data used in the 2025 Review adjusted budget compilation process.

Table 2 Data used in the adjusted budget

Data source	Data description	How data are used	How data are obtained
ABS	GG and PNFC final GFS data (years minus 1 to 2)	To compile years 1 and 2 of adjusted budget. Years minus 1 to 0 are used for the investment assessment and analysis of change.	Data request
ABS	AASB16 (Leases) data	For an adjustment to ABS data.	Data request
ABS	Preliminary year 3 GG and PNFC GFS data	To compile year 3 of the adjusted budget and for various adjustments.	Data compiled by the ABS and forwarded to the Commission by states
States	GFS GG and PNFC data (year 3)	If ABS preliminary data are not available for a particular state by December each year, the state's year 3 data will be used to compile year 3 of the adjusted budget.	Data request
States/ABS	Various data for adjustments	For various adjustments.	Data request or publicly available data

Note: GG refers to general government; PNFC refers to public non-financial corporations; GFS refers to Government Finance Statistics; AASB16 refers to Australian Accounting Standard Board - Standard 16.

Method

Process for creating the adjusted budget

13 The Commission uses a set of code rules to classify the Government Finance Statistics data to the categories and their components. In general, data are allocated to Commission categories using the classification of the functions of government – Australia, taxes classification, economic type framework and source/destination classification codes. See Attachment A for full details.[7]

[6] ABS, *Glossary, Australian System of Government Finance Statistics: Concepts, Sources and Methods*, ABS website, 2015, accessed 5 September 2023.

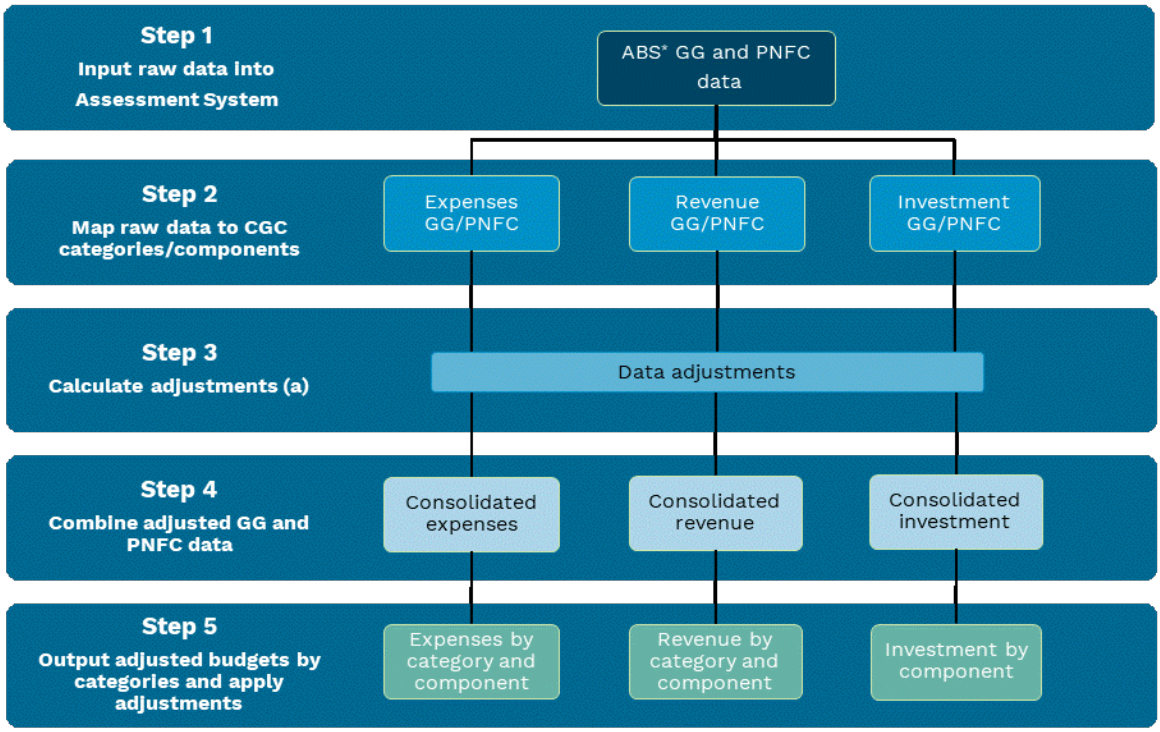
[7] Categories relate to areas of state spending or state revenue activity. The Commission has identified 12 expenditure categories and 7 revenue categories (see Attachment A).

14 For most expense categories, the final ABS Government Finance Statistics data are used to create the component-level splits.[8] This includes the component split for the year 3 data, using the ABS year 2 data to create the components.

15 There are some exceptions, such as when ABS data do not include coding for the specific component splits required. In these cases, data may be requested from states or other sources to inform the split. In the case of investment, the preliminary ABS data are used to create the component splits for year 3.[9] For the services to industry category, preliminary ABS data are also used to create the component split for year 3. However, this will be monitored and may be changed to use ABS year 2 data if appropriate.[10]

16 To ensure the adjusted budget provides the best possible representation of states' financial transactions across all categories, the Commission may decide to adjust Government Finance Statistics data when compiling the adjusted budget. Figure 2 shows the process for creating the adjusted budget and Figure 3 shows an example of the process for creating the adjusted budget at a category level.

Figure 2 Steps to create the adjusted budget



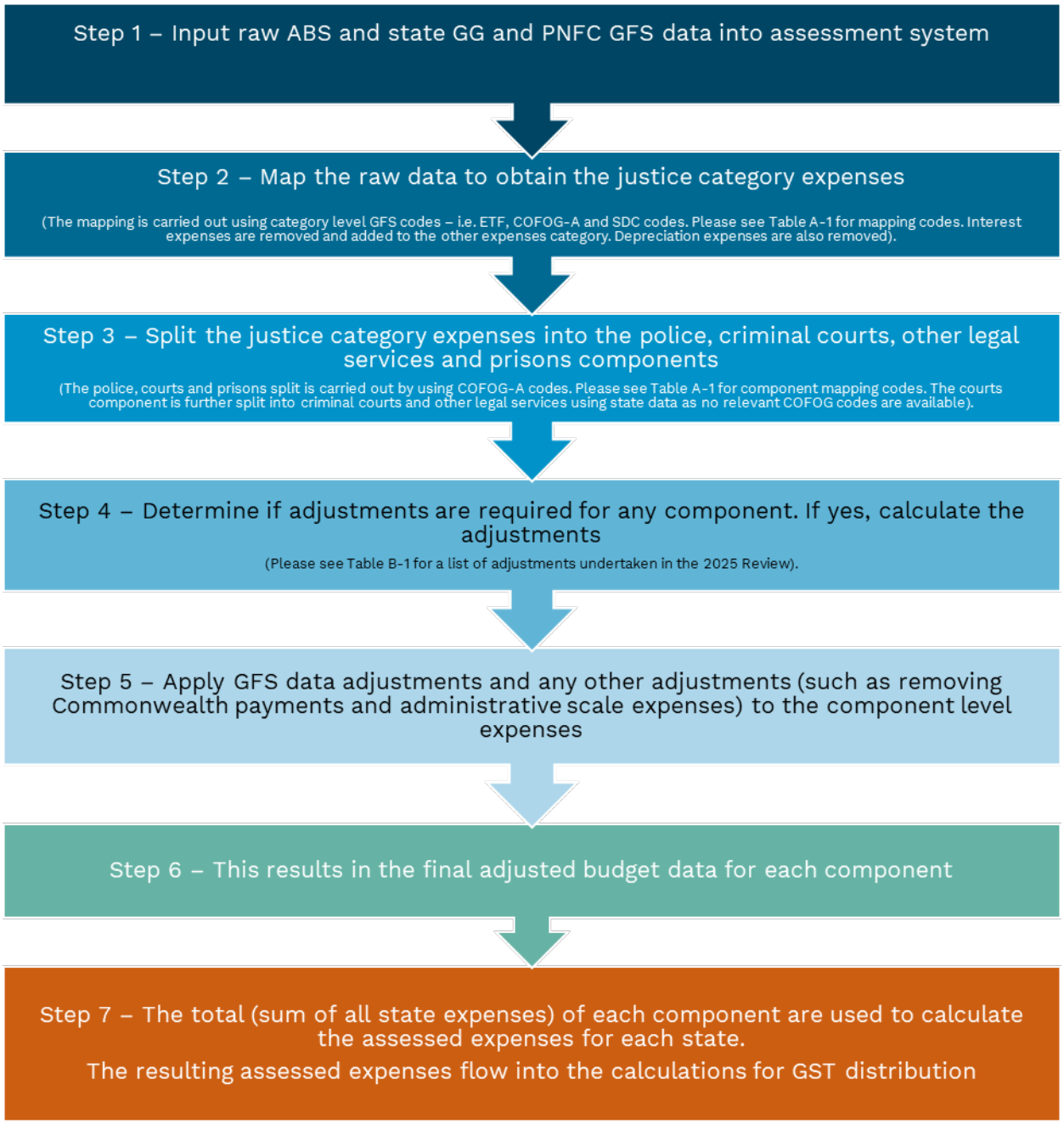
Note: * If preliminary ABS data is not available for Year 3, state data will be used instead.
GG refers to general government; PNFC refers to public non-financial corporations; CGC refers to Commonwealth Grants Commission.
(a) Some adjustments are calculated and applied during other steps in the adjusted budget compilation process.

[8] A component refers to a particular area of spending within a broader category. For example, there are 4 components within the justice category. These are police, criminal courts, other legal services and prisons.

[9] Preliminary ABS data are used to derive component expenditure because investment is too volatile to estimate using year 2 ABS data.

[10] Preliminary ABS data are used to create the component split for year 3 in the 2025 Review as the 2023–24 assessment year data may still contain residual amounts of COVID-19 payments. If it is found that no COVID-19 payments are being included in the preliminary ABS data going forward, components can revert to being based on final ABS year 2 proportions.

Figure 3 **Process for creating the adjusted budget at a category level – an example using the justice category**

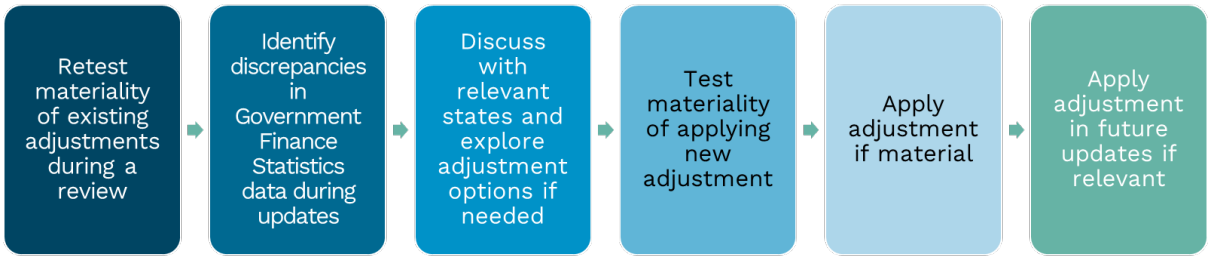


Note: GG refers to general government; PNFC refers to public non-financial corporations; GFS refers to Government Finance Statistics; ETF refers to economic type framework; COFOG-A refers to classification of the functions of government – Australia; and SDC refers to source/destination classification codes.

Process for existing and new data adjustments

17 The Commission uses the process shown in Figure 4 for implementing existing and new data adjustments in the 2025 Review and subsequent updates.

Figure 4 Process for implementing data adjustments



Existing adjustments

18 In a review year, existing adjustments are tested for materiality. An adjustment is included if it redistributes more than $12 per capita for any state in the assessment period.

19 Material adjustments are retained and applied in the review and subsequent updates. The materiality of these adjustments is not retested until the following review.

20 Immaterial adjustments are not applied. The materiality of these adjustments is not tested in subsequent updates unless new information becomes available to suggest that an adjustment has become material. States can provide such evidence through the yearly New Issues process.

New adjustments

21 In a review or update year, the Commission or any state can identify a new issue with Government Finance Statistics data. If an adjustment can be developed and it is material, the adjustment will be applied and retained in subsequent updates.[11] The materiality of the adjustment is not retested until the following review.

22 When considering new adjustments, the Commission consults the relevant state(s). The consultation process is undertaken as soon as possible after a potential adjustment has been identified. If new adjustments are identified that impact most or all states, early in the update process, the Commission informs all states during the yearly New Issues process. These will likely be related to any adjustments required for the year minus 1 to year 2 ABS final data as they are received earlier than the year 3 data. Due to timing constraints, consultation on adjustments to year 3 data generally takes place in December or January.

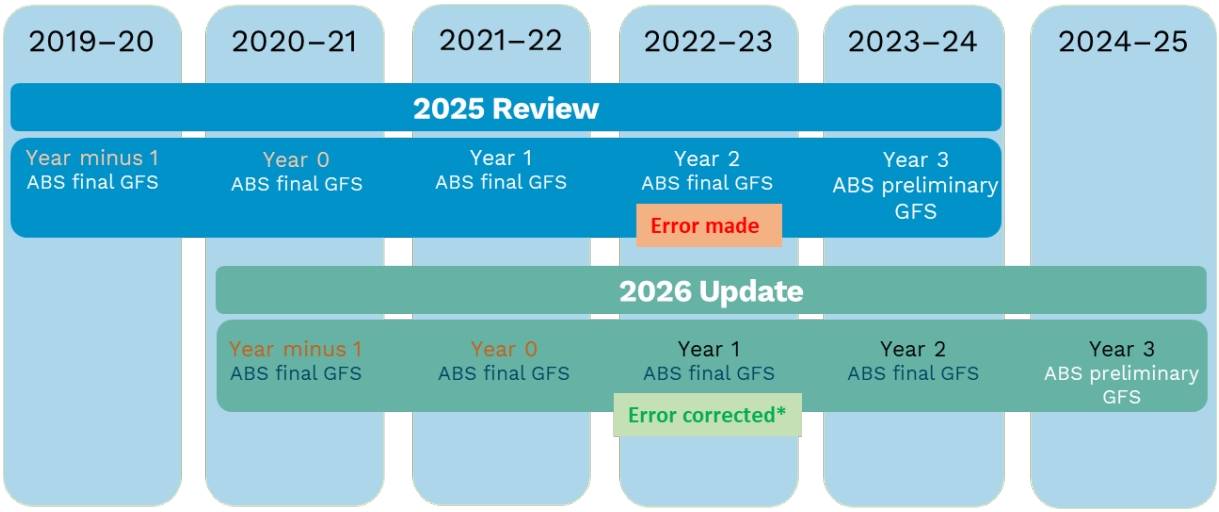
23 See Attachment B for a list of the adjustments applied in the 2025 Review.

[11] New adjustments are made to all relevant assessment years in the current review or update. New adjustments are not applied retrospectively.

Process for correcting data errors in prior years

24 Data errors discovered in previous assessment years are corrected in the corresponding assessment year of the current update. For example, an error identified in year 2 of a previous update will be corrected in year 1 of the current update (see Figure 5). The Commission will not generally make an additional adjustment to correct errors in previous year's GST distribution as a result of data errors in previous updates. These types of retrospective adjustments are made in rare circumstances and are considered on a case-by-case basis.

Figure 1 Example of data error correction method



Note: *The error made in the 2022–23 assessment year in the 2025 Review is corrected in the 2022–23 assessment year in the 2026 Update. However, an adjustment to correct for the impact on GST distribution of the error in the 2025 Review is not (generally) made in the subsequent update.

Attachment A: Code rules for mapping Government Finance Statistics data

25 The Commission uses a set of code rules to classify the Government Finance Statistics data to the categories and their components. For all categories, the Commission uses the following codes from the Australian System of Government Finance Statistics 2015 (AGFS15):[12]

- level of government classification (LOG) = 2 (state)
- jurisdiction classification (JUR)
- institutional sector classification (INST) = 300 (general government) other than housing and urban transport
- for housing and urban transport, INST = 300 (general government) and 100 (public non-financial corporations, with transactions between the 2 sectors removed)
- economic type framework (ETF)
- classification of the functions of government – Australia (COFOG-A)
- taxes classification (TC)
- source destination classification (SDC)
- type of assets and liability classification (TALC) for transactions in non-financial assets.

26 Table A-1 provides the code rules for general government sector transactions and Table A-2 provides the code rules for housing and urban transport, which cover transactions for both the general government and public non-financial corporation sectors.

[12] Refer to ABS catalogue *Australian System of Government Finance Statistics: Concepts, Sources and Methods 2015* for details of Government Financial Statistics concepts and definition of Government Financial Statistics codes.

Table A-1 Categories and their relevant Government Financial Statistics codes – general government

Category	ETF	COFOG-A	SDC
Commonwealth payments			
	1141 Revenue from current grants and subsidies 1151 Revenue from capital grants	All	130 Commonwealth GG
Payments affecting state fiscal capacities	Use figures published in the Commonwealth's Final Budget Outcome. Revenue included in this category are those payments that the Commission decided should affect state fiscal capacities.		
Other Commonwealth transfers	Total Commonwealth grants less payments affecting state fiscal capacities.		
Category	**ETF**	**TC**	**SDC**
Revenue			
Payroll tax	111* Taxation revenue	211 Payroll taxes 219 Taxes on employers' payroll and labour force n.e.c.	≠"23" & own JUR
Land tax	111* Taxation revenue	311 Land taxes	≠"23" & own JUR
Stamp duty on conveyances	111* Taxation revenue	463 Stamp duty on conveyances	≠"23" & own JUR
Insurance tax	111* Taxation revenue	452 Third party insurance taxes 459 Taxes on insurance n.e.c.	≠"23" & own JUR
Motor taxes	111* Taxation revenue	511 Stamp duty on vehicle registration 512 Road transport and maintenance taxes 513 Heavy vehicle registration fees and taxes 514 Other vehicle registration fees and taxes 519 Motor vehicle taxes n.e.c.	≠"23" & own JUR
Mining revenue	1135 Royalty income	No relevant TC	≠"23" & own JUR
Other revenue	111* Taxation revenue	212 Superannuation guarantee charge 312 Municipal rates 313 Metropolitan improvement rates 314 Property owners' contributions to fire brigades 319 Taxes on immovable property n.e.c 321 Estate, inheritance and gift taxes 425 Agricultural production taxes 426 Levies on statutory corporations 441 Taxes on government lotteries 442 Taxes on private lotteries 443 Taxes on gambling devices 444 Casino taxes 445 Race and other sports betting taxes 449 Taxes on gambling n.e.c 451 Insurance companies' contributions to fire brigade 461 Financial institutions transactions taxes 462 Government borrowing guarantee levies 464 Stamp duty on shares and marketable securities 465 Other stamp duties on financial and capital transactions 469 Taxes on financial and capital transactions n.e.c 521 Gas franchise taxes 522 Petroleum products franchise taxes 523 Tobacco franchise taxes 524 Liquor franchise taxes 529 Franchise taxes n.e.c 534 Clean energy and related taxes	≠"23" & own JUR

Category	ETF	TC	SDC
Revenue (continued)			
Other revenue (continued)		539 Other taxes on the use of goods and performance of activities n.e.c.	
	1131 Interest income 1132 Dividend income 1133 Withdrawals from income of quasi-corps 1134 Land rent income 1136 Revenue from investment funds 1137 Reinvestment earnings on foreign direct investment 1139 Property income n.e.c. 1142 Fines, penalties and forfeits 1143 Premiums, fees and current claims related to non-life insurance and standardised guarantee schemes 1149 Other current revenue not elsewhere classified 1152 Assets acquired below market value 1153 Capital claims related to non-life insurance and standardised guarantee schemes 1159 Capital revenue not elsewhere classified	No relevant TC	≠"23" & own JUR
	1141 Revenue from current grants and subsidies 1151 Revenue from capital grants	No relevant TC	≠"23"& own JUR and ≠"130" Commonwealth GG
	112* Sales of goods and services	No relevant TC – COFOG-As other than those included in 'net' categories	≠"23" & own JUR

Category	ETF	COFOG-A	SDC
Expenses			
Schools (net)	Expenses – 12**, except 1241 Depreciation of fixed produced assets (non-defence), 1242 Depreciation of fixed assets (defence), 1271 Interest on defined benefit superannuation and 1279 Interest expenses n.e.c. User charges – 112* Sales of goods and services	0911 Government pre-primary education 0912 Non-government pre-primary education 0913 Government primary education 0914 Non-government primary education 0921 Government secondary education 0922 Non-government secondary education 0949 Education not definable by level n.e.c. 0959 Subsidiary services to education n.e.c. 0961 R&D - Education 0991 Special education 0999 Education n.e.c.	≠"23" & own JUR
Post-secondary education (net)	Expenses – 12**, except 1241, 1242, 1271, and 1279 User charges – 112* Sales of goods and services	0931 University education 0932 Vocational education and training 0941 Apprenticeships and traineeships	≠"23" & own JUR
Health (net)	Expenses – 12**, except 1241, 1242, 1271, and 1279 User charges – 112* Sales of goods and services	0711 Pharmaceutical products 0712 Other medical products 0713 Therapeutic appliances and equipment 0721 General medical services 0722 Specialised medical services 0723 Dental services	≠"23" & own JUR

Category	ETF	COFOG-A	SDC
Expenses (continued)			
Health (continued)		0724 Paramedical services 0731 General hospital services 0732 Specialised hospital services 0733 Medical and maternity centre services 0734 Nursing and convalescent home services 0741 Mental health institutions 0751 Community mental health services 0752 Patient transport 0759 Community health services n.e.c. 0761 Public health services 0771 R&D - health 0799 Health n.e.c.	
Welfare	Expenses – 12**, except 1241, 1242, 1271, and 1279	1001 Sickness 1002 Disability 1011 Old age 1021 Survivors 1031 Family and children 1041 Unemployment 1069 Social exclusion n.e.c. 1071 R&D - Social protection 1099 Social protection n.e.c.	≠"23" & own JUR
Services to communities	Expenses – 12**, except 1241, 1242, 1271, and 1279	0435 Electricity 0511 Waste recycling 0519 Waste management n.e.c 0521 Reused or recycled waste water management 0529 Waste water management n.e.c. 0531 Pollution abatement 0541 Protection of biodiversity and landscape 0551 R&D - environmental protection 0599 Environmental protection n.e.c. 0621 Indigenous community development 0629 Community development n.e.c. 0631 Water supply 0641 Street lighting 0651 R&D - Housing and community amenities 0699 Community amenities n.e.c.	≠"23" & own JUR
Justice	Expenses – 12**, except 1241, 1242, 1271, and 1279	0311 Police services 0331 Law courts 0341 Prisons 0351 R&D - public order and safety	≠"23" & own JUR
Roads	Expenses – 12**, except 1241, 1242, 1271, and 1279	1111 Road maintenance 1112 Road rehabilitation 1113 Road construction 1119 Road transport n.e.c.	≠"23" & own JUR
Transport – non-urban transport (net); urban transport code rule is in Table A-2	Expenses – 12**, except 1241, 1242, 1271, and 1279 User charges – 112* Sales of goods and services	1122 Non-urban bus transport 1132 Urban water transport freight services 1133 Non-urban water transport services 1142 Non-urban railway transport freight services 1143 Non-urban railway transport passenger services 1151 Air transport 1171 Pipeline and other transport	≠"23" & own JUR
Services to industry (net)	Expenses – 12**, except 1241, 1242, 1271, and 1279 User charges – 112* Sales of goods and services	0439 Fuel and energy n.e.c. 0441 Mining of mineral resources other than mineral fuels 0442 Manufacturing 0443 Construction 0461 Distributive trades, storage and warehouse 0462 Hotels and restaurants 0463 Tourism	

Category	ETF	COFOG-A	SDC
Expenses (continued)			
Services to industry (continued)		0464 Multipurpose development projects 0471 R&D - general economic, commercial and labour affairs 0472 R&D - agriculture, forestry, fishing and hunting 0473 R&D - fuel and energy 0474 R&D - mining, manufacturing and construction 0476 R&D - other industries 0499 Economic affairs n.e.c.	
Other expenses (net)	Expenses – 12**, except 1241, 1242, 1271, and 1279 User charges – 112* Sales of goods and services, TC 314 Property owners' contributions to fire brigades, TC 451 Insurance companies' contributions to fire brigades	0111 Executive and legislative organs 0112 Financial and fiscal affairs 0113 External affairs 0121 Economic aid to developing countries and countries in transition 0122 Economic aid routed through international organisations 0131 General personnel services 0132 Overall planning and statistical services 0139 General services n.e.c. 0141 Basic research 0151 R&D - general public services 0161 Public debt transactions 0171 Transfers of a general character between difference levels of government 0199 General public services n.e.c. 0321 Civil protection services 0322 Fire protection services 0391 Control of domestic animals and livestock 0399 Public order and safety n.e.c. 0451 Communication 0475 R&D - communication 0811 Recreational and sporting services 0821 Film production services 0829 Cultural services 0831 Broadcasting and publishing services 0832 Publishing services 0841 Religious and other community services 0851 R&D - Recreation, culture and religion 0891 Community centres and halls 0899 Recreation, culture and religion n.e.c. 1091 Natural disaster relief	≠"23" & own JUR

Category	ETF	COFOG-A	SDC
Investment			
Investment	Gross investment (that is depreciation is not deducted) for all categories except urban transport. For urban transport, depreciation is deducted from gross investment.		
Transactions in non-financial produced assets (TALC 1 fixed produced assets and 2 other produced assets)			
Other than housing and urban transport	4111 Change in inventories 4112 Acquisitions of non-financial assets under new finance leases 4113 Own-account capital formation 4114 Acquisition of other new non-financial assets 4115 Acquisition of second-hand non-financial assets 4211 Disposals of non-financial assets (excluding depreciation)	COFOG-As other than housing and urban transport	≠"23" & own JUR

Category	ETF	COFOG-A	SDC
Other transactions in non-financial non produced assets (TALC 3 Non-produced assets)			
	4112 Acquisitions of non-financial assets under new finance leases 4113 Own-account capital formation 4114 Acquisition of other new non-financial assets 4115 Acquisition of second-hand non-financial assets 4211 Disposals of non-financial assets (excluding depreciation)	COFOG-As other than housing and urban transport	≠"23" & own JUR

Table A-2 Housing and urban transport and their relevant Government Finance Statistics codes – consolidated GG and PNFC sectors (INST=100, 300)

Category	ETF	COFOG-A	SDC
Operating expenses			
Housing (net)	Expenses – 12**, except 1241, 1242, 1271, and 1279 User charges – 112* Sales of goods and services	0611 Housing development 0698 Housing n.e.c. 1051 Housing	≠"23" & own JUR and ≠"21" & own JUR
Transport – urban transport (net)	Expenses (including depreciation) – 12**, except 1242, 1271, and 1279 User charges – 112* Sales of goods and services	0951 Transportation of non-urban school students 0952 Transportation of other students 1121 Urban bus transport 1131 Urban water transport passenger services 1141 Urban railway transport services 1161 Multi-mode urban transport 1181 R&D – transport 1199 Transport n.e.c.	≠"23" & own JUR and ≠"21" & own JUR
Investment (gross for housing, net for urban transport)			
Transactions in non-financial produced assets (TALC 1 – fixed produced assets and TALC 2 – other produced assets)			
Housing (gross)	4111 Change in inventories 4112 Acquisitions of non-financial assets under new finance leases 4113 Own-account capital formation 4114 Acquisition of other new non-financial assets 4115 Acquisition of second-hand non-financial assets 4211 Disposals of non-financial assets (excluding depreciation)	0611 Housing development 0698 Housing n.e.c. 1051 Housing	≠"23" & own JUR and ≠"21" & own JUR
Urban transport (net)	4111 Change in inventories 4112 Acquisitions of non-financial assets under new finance leases 4113 Own-account capital formation 4114 Acquisition of other new non-financial assets 4115 Acquisition of second-hand non-financial assets 4211 Disposals of non-financial assets (excluding depreciation) 4212 Reductions in non-financial assets due to depreciation	0951 Transportation of non-urban school students 0952 Transportation of other students 1121 Urban bus transport 1131 Urban water transport passenger services 1141 Urban railway transport services 1161 Multi-mode urban transport 1181 R&D - transport 1199 Transport n.e.c.	≠"23" & own JUR and ≠"21" & own JUR
Other transactions in non-financial non produced assets (TALC 3 – non-produced assets)			
	4112 Acquisitions of non-financial assets under new finance leases 4113 Own-account capital formation 4114 Acquisition of other new non-financial assets 4115 Acquisition of second-hand non-financial assets 4211 Disposals of non-financial assets (excluding depreciation)	0611 Housing development 0698 Housing n.e.c. 1051 Housing 0951 Transportation of non-urban school students 0952 Transportation of other students 1121 Urban bus transport 1131 Urban water transport passenger services 1141 Urban railway transport services 1161 Multi-mode urban transport 1181 R&D - transport 1199 Transport n.e.c.	≠"23" & own JUR and ≠"21" & own JUR

Attachment B: Adjustments made to Government Finance Statistics data, 2025 Review

Table B-1 Adjustments made to Government Finance Statistics data, 2025 Review

Adjustment Name	Description
Investment – roads and transport	This adjustment allocates a state's urban transport investment expenses into the roads, urban transport and non-urban transport investment components. The state classifies all investment expenses for roads, urban transport, and non-urban transport as urban transport investment.
Investment – AASB16 adjustment	An adjustment is made to include the Australian Accounting Standard Board (AASB16) leases standard in ABS final Government Finance Statistics data. An adjustment is also required for year 3 preliminary ABS data if they did not include the AASB16 standard.
Non-government schools Commonwealth payment adjustment	This adjustment removes the non-government schools' proportion of the Quality Schools funding from year 3 preliminary ABS data. This funding no longer appears in states' ABS final Government Finance Statistics data.
Public non-financial corporation adjustments	These adjustments reclassify some ABS public non-financial corporation data to the appropriate category and component. This adjustment mainly affects the housing category.
Local government and roads grants adjustment	The adjustment reclassifies some local government and roads grant expenses to the appropriate category and component. This adjustment mainly affects the roads and other expenses categories.
Concessions	This adjustment moves several concession expenses to the appropriate category and component. This adjustment mainly affects the welfare category.
Homelessness	This adjustment moves several homelessness expenses to the appropriate category and component. This adjustment mainly affects the welfare category.
Natural disasters adjustment	The natural disasters adjustment reclassifies the relevant natural disaster expenses of a state's reconstruction authority to other expenses.
Stamp duty adjustments	The stamp duty adjustments relocate stamp duties from the sale of major state assets, corporate reconstructions and non-real property from the stamp duty on conveyances to the other revenue category.
Transport adjustments	The transport adjustments move some transport expenses between urban and non-urban transport.
Water extraction charge	This adjustment reclassifies a state's water abstraction charges from mining to other revenue.
Mining expenses adjustments	The mining expenses adjustments reclassifies mining expenses to the appropriate category and component. These adjustments mainly affect the services to industry category.
Mental health levy	This adjustment reclassifies a state's mental health levy from other revenue to payroll tax.
Transfer of urban transport assets	This adjustment reclassifies the sign of a state's asset transfer between GG and PNFC sectors to ensure it does not impact expenditure.

26. Approach to horizontal fiscal equalisation

Overview

1 This chapter provides the Commission's approach to horizontal fiscal equalisation, supporting principles and assessment guidelines. It also outlines the legislative requirements for finalising GST relativities.

Horizontal fiscal equalisation objective

2 The Commission provides independent advice to the Australian Government on how GST revenue should be distributed among the states and territories (states). The distribution of GST revenue is governed by legislation and terms of reference issued by the Commonwealth Treasurer.

3 The terms of reference require the Commission, in making its recommendations, to take into account the *Intergovernmental Agreement on Federal Financial Relations*.[1] This agreement provides that GST revenue will be distributed in accordance with the principle of horizontal fiscal equalisation.

4 States have different relative fiscal capacities given their different service delivery needs and costs, along with different revenue raising capacities. The distribution of GST in accordance with horizontal fiscal equalisation seeks to provide each state with sufficient GST such that it has the potential to provide similar services and infrastructure to its residents.

5 The objective of horizontal fiscal equalisation is that:

> 'after allowing for material factors affecting revenues and expenditures, each state would have the fiscal capacity to provide services and the associated infrastructure at the same standard, if each made the same effort to raise revenue from its own-sources and operated at the same level of efficiency.' [2]

6 In assessing each state's relative fiscal capacity, the Commission assesses the amount the state would need to spend to provide all-state average services and infrastructure, and the revenue it could raise from its own sources if it made the average effort. The Commission also takes into account payments other than GST that each state receives from the Commonwealth.[3]

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[1] Council on Federal Financial Relations, The Intergovernmental Agreement on Federal Financial Relations, Federal Financial Relations, 2009.

[2] Commonwealth Grants Commission (CGC), Commission's position on fiscal equalisation, supporting principles and guidelines, CGC, Australian Government, 2023, p5.

[3] Not all Commonwealth payments are taken into account. Some payments are excluded by the Treasurer's terms of reference ('quarantined payments'). In the case of payments that are not quarantined, the Commission includes those that relate to state-type services for which the Commission assesses states' expenditure needs.

7 Equalisation is not an exact science — it depends on the availability of appropriate data and requires the Commission to undertake estimates, apply judgements, and make trade-offs. In doing so, the Commission follows the processes outlined in its supporting principles and assessment guidelines.

GST distribution legislation

8 Changes to the GST distribution arrangements were legislated by the Australian Parliament in 2018. The key elements are:

- a new equalisation benchmark linked to the fiscally stronger of New South Wales or Victoria
- a GST relativity floor
- Commonwealth funded top-ups to the GST pool
- transitional arrangements to phase in the new benchmark and give states a no worse off guarantee.

9 The Commission's calculation of states' relative fiscal capacities is necessary to identify the fiscally stronger of New South Wales or Victoria, which is the benchmark set by the legislation.

10 The legislation includes a guarantee that no state will be worse off under the new arrangements – that is, without GST pool top-up payments, a GST relativity floor or the phasing in of the new standard state benchmark. The legislated no worse off guarantee operates from 2021–22 until 2026–27, with no worse off payments calculated and provided by the Commonwealth in accordance with the legislation. Under an agreement between the Commonwealth and the states, no worse off payments will continue until 2029–30.[4]

11 Attachment A outlines the Commission's approach to horizontal fiscal equalisation and the additional steps required by the 2018 GST distribution legislation.

Supporting principles

12 The Commission's core task is to identify influences, referred to as 'drivers', beyond the direct control of states that cause their relative fiscal capacities to diverge. By quantifying these influences, the Commission seeks to estimate the GST share each state requires to provide the same (average) level of services — that is, each state's relative fiscal capacity as represented by its 'assessed relativity'.[5]

[4] Commonwealth Treasury, Extension of the GST No Worse Off Guarantee, Federal Financial Relations, 2024, accessed 4 February 2025.

[5] Assessed relativities are calculated for each assessment year by comparing each state's relative ability to raise revenue with its relative cost of providing services.

13 To assist in designing and evaluating alternative assessment methods, the Commission has 4 supporting principles: 'what states do', policy neutrality, practicality, and contemporaneity. They are subsidiary to the objective of horizontal fiscal equalisation.

14 Ideally, assessment methods would embody each of the supporting principles. In practice, alternative assessment methods often involve trade-offs between supporting principles, with the objective of fiscal equalisation always being the primary consideration. The Commission has not established a relative weighting or hierarchy of supporting principles. Instead, it uses its judgement to determine the most appropriate measure of states' relative fiscal capacities.

'What states do'

15 The Commission bases its assessments on the average policies of all states. It does not make judgements about what states could, or should, do.

16 To determine the average policy, the Commission uses a 'weighted average approach' as a benchmark for an assessment. Average policy reflects the average of what all states do, recognising that some states may choose not to impose a tax or provide a service.[6]

17 Under this approach, if even one state raises revenue (or provides a service), it becomes part of what states collectively do. A differential assessment will be made if it has a material effect on GST distribution.[7] Average policy is a continuum, where:

- the average effective tax rate for a particular tax base reflects the total amount of revenue collected by all states from that tax as a proportion of the total tax base
- the average per capita spending on a service depends on the total amount of money spent on that service, regardless of the states in which that money is spent.

18 In applying the 'what states do' supporting principle:

- assessments reflect the average range of services provided collectively by states and the average range of revenues raised
- the level of services and associated infrastructure states are funded to provide, and the revenue raising efforts they are presumed to make, are an average of those actually provided or made
- drivers reflect the material factors beyond a state's control that affect service delivery costs and revenue raising capacities.

[6] Under this approach, each state contributes to the average policy in proportion to its share of the total revenue base or total service population. The approach uses the data on 'what states do' to inform the decisions on what assessments are made and how those assessments are made.

[7] A differential assessment is an assessment of states' costs of providing services or their revenue raising capacity that is not an equal per capita assessment. Materiality thresholds represent the minimum change from an equal per capita assessment of a revenue or expense that must occur for the Commission to recognise a driver. Materiality thresholds are discussed in the section on Assessment Guidelines.

19 The 'what states do' principle ensures that assessments reflect the full range of state expenditures and revenues.[8] As the roles, functions, priorities and circumstances of states change, so does the assessment of their relative fiscal capacities.

Policy neutrality

20 The policy neutrality supporting principle has 2 related aspects. First, a state's policy choices (in relation to the revenue it raises or the services it provides) should not directly influence its GST share. Second, the Commission's assessments should not create incentives or disincentives for states to choose one policy over another.

21 In most cases, the Commission broadly achieves policy-neutral assessments through its weighted average policy approach. Under this approach, a state's policy choice will only affect the assessment to the extent it affects the average revenue or expenditure (that is, it cannot 'directly' influence its GST share).

22 An exception arises where a revenue base is concentrated in one state, for example iron ore production in Western Australia. In this case, the policy of Western Australia has a dominant role in determining average state policy, which can raise issues if the dominant state changes its royalty rate.[9]

Practicality

23 The terms of reference for the review of the Commission's assessment methodology requires that it should 'aim to have assessments that are simple and consistent with the quality and fitness for purpose of the available data'.[10] The practicality supporting principle seeks to ensure that assessment methods are sound, as simple as possible and based on reliable and fit-for-purpose data.

24 This principle recognises that, while state fiscal capacities are affected by a variety of factors, the suitability of the recommended GST relativities may not be improved by including drivers when sufficient data are not available to measure their effects or when those effects are small. The principle is supported by the inclusion of materiality and reliability criteria in the assessment guidelines.

Contemporaneity

25 The contemporaneity supporting principle aims to ensure that, to the extent reliable data will allow, the distribution of GST provided to states in a year should reflect state circumstances in that year. A fully contemporaneous approach would equalise state fiscal capacities in the application year. However, robust data are not available

[8] Differential assessments of those expenditures and revenues are only made where those assessments are material and are supported by reliable methods and data.

[9] Further detail on the issue of dominant state royalty rates can be found in the mining chapter of *Review Outcomes*.

[10] Commonwealth Treasurer, Terms of Reference for the 2025 Methodology Review, Commonwealth Grants Commission website, 2023, accessed 14 February 2025.

until the application year has passed. In the absence of such data, the Commission bases its recommendations on historical data. The 3-year lagged, moving average provides an appropriate balance between contemporaneity, predictability and smoothing the impact of fiscal shocks.

Assessment guidelines

26 The Commission's guidelines support a consistent approach to developing assessment methods, and ensure that methods are conceptually sound and reliable, and as transparent and simple as possible.

27 The guidelines are also a key part of the Commission's quality assurance process. They ensure all relevant steps in the decision-making process are followed and that this process is transparent.

28 As previously noted, equalisation is not an exact science; it relies on the availability of appropriate data and requires the Commission to make estimates, exercise judgement and navigate trade-offs. Box 1 outlines the assessment guidelines.

Box 1 Assessment guidelines

The Commission organises its work by making assessments for individual categories. Separate assessments will be made when they are materially different from other assessments or if the assessment is easier to understand if undertaken in a separate category. The Commission will include a driver in a category when:

- a case for the driver is established, namely:
  - a sound conceptual basis for different assessments exist
  - there is sufficient empirical evidence that material differences exist between states in the levels of service use or unit costs, or both, or in their capacities to raise revenues.
- a reliable method has been devised that is:
  - conceptually rigorous — for example, it measures what is intended to be measured, is based on internal standards and is policy neutral
  - implementable — the driver can be measured satisfactorily
  - consistent with external review outcomes where used.
- data are available that are:
  - fit for purpose — they capture the influence the Commission is trying to measure and provide a valid measure of state circumstances
  - of suitable quality — the collection process and sampling techniques are appropriate, the data are consistent across the states and over time, and are not subject to large revisions.

The Commission will adjust data where necessary to improve interstate comparability. However, the Commission will only make data adjustments if they redistribute more than $12 per capita for any state in the assessment period.

The Commission will include a driver in its final assessments if:

- it redistributes more than $40 per capita for any state in the assessment period (the materiality test will be applied to the total effect the driver has on the redistribution from an equal per capita assessment of revenue or expenditure, averaged over the 3 assessment years)
- removing the driver has a significant effect on the conceptual rigour and reliability of assessments.

Where a case for assessing a driver in a category is established, but the Commission has concerns with the underlying data or assessment method, a uniform set of discounts will be used — low (12.5%), medium (25%), high (50%) or no assessment (100%). The Commission will use higher discounts when the Commission has greater concerns with the underlying data or assessment method.

Discounting assessments

29 For some assessments, the Commission accepts the conceptual case for including a driver, but it has concerns with the data or the assessment method. In these cases, the Commission can decide whether to use the data or method with a discount, or to not assess the driver.

Discounting framework

30 Discounts are used for concerns or uncertainty with respect to specific data or methods but are not applied in cases of general uncertainty or to address policy neutrality.

31 The types of data or method concerns that may result in discounting include:

- the comparability of state data
- where data are only available for a few states and may not represent the situation in all states
- the use of proxy data that may not capture the full influence of a driver.

32 There are times the Commission considers the application of a discount is inappropriate.

- The Commission makes judgement-based estimates (such as the proportion of expenses to which a driver should apply). Discounting is not applied as the Commission has already incorporated relevant information in applying its judgement.
- There may be concerns about policy neutrality, general uncertainty, or the strength of the conceptual case. These factors are taken into account in the decisions on whether the conceptual case is accepted or how the driver is best measured.
- There may be concerns about the quality of estimates of national spending or revenue, such as those derived from ABS Government Finance Statistics or state revenue office data for measuring component revenue and expenses. Adjustments to ensure budget data are fit for purpose are made, so no discounts are necessary.

33 There are 4 levels of discount — low (12.5%), medium (25%), high (50%) and no assessment (100%). The level of discount applied depends on the Commission's judgement about the reliability of the data or method.

34 The Commission reviews its use of discounts at each methodology review, ensuring that discounts are appropriately applied, the size of the discount reflects the degree of concern with the data or assessment method, and there is consistency in the application of discounts across assessments. Where discounts are applied to an assessment, the Commission provides a clear explanation for their use.

35 Table 1 shows the assessments where the Commission has applied a discount, including the rationale and the level.

Table 1 Discounts in the 2025 Review

Assessment	Rationale for discount	Level of discount
Land tax	Uncertainty about the reliability and comparability of taxable land value data.	12.5%
Health – community health socio-demographic	Reliance on a proxy measure of activity for a significant share of community and public health expenses.	12.5%
Health – non-state sector adjustments	Uncertainty about the reliability of data and the robustness of the methods for determining the adjustments.	12.5%
Roads	Uncertainty about the reliability of data included in several aspects of the assessment, including the reliability of the rural road synthetic network as a proxy measure of what states do.	12.5%
Wage costs	Uncertainty about the reliability of private sector wages as a proxy for public sector wage pressures, and the capacity of the model to control for all differences in employee productivity.	12.5%
Geography – regional costs general gradient	Uncertainty about the reliability of the gradient, given it is applied where a gradient cannot be directly measured.	25.0%

Attachment A: Calculating GST relativities

36 GST relativities are the weights used by the Commission to recommend the GST distribution to the Commonwealth Treasurer. They are calculated in a series of steps, which are described below and visualised in Figure 1.

37 A state with a GST relativity of above 1 will receive an above-average amount of GST per person, and a state with a relativity below 1 will receive a below-average amount of GST per person.

38 The steps outline how the Commission gathers and standardises data, assesses GST needs and gives effect to the 2018 GST distribution legislation.

Step 1. Establish the adjusted budget

39 The Commission develops an 'adjusted budget' for each assessment year. This is a comprehensive representation of state budgets, broken down into the Commission's category and component structure. It provides a comparable and consistent representation of revenues, expenses and investment across the states.

40 By collating what states collectively spend on a service, there is a basis to identify what a state's spending may look like under average policy. The same is true for each source of revenue.

41 The adjusted budget uses data from the ABS final Government Finance Statistics (GFS) for the first 2 assessment years in the 3-year assessment period and ABS preliminary GFS data for the most recent assessment year, where available.[11] Data on payments received from the Commonwealth are sourced from the Commonwealth's Final Budget Outcome publication.

42 These data allow the Commission to identify average state spending and revenue raising.

Step 2. Apply the assessment methods

43 The Commission assesses the expenses, investment, revenue and net borrowing of each state as well as the Commonwealth payments received. The assessed amounts differ from states' actual amounts because they take account of each state's cost and revenue drivers.

44 Drivers are factors beyond the control of a state that affect how much a state needs to spend on providing services and how much revenue it can raise.

[11] Where ABS preliminary GFS data are not available for a particular state, GFS data from the state will be used instead.

45 The Commission estimates the following:

- the revenue a state would raise if it were to apply the average policies to its revenue base and raise revenue at the average level of efficiency (assessed revenue)
- the expenses a state would incur if it were to follow average expense policies, allowing for the drivers it faces and assuming it provides services at the average level of efficiency (assessed expenses)
- the expenditure on new and replacement infrastructure a state would incur if it were to follow average policies, allowing for the drivers it faces in providing infrastructure and assuming it requires the average level of infrastructure to deliver the average level of services (assessed investment)
- the borrowing a state would require to achieve the average net financial worth at the end of each year (assessed net borrowing)
- payments of financial assistance (excluding GST) made by the Commonwealth that add to a state's fiscal capacity (Commonwealth payments).

Step 3. Calculate each state's assessed GST need

46 A state's assessed GST need is the amount of GST required to bridge the gap between its assessed expenses and assessed investment, and its assessed revenues, assessed net borrowing and Commonwealth payments.

$$Assessed\ GST\ need = (assessed\ expenses + assessed\ investment) - (assessed\ revenues + assessed\ net\ borrowing + Commonwealth\ payments)$$

47 A state's population share of GST (the amount required if it received the per capita national average share of GST) is also calculated in this step.

Step 4. Calculate each state's assessed relativity

48 The assessed relativity reflects a state's assessed GST needs relative to its population share of GST.

$$Assessed\ relativity = \frac{assessed\ GST\ need}{population\ share\ of\ GST}$$

49 An assessed relativity above 1 indicates that a state requires more than the average GST per person.

50 Prior to the 2018 GST distribution legislation, the average of a state's assessed relativity over the 3 assessment years was equal to its GST relativity. Step 4 was the end of the equalisation process.

51 This share of the GST balanced the requirements of each state to meet the difference between their assessed expense and investment needs, and their assessed revenue, net borrowing and Commonwealth payments.

Step 5. Calculate each state's GST relativity

52 Since the 2018 GST distribution legislation, additional steps are involved in calculating a state's GST relativity.

53 The legislation introduced:

- standard state relativities, including temporary blended relativities to 2026-27
- a GST relativity floor.

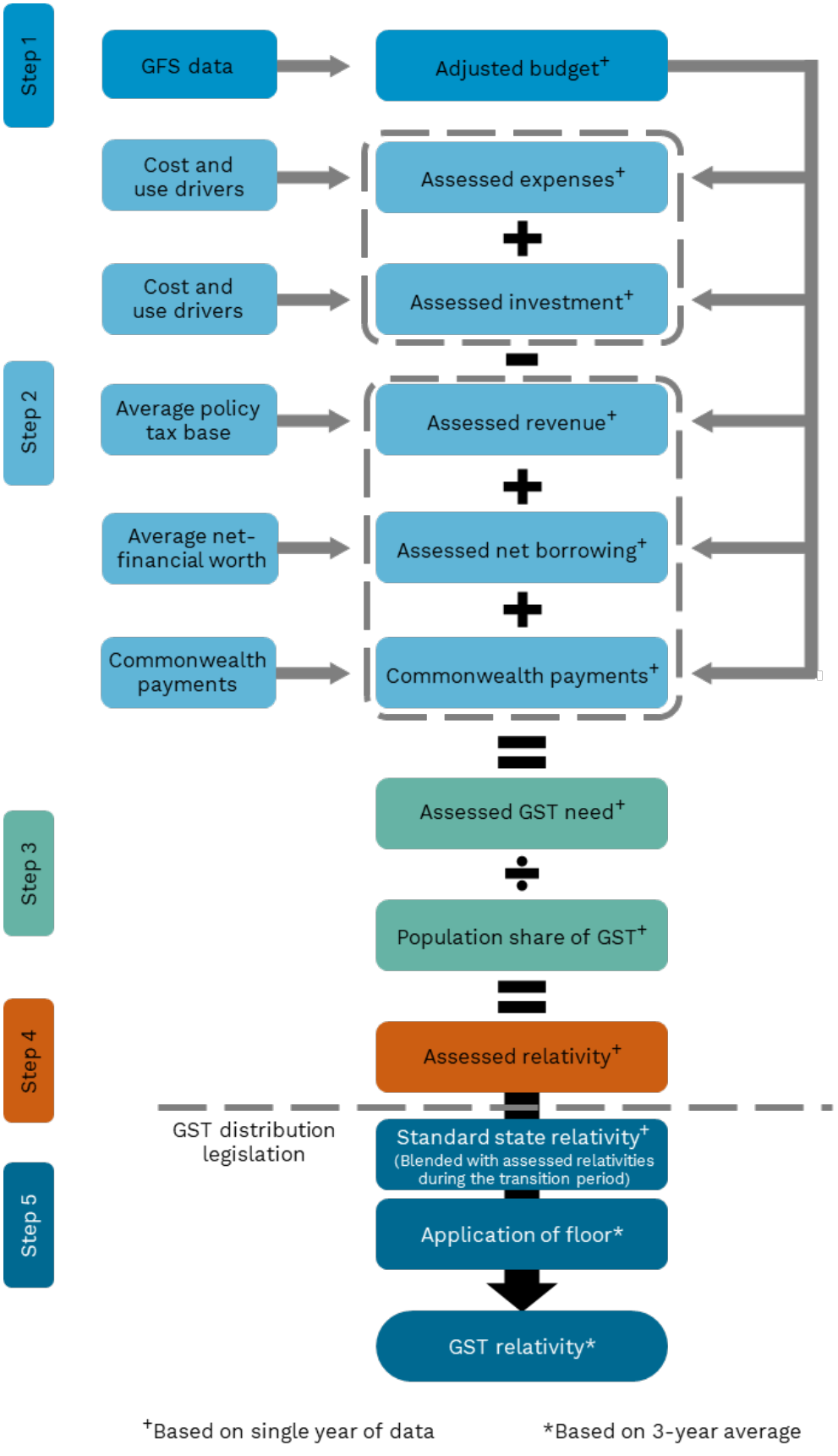
54 No state can have a relativity lower than that of the fiscally stronger of New South Wales or Victoria, which serves as the standard state, in any of the 3 assessment years. If a state's relativity is increased to match the standard, the relativities of all other states will be adjusted downward on a population share basis. The resulting relativities from these adjustments are the standard state relativities.

55 Over the 6-year transition period, the assessed relativities are blended with the standard state relativities. The weighting that each receives is specified in the legislation. The new arrangements form a growing proportion of the calculation of GST relativities until 2026-27, when they will be fully implemented.

56 Each state's final relativity must remain at or above the GST relativity floor. This is 0.75. If the average of a state's 3 assessment year blended relativities is below the floor, it is lifted to the floor and all other states are adjusted down on a population-share basis.

57 These final numbers are called GST relativities.

Figure 1 **Calculating GST relativities (excludes no worse off relativities)**



No worse off relativities

58 Under the 2018 GST distribution legislation, the Commonwealth provided a guarantee that states would not be worse off than they were under previous arrangements. The no worse off guarantee was legislated to conclude in 2026–27, however it has been extended until 2029–30.

59 Each year the Commission is asked through terms of reference to provide relativities that would have applied had the 2018 GST distribution legislation not been enacted. These 'no worse off relativities' are used by the Commonwealth to determine whether to make a no worse off payment to a state.

60 No worse off relativities are broadly calculated in the same way as assessed relativities but include adjustments to remove the impact of the Commonwealth's legislated top-ups to the GST pool.

27. Population

Overview

1 Population estimates are required for all of the Commission's assessments and the calculation of GST relativities. Population data are required for a range of population groups disaggregated by various characteristics related to the differential use or cost of services, such as age, Indigenous status, socio-economic status and remoteness areas as defined by the ABS.

2 This chapter provides details on the population data used in the calculations, including how these are estimated and used.

Estimated Resident Population

3 The population data used in the estimation of GST relativities is Estimated Resident Population, produced by the ABS. This measure includes all people who usually reside in Australia (regardless of nationality, citizenship or visa status), excluding those present for foreign consular or diplomatic purposes. The data link people to their place of usual residence and are updated at each Census. The population data have been updated based on the 2021 Census and associated geographies.

4 The assessment years and application year for the Commission's recommendation on GST relativities are based on financial years. The most representative date for population in a given financial year is 31 December. The ABS produces population data disaggregated by age, remoteness and socio-economic status as of 30 June annually. The Commission scales the 30 June disaggregated population data to state total populations as of 31 December for each year.

State level population estimates

5 State level population is used for calculating:

- equal per capita distributions
- population growth
- per capita GST relativities.

6 In each update of GST relativities, *Table S1-1 in supporting data* shows total state populations for the relevant assessment years and the application year.

Population growth

7 Relative differences in state population growth affect states' investment and net borrowing needs.

8 The investment assessment estimates the need of each state to provide the national average level of infrastructure per person using the relevant 'user population'. State Estimated Resident Population is used as the measure of the user population for the services to communities, other expenses and non-urban transport investment assessments. Category specific measures of user populations are used in other expense assessments (see investment chapter of the *Commission's Assessment Methodology*). Differences in states' population growth rates are the only driver of differences in net borrowing assessed needs.

9 In each update of GST relativities, *Table S1-2 in supporting data* shows states' annual population growth rates for the relevant assessment years.

Estimating disaggregated populations

10 The Commission uses administrative data on the use and cost of services from states and Commonwealth agencies to identify the characteristics of higher or lower cost population groups in the provision of state services. Disaggregated population data are required so that national costs by population group can be distributed across states based on their share of each population group.

First Nations population estimates

11 Aside from the census year, the ABS does not provide population data disaggregated by Indigenous status. Therefore, for subsequent years, the Commission imputes First Nations population estimates. This is done by applying the First Nations share of the total population within each disaggregated population group (in each census year) and then adjusting this to match the ABS estimated First Nations population projections as of 30 June each year, by age and state. The resulting estimated numbers of First Nations people in each disaggregated group are subtracted from the group's total to give the number of non-Indigenous people in each group.

Statistical Area Level 1 based classifications

12 The finest level of disaggregation of population, by remoteness and socio-economic status, is that based on classifications at the ABS Statistical Area Level 1 (SA1) geography. While it would be ideal if administrative data provided by the states and Commonwealth agencies were also available at the SA1 level, this is not always the case. In practice, the Commission receives administrative data on the use and cost of services from states and other agencies that reflect varying geographies. The Commission uses concordance maps (by postcode and other geographies) to get a breakdown of administrative data by remoteness and socio-economic status.

Population characteristics used in assessments

13 The main population characteristics used in the expense assessments are Indigenous status, age, socio-economic status and remoteness. In the Commission's context, the main way in which these attributes affect the assessments is where states have different shares of these population groups. In selecting classifications, it is more important to consider how state populations differ, because differences in use rates only become relevant when state population characteristics differ (for example, high First Nations use rates would be irrelevant if all states had the same share of First Nations populations).

14 Where possible, the Commission uses a common structure for the classification of population characteristics for expense categories (described below). Having a common structure, with fewer unique classifications for these characteristics, reduces the size of the datasets required, makes for simpler assessments and reduces the risk of errors. It also enhances the comparative analysis that can be undertaken between expense categories.

15 However, where service use rates differ between states, it may be material to use different levels of detail within the common structure.

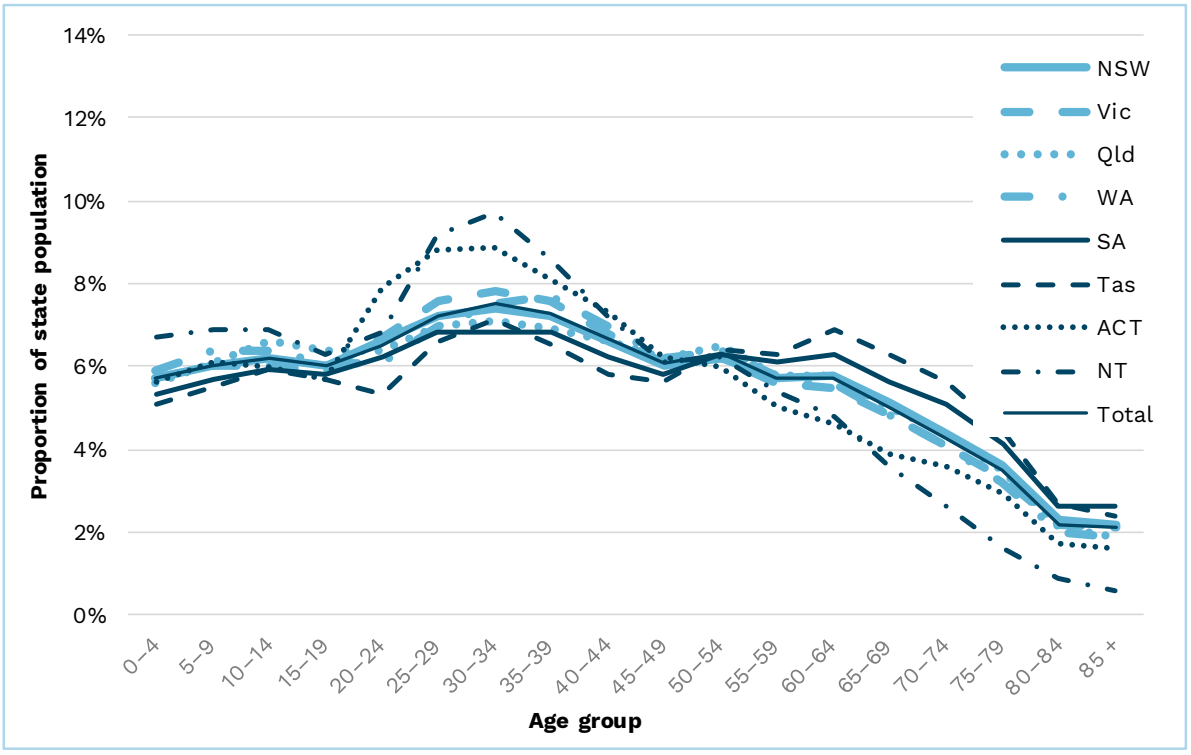
Age

16 The Commission aims to have common classification structures for the various assessments. This is best demonstrated with age but is valid in other classifications. As the primary focus is on the difference in the distribution of populations between states, the Commission was guided in selecting common structures by the patterns in Figure 1. This shows that Tasmania and South Australia have below average shares of 0-49 year olds, and above average shares of 60+ year olds. In contrast, the Northern Territory and the ACT have above average shares of 20-44 year olds but their shares of 60+ year olds are below the national average.

17 In the 2025 Review, the major age groups used are 0-14, 15-64 and 65+ years. This structure is used in a range of social and economic statistics and has been generally adopted in the Commission's assessments. Within these major groups, further disaggregation has been applied where there is a conceptual case and it has been material to do so for different expense categories (see chapters on Health, Welfare and Justice of the *Commission's Assessment Methodology*).

18 In each update of GST relativities, *Table S1-5 in supporting data* shows state populations by major age groups for year 3 of the assessment period.

Figure 1 Age structure of state populations, June 2023



Source: ABS, *National, state and territory population*, December 2023

Remoteness

19 Many of the assessments use disaggregated populations according to degree of remoteness, as there is evidence that this affects both the use of services and the cost of delivering services. The indicator of remoteness groups like areas together and distinguishes unlike areas.

20 Category assessments use either the five remoteness areas as specified by the ABS, or an aggregation of these into groups, depending on the materiality of each disaggregation or the quality of the related administrative data. For example, in the welfare assessment, it is not material to split remote and very remote categories for First Nations child protection and family services, so these are grouped together.

21 In each update of GST relativities, *Table S1-4 in supporting data* shows state populations by remoteness area for year 3 of the assessment period.

Indigenous status and socio-economic status

22 The Commission uses separate measures of socio-economic status for First Nations and non-Indigenous populations.

23 The Non-Indigenous Socio-Economic Index for Areas (NISEIFA) was developed for the Commission by the ABS. This index uses the same indicators as the Socio-Economic Indexes for Areas (SEIFA) Index of relative socio-economic disadvantage.[1] The

[1] ABS (2021), Census of Population and Housing, *Socio Economic Indexes for Areas, Australia*, released 27 April 2023.

Commission uses NISEIFA to classify the non-Indigenous population into socio-economic quintiles. The Indigenous Relative Socio-economic Outcomes (IRSEO) index was developed at the Australian National University.[2] The Commission uses this index to classify the First Nations population into socio-economic quintiles. These indexes are area-based measures.

24 Some assessments do not use IRSEO and NISEIFA to classify the population. This occurs when the administrative data on the use and cost of services from states or third parties cannot be classified to IRSEO and NISEIFA quintiles. The schools assessment uses the Socio-Educational Advantage quartiles as the basis for estimating school student socio-economic status. The housing assessment uses household income to classify households as either low or high socio-economic status.

25 In each update of GST relativities, *Table S1-3 in supporting data* shows state First Nations and non-Indigenous populations by socio-economic quintile for year 3 of the assessment period.

Urban Centres and Localities

26 Urban Centres and Localities are used as the primary geographic measure in assessments that relate to urban form. However, in certain instances the Commission needs to make adjustments to better reflect what states do. For example:

- Urban transport is often provided as an integrated network across closely neighbouring Urban Centres and Localities. Therefore, in the Transport category, all Urban Centres and Localities within a Significant Urban Area are aggregated and treated as a single urban centre.[3,4] The Commission considers that this generally better reflects how states deliver this service.
- In the services to communities category, the Commission considers that subsidies for electricity are provided in remote and very remote towns. Because Urban Centres and Localities are not defined for towns of less than 200 people, the Commission has defined small urban areas using aggregations of mesh blocks, using criteria like that used by the ABS to define urban areas.[5]

27 These adjustments and the other category specific criteria relating to how Urban Centres and Localities are used in each category are discussed in the relevant chapters (see the roads, transport and services to communities chapters of the *Commission's Assessment Methodology*).

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[2] IRSEO was developed by the Centre for Aboriginal Economic and Policy Research (see the CAEPR website, http://caepr.cass.anu.edu.au), at the Australian National University.

[3] Urban Centres and Localities represent areas of concentrated urban development with populations of 200 people or more.

[4] The Significant Urban Area structure of the Australian Statistical Geography Standard represents significant towns and cities of 10 000 people or more. A single Significant Urban Area can represent either a single Urban Centre or a cluster of related Urban Centres.

[5] Mesh blocks are the smallest geographic region in the Australian Statistical Geography Standard and the smallest geographical unit for which census data are available.